

Connect To A Postgresql Database Postgresql Tutorial

This book consists of a series of step-by-step tutorials for creating mini projects in integrating pyqt, python, opencv, and PostgreSQL database. By studying this book, you will understand how to program python GUIs involving opencv and databases in applications. This book is suitable for beginners, students, engineers, and even researchers in a variety of disciplines. No advanced programming experience is needed, and only a few school-level programming skills are needed. In the first chapter, you will learn to use several widgets in PyQt5: Display a welcome message; Use the Radio Button widget; Grouping radio buttons; Displays options in the form of a check box; and Display two groups of check boxes. In chapter two, you will learn to use the following topics: Using Signal / Slot Editor; Copy and place text from one Line Edit widget to another; Convert data types and make a simple calculator; Use the Spin Box widget; Use scrollbars and sliders; Using the Widget List; Select a number of list items from one Widget List and display them on another Widget List widget; Add items to the Widget List; Perform operations on the Widget List; Use the Combo Box widget; Displays data selected by the user from the Calendar Widget; Creating a hotel reservation application; and Display tabular data using Table Widgets. In chapter three and chapter four, you will get introduction of postgresql. And then, you will learn querying data from the postgresql using Python including establishing a database connection, creating a statement object, executing the query, processing the resultset object, querying data using a statement that returns multiple rows, querying data using a statement that has parameters, inserting data into a table using Python, updating data in postgresql database using Python, calling postgresql stored function using Python, deleting data from a postgresql table using Python, and postgresql Python transaction. In chapter five, you will create dan configure PotgreSQL database. In this chapter, you will create Suspect table in crime database. This table has eleven columns: suspect_id (primary key), suspect_name, birth_date, case_date, report_date, suspect_status, arrest_date, mother_name, address, telephone, and photo. You will also create GUI to display, edit, insert, and delete for this table. In chapter six, you will create a table with the name Feature_Extraction, which has eight columns: feature_id (primary key), suspect_id (foreign key), feature1, feature2, feature3, feature4, feature5, and feature6. The six fields (except keys) will have a VARCHAR data type (200). You will also create GUI to display, edit, insert, and delete for this table. In chapter seven, you will create two tables, Police and Investigator. The Police table has six columns: police_id (primary key), province, city, address, telephone, and photo. The Investigator table has eight columns: investigator_id (primary key), investigator_name, rank, birth_date, gender, address, telephone, and photo. You will also create GUI to display, edit, insert, and delete for both tables. In chapter eight, you will create two tables, Victim and Case_File. The Victim table has nine columns: victim_id (primary key), victim_name, crime_type, birth_date, crime_date, gender, address, telephone, and photo. The Case_File table has seven columns: case_file_id (primary key), suspect_id (foreign key), police_id (foreign key), investigator_id (foreign key), victim_id (foreign key), status, and description. You will create GUI to display, edit, insert, and delete for both tables as well. Essential SQLAlchemy introduces a high-level open-source code library that makes it easier for Python programmers to access relational databases such as Oracle, DB2, MySQL, PostgreSQL, and SQLite. SQLAlchemy has become increasingly popular since its release, but it still lacks good offline documentation. This practical book fills the gap, and because a developer wrote it, you get an objective look at SQLAlchemy's tools rather than an advocate's description of all the "cool" features. SQLAlchemy includes both a database server-independent SQL expression language and an object-relational mapper (ORM) that lets you map "plain old Python objects" (POPOs) to database tables without substantially changing your existing Python code. Essential SQLAlchemy demonstrates how to use the library to

create a simple database application, walks you through simple queries, and explains how to use SQLAlchemy to connect to multiple databases simultaneously with the same Metadata. You also learn how to: Create custom types to be used in your schema, and when it's useful to use custom rather than built-in types Run queries, updates, and deletes with SQLAlchemy's SQL expression language Build an object mapper with SQLAlchemy, and understand the differences between this and active record patterns used in other ORMs Create objects, save them to a session, and flush them to the database Use SQLAlchemy to model object oriented inheritance Provide a declarative, active record pattern for use with SQLAlchemy using the Elixir extension Use the SQLSoup extension to provide an automatic metadata and object model based on database reflection In addition, you'll learn how and when to use other extensions to SQLAlchemy, including AssociationProxy, OrderingList, and more. Essential SQLAlchemy is the much-needed guide for every Python developer using this code library. Instead of a feature-by-feature documentation, this book takes an "essentials" approach that gives you exactly what you need to become productive with SQLAlchemy right away.

Welcome to the PostgreSQL 8.4 Official Documentation - Volume I. The SQL Language! After many years of development, PostgreSQL has become feature-complete in many areas. This release shows a targeted approach to adding features (e.g., authentication, monitoring, space reuse), and adds capabilities defined in the later SQL standards.

This book offers the straightforward, practical answers you need to help you do your job. This hands-on tutorial/reference/guide to PostgreSQL and SQL Server is not only perfect for students and beginners, but it also works for experienced developers who aren't getting the most from PostgreSQL and SQL Server. As you would expect, this book shows how to build from scratch two different databases: PostgreSQL and SQL Server using Java. In designing a GUI and as an IDE, you will make use of the NetBeans tool. In chapter one, you will learn: How to install NetBeans, JDK 11, and the PostgreSQL connector; How to integrate external libraries into projects; How the basic PostgreSQL commands are used; How to query statements to create databases, create tables, fill tables, and manipulate table contents is done. In chapter two, you will learn querying data from the postgresql using jdbc including establishing a database connection, creating a statement object, executing the query, processing the resultset object, querying data using a statement that returns multiple rows, querying data using a statement that has parameters, inserting data into a table using jdbc, updating data in postgresql database using jdbc, calling postgresql stored function using jdbc, deleting data from a postgresql table using jdbc, and postgresql jdbc transaction. In chapter three, you will learn the basics of cryptography using Java. Here, you will learn how to write a Java program to count Hash, MAC (Message Authentication Code), store keys in a KeyStore, generate PrivateKey and PublicKey, encrypt / decrypt data, and generate and verify digital prints. You will also learn how to create and store salt passwords and verify them. In chapter four, you will create a PostgreSQL database, named Bank, and its tables. In chapter five, you will create a Login table. In this case, you will see how to create a Java GUI using NetBeans to implement it. In addition to the Login table, in this chapter you will also create a Client table. In the case of the Client table, you will learn how to generate and save public and private keys into a database. You will also learn how to encrypt / decrypt data and save the results into a database. In chapter six, you will create an Account table. This account table has the following ten fields: account_id (primary key), client_id (primarykey), account_number, account_date, account_type, plain_balance, cipher_balance, decipher_balance, digital_signature, and signature_verification. In this case, you will learn how to implement generating and verifying digital prints and storing the results into a database. In chapter seven, you create a table named Client_Data, which has seven columns: client_data_id (primary key), account_id (primary_key), birth_date, address, mother_name, telephone, and photo_path. In chapter eight, you will be taught how to create a SQL Server database, named Crime, and its tables. In

chapter nine, you will be taught how to extract image features, utilizing BufferedImage class, in Java GUI. In chapter ten, you will be taught to create Java GUI to view, edit, insert, and delete Suspect table data. This table has eleven columns: suspect_id (primary key), suspect_name, birth_date, case_date, report_date, suspect_status, arrest_date, mother_name, address, telephone, and photo. In chapter eleven, you will be taught to create Java GUI to view, edit, insert, and delete Feature_Extraction table data. This table has eight columns: feature_id (primary key), suspect_id (foreign key), feature1, feature2, feature3, feature4, feature5, and feature6. In chapter twelve, you will add two tables: Police_Station and Investigator. These two tables will later be joined to Suspect table through another table, File_Case, which will be built in the seventh chapter. The Police_Station has six columns: police_station_id (primary key), location, city, province, telephone, and photo. The Investigator has eight columns: investigator_id (primary key), investigator_name, rank, birth_date, gender, address, telephone, and photo. Here, you will design a Java GUI to display, edit, fill, and delete data in both tables. In chapter thirteen, you will add two tables: Victim and File_Case. The File_Case table will connect four other tables: Suspect, Police_Station, Investigator and Victim. The Victim table has nine columns: victim_id (primary key), victim_name, crime_type, birth_date, crime_date, gender, address, telephone, and photo. The File_Case has seven columns: file_case_id (primary key), suspect_id (foreign key), police_station_id (foreign key), investigator_id (foreign key), victim_id (foreign key), status, and description. Here, you will also design a Java GUI to display, edit, fill, and delete data in both tables. Finally, this book is hopefully useful and can improve database programming skills for every Java/PostgreSQL/SQL Server programmer. This book is a comprehensive guide to Python as one of the fastest-growing computer languages including Web and Internet applications. This clear and concise introduction to the Python language is aimed at readers who are already familiar with programming in at least one language. This hands-on book introduces the essential topic of coding and the Python computer language to beginners and programmers of all ages. This book explains relational theory in practice, and demonstrates through two projects how you can apply it to your use of PostgreSQL and SQL Server databases. This book covers the important requirements of teaching databases with a practical and progressive perspective. This book offers the straightforward, practical answers you need to help you do your job. This hands-on tutorial/reference/guide to PostgreSQL and SQL Server is not only perfect for students and beginners, but it also works for experienced developers who aren't getting the most from both databases. In designing a GUI and as an IDE, you will make use Qt Designer. In the first chapter, you will learn to use several widgets in PyQt5: Display a welcome message; Use the Radio Button widget; Grouping radio buttons; Displays options in the form of a check box; and Display two groups of check boxes. In chapter two, you will learn to use the following topics: Using Signal / Slot Editor; Copy and place text from one Line Edit widget to another; Convert data types and make a simple calculator; Use the Spin Box widget; Use scrollbars and sliders; Using the Widget List; Select a number of list items from one Widget List and display them on another Widget List widget; Add items to the Widget List; Perform operations on the Widget List; Use the Combo Box widget; Displays data selected by the user from the Calendar Widget; Creating a hotel reservation application; and Display tabular data using Table Widgets. In chapter three, you will learn: How to create the initial three tables project in the School database: Teacher, Class, and Subject tables; How to create database configuration files; How to create a Python GUI for inserting and editing tables; How to create a Python GUI to join and query the three tables. In chapter four, you will learn how to: Create a main form to connect all forms; Create a project will add three more tables to the school database: Student, Parent, and Tuition tables; Create a Python GUI for inserting and editing tables; Create a Python GUI to join and query over the three tables. In chapter five, you will join the six classes, Teacher, TClass, Subject, Student, Parent, and Tuition and make queries over those tables. In chapter

six, you will get introduction of postgresql. And then, you will learn querying data from the postgresql using Python including establishing a database connection, creating a statement object, executing the query, processing the resultset object, querying data using a statement that returns multiple rows, querying data using a statement that has parameters, inserting data into a table using Python, updating data in postgresql database using Python, calling postgresql stored function using Python, deleting data from a postgresql table using Python, and postgresql Python transaction. In chapter seven, you will create and configure PostgreSQL database. In this chapter, you will create Suspect table in crime database. This table has eleven columns: suspect_id (primary key), suspect_name, birth_date, case_date, report_date, suspect_status, arrest_date, mother_name, address, telephone, and photo. You will also create GUI to display, edit, insert, and delete for this table. In chapter eight, you will create a table with the name Feature_Extraction, which has eight columns: feature_id (primary key), suspect_id (foreign key), feature1, feature2, feature3, feature4, feature5, and feature6. The six fields (except keys) will have a VARCHAR data type (200). You will also create GUI to display, edit, insert, and delete for this table. In chapter nine, you will create two tables, Police and Investigator. The Police table has six columns: police_id (primary key), province, city, address, telephone, and photo. The Investigator table has eight columns: investigator_id (primary key), investigator_name, rank, birth_date, gender, address, telephone, and photo. You will also create GUI to display, edit, insert, and delete for both tables. In chapter ten, you will create two tables, Victim and Case_File. The Victim table has nine columns: victim_id (primary key), victim_name, crime_type, birth_date, crime_date, gender, address, telephone, and photo. The Case_File table has seven columns: case_file_id (primary key), suspect_id (foreign key), police_id (foreign key), investigator_id (foreign key), victim_id (foreign key), status, and description. You will create GUI to display, edit, insert, and delete for both tables as well. Arguably the most capable of all the open source databases, PostgreSQL is an object-relational database management system first developed in 1977 by the University of California at Berkeley. In spite of its long history, this robust database suffers from a lack of easy-to-use documentation. Practical PostgreSQL fills that void with a fast-paced guide to installation, configuration, and usage. This comprehensive new volume shows you how to compile PostgreSQL from source, create a database, and configure PostgreSQL to accept client-server connections. It also covers the many advanced features, such as transactions, versioning, replication, and referential integrity that enable developers and DBAs to use PostgreSQL for serious business applications. The thorough introduction to PostgreSQL's PL/pgSQL programming language explains how you can use this very useful but under-documented feature to develop stored procedures and triggers. The book includes a complete command reference, and database administrators will appreciate the chapters on user management, database maintenance, and backup & recovery. With Practical PostgreSQL, you will discover quickly why this open source database is such a great open source alternative to proprietary products from Oracle, IBM, and Microsoft.

This step-by-step guide to explore database programming using Java is ideal for people with little or no programming experience. The goal of this concise book is not just to teach you Java, but to help you think like a programmer. Each brief chapter covers the material for one week of a college course to help you practice what you've learned. As you would expect, this book shows how to build from scratch two different databases: PostgreSQL and SQLite using Java. In designing a GUI and as an IDE, you will make use of the NetBeans tool. In the first chapter, you will learn: How to install NetBeans, JDK 11, and the PostgreSQL connector; How to integrate external libraries into projects; How the basic PostgreSQL commands are used; How to query statements to create databases, create tables, fill tables, and manipulate table contents is done. In the first chapter, you will learn: How to install NetBeans, JDK 11, and the PostgreSQL connector; How to integrate external libraries into projects; How the basic

PostgreSQL commands are used; How to query statements to create databases, create tables, fill tables, and manipulate table contents is done. In the second chapter, you will learn querying data from the postgresql using jdbc including establishing a database connection, creating a statement object, executing the query, processing the resultset object, querying data using a statement that returns multiple rows, querying data using a statement that has parameters, inserting data into a table using jdbc, updating data in postgresql database using jdbc, calling postgresql stored function using jdbc, deleting data from a postgresql table using jdbc, and postgresql jdbc transaction. In chapter three, you will create a PostgreSQL database, named School, and its tables. In chapter four, you will study: Creating the initial three table projects in the school database: Teacher table, TClass table, and Subject table; Creating database configuration files; Creating a Java GUI for viewing and navigating the contents of each table; Creating a Java GUI for inserting and editing tables; and Creating a Java GUI to join and query the three tables. In chapter five, you will learn: Creating the main form to connect all forms; Creating a project will add three more tables to the school database: the Student table, the Parent table, and Tuition table; Creating a Java GUI to view and navigate the contents of each table; Creating a Java GUI for editing, inserting, and deleting records in each table; Creating a Java GUI to join and query the three tables and all six. In chapter six, you will study how to query the six tables. In chapter seven, you will be shown how to create SQLite database and tables with Java. In chapter eight, you will be taught how to extract image features, utilizing BufferedImage class, in Java GUI. Digital image techniques to extract image features used in this chapter are grascaling, sharpening, inverting, blurring, dilation, erosion, closing, opening, vertical prewitt, horizontal prewitt, Laplacian, horizontal sobel, and vertical sobel. For readers, you can develop it to store other advanced image features based on descriptors such as SIFT and others for developing descriptor based matching. In chapter nine, you will be taught to create Java GUI to view, edit, insert, and delete Suspect table data. This table has eleven columns: suspect_id (primary key), suspect_name, birth_date, case_date, report_date, suspect_status, arrest_date, mother_name, address, telephone, and photo. In chapter ten, you will be taught to create Java GUI to view, edit, insert, and delete Feature_Extraction table data. This table has eight columns: feature_id (primary key), suspect_id (foreign key), feature1, feature2, feature3, feature4, feature5, and feature6. All six fields (except keys) will have a BLOB data type, so that the image of the feature will be directly saved into this table. In chapter eleven, you will add two tables: Police_Station and Investigator. These two tables will later be joined to Suspect table through another table, File_Case, which will be built in the seventh chapter. The Police_Station has six columns: police_station_id (primary key), location, city, province, telephone, and photo. The Investigator has eight columns: investigator_id (primary key), investigator_name, rank, birth_date, gender, address, telephone, and photo. Here, you will design a Java GUI to display, edit, fill, and delete data in both tables. In chapter twelve, you will add two tables: Victim and Case_File. The File_Case table will connect four other tables: Suspect, Police_Station, Investigator and Victim. The Victim table has nine columns: victim_id (primary key), victim_name, crime_type, birth_date, crime_date, gender, address, telephone, and photo. The Case_File has seven columns: case_file_id (primary key), suspect_id (foreign key), police_station_id (foreign key), investigator_id (foreign key), victim_id (foreign key), status, and description. Here, you will also design a Java GUI to display, edit, fill, and delete data in both tables. Finally, this book is hopefully useful and can improve database programming skills for every Java/PostgreSQL/SQLite programmer.

Recipes for emerging developers in R programming and data scientists to simplify their R programming capabilities About This Book Develop strategies to speed up your R code Tackle programming problems and explore both functional and object-oriented programming techniques Learn how to address the core problems of programming in R with the most popular R packages for common tasks Who This Book Is For This book is for developers who

would like to enhance the R programming skills. Basic knowledge of R programming is assumed. What You Will Learn Install R and its various IDE for a given platform along with installing libraries from different repositories and version control Learn about basic data structures in R and how to work with them Write customized R functions and handle recursions, exceptions in R environments Create the data processing task as a step by step computer program and execute using dplyr Extract and process unstructured text data Interact with database management system to develop statistical applications Formulate and implement parallel processing in R In Detail R is a powerful tool for statistics, graphics, and statistical programming. It is used by tens of thousands of people daily to perform serious statistical analyses. It is a free, open source system whose implementation is the collective accomplishment of many intelligent, hard-working people. There are more than 2,000 available add-ons, and R is a serious rival to all commercial statistical packages. The objective of this book is to show how to work with different programming aspects of R. The emerging R developers and data science could have very good programming knowledge but might have limited understanding about R syntax and semantics. Our book will be a platform develop practical solution out of real world problem in scalable fashion and with very good understanding. You will work with various versions of R libraries that are essential for scalable data science solutions. You will learn to work with Input / Output issues when working with relatively larger dataset. At the end of this book readers will also learn how to work with databases from within R and also what and how meta programming helps in developing applications. Style and approach This book will be a companion for R programmer and emerging developers in R programming areas. This book will contain recipes related to advanced R programming which will enable users to solve complex problems efficiently. Businesses are gathering data today at exponential rates and yet few people know how to access it meaningfully. If you're a business or IT professional, this short hands-on guide teaches you how to pull and transform data with SQL in significant ways. You will quickly master the fundamentals of SQL and learn how to create your own databases. Author Thomas Nield provides exercises throughout the book to help you practice your newfound SQL skills at home, without having to use a database server environment. Not only will you learn how to use key SQL statements to find and manipulate your data, but you'll also discover how to efficiently design and manage databases to meet your needs. You'll also learn how to: Explore relational databases, including lightweight and centralized models Use SQLite and SQLiteStudio to create lightweight databases in minutes Query and transform data in meaningful ways by using SELECT, WHERE, GROUP BY, and ORDER BY Join tables to get a more complete view of your business data Build your own tables and centralized databases by using normalized design principles Manage data by learning how to INSERT, DELETE, and UPDATE records PostgreSQL: Up and Running"O'Reilly Media, Inc."

This book is for moderate to advanced PostgreSQL database professionals who wish to extend PostgreSQL, utilizing the most updated features of PostgreSQL 9.4. For a better understanding of this book, familiarity with writing SQL, a basic idea of query tuning, and some coding experience in your preferred language is expected.

In this book, you will learn how to build from scratch a criminal records management database system using Java/PostgreSQL. All Java code for cryptography and digital image processing in this book is Native Java. Intentionally not to rely on external libraries, so that readers know in detail the process of extracting digital images from scratch in Java. There are only three external libraries used in this book: Connector / J to facilitate Java to PostgreSQL connections, JCalendar to display calendar controls,

and JFreeChart to display graphics. Digital image techniques to extract image features used in this book are grascaling, sharpening, invertering, blurring, dilation, erosion, closing, opening, vertical prewitt, horizontal prewitt, Laplacian, horizontal sobel, and vertical sobel. For readers, you can develop it to store other advanced image features based on descriptors such as SIFT and others for developing descriptor based matching. In the first chapter, you will learn: How to install NetBeans, JDK 11, and the PostgreSQL connector; How to integrate external libraries into projects; How the basic PostgreSQL commands are used; How to query statements to create databases, create tables, fill tables, and manipulate table contents is done. In the second chapter, you will learn querying data from the postgresql using jdbc including establishing a database connection, creating a statement object, executing the query, processing the resultset object, querying data using a statement that returns multiple rows, querying data using a statement that has parameters, inserting data into a table using jdbc, updating data in postgresql database using jdbc, calling postgresql stored function using jdbc, deleting data from a postgresql table using jdbc, and postgresql jdbc transaction. In the second chapter, you will learn the basics of cryptography using Java. Here, you will learn how to write a Java program to count Hash, MAC (Message Authentication Code), store keys in a KeyStore, generate PrivateKey and PublicKey, encrypt / decrypt data, and generate and verify digital prints. In the third chapter, you will learn how to create and store salt passwords and verify them. You will create a Login table. In this case, you will see how to create a Java GUI using NetBeans to implement it. In addition to the Login table, in this chapter you will also create a Client table. In the case of the Client table, you will learn how to generate and save public and private keys into a database. You will also learn how to encrypt / decrypt data and save the results into a database. In the fourth chapter, you will create an Account table. This account table has the following ten fields: account_id (primary key), client_id (primarykey), account_number, account_date, account_type, plain_balance, cipher_balance, decipher_balance, digital_signature, and signature_verification. In this case, you will learn how to implement generating and verifying digital prints and storing the results into a database. In the fifth chapter, you create a table with the name of the Account, which has ten columns: account_id (primary key), client_id (primarykey), account_number, account_date, account_type, plain_balance, cipher_balance, decipher_balance, digital_signature, and signature_verification. In the sixth chapter, you will create a Client_Data table, which has the following seven fields: client_data_id (primary key), account_id (primary_key), birth_date, address, mother_name, telephone, and photo_path. In the seventh chapter, you will be taught how to create Crime database and its tables. In eighth chapter, you will be taught how to extract image features, utilizing BufferedImage class, in Java GUI. In the nineth chapter, you will be taught to create Java GUI to view, edit, insert, and delete Suspect table data. This table has eleven columns: suspect_id (primary key), suspect_name, birth_date, case_date, report_date, suspect_status, arrest_date, mother_name, address, telephone, and photo. In the tenth chapter, you will be taught to create Java GUI to view, edit, insert, and delete Feature_Extraction table data. This table has eight columns: feature_id (primary key), suspect_id (foreign key), feature1, feature2, feature3, feature4, feature5, and feature6. In the eleventh chapter, you will add two tables: Police_Station and Investigator. These two tables will later be joined to Suspect table through another

table, `File_Case`, which will be built in the seventh chapter. The `Police_Station` has six columns: `police_station_id` (primary key), `location`, `city`, `province`, `telephone`, and `photo`. The `Investigator` has eight columns: `investigator_id` (primary key), `investigator_name`, `rank`, `birth_date`, `gender`, `address`, `telephone`, and `photo`. Here, you will design a Java GUI to display, edit, fill, and delete data in both tables. In the twelfth chapter, you will add two tables: `Victim` and `File_Case`. The `File_Case` table will connect four other tables: `Suspect`, `Police_Station`, `Investigator` and `Victim`. The `Victim` table has nine columns: `victim_id` (primary key), `victim_name`, `crime_type`, `birth_date`, `crime_date`, `gender`, `address`, `telephone`, and `photo`. The `File_Case` has seven columns: `file_case_id` (primary key), `suspect_id` (foreign key), `police_station_id` (foreign key), `investigator_id` (foreign key), `victim_id` (foreign key), `status`, and `description`. Here, you will also design a Java GUI to display, edit, fill, and delete data in both tables. Finally, this book is hopefully useful for you.

This book explains relational theory in practice, and demonstrates through two projects how you can apply it to your use of PostgreSQL and SQLite databases. This book covers the important requirements of teaching databases with a practical and progressive perspective. This book offers the straightforward, practical answers you need to help you do your job. This hands-on tutorial/reference/guide to PostgreSQL and SQLite is not only perfect for students and beginners, but it also works for experienced developers who aren't getting the most from both databases. In designing a GUI and as an IDE, you will make use Qt Designer. In the first chapter, you will learn to use several widgets in PyQt5: Display a welcome message; Use the Radio Button widget; Grouping radio buttons; Displays options in the form of a check box; and Display two groups of check boxes. In chapter two, you will learn to use the following topics: Using Signal / Slot Editor; Copy and place text from one Line Edit widget to another; Convert data types and make a simple calculator; Use the Spin Box widget; Use scrollbars and sliders; Using the Widget List; Select a number of list items from one Widget List and display them on another Widget List widget; Add items to the Widget List; Perform operations on the Widget List; Use the Combo Box widget; Displays data selected by the user from the Calendar Widget; Creating a hotel reservation application; and Display tabular data using Table Widgets. In chapter three, you will learn: How to create the initial three tables project in the School database: `Teacher`, `Class`, and `Subject` tables; How to create database configuration files; How to create a Python GUI for inserting and editing tables; How to create a Python GUI to join and query the three tables. In chapter four, you will learn how to: Create a main form to connect all forms; Create a project will add three more tables to the school database: `Student`, `Parent`, and `Tuition` tables; Create a Python GUI for inserting and editing tables; Create a Python GUI to join and query over the three tables. In chapter five, you will join the six classes, `Teacher`, `TClass`, `Subject`, `Student`, `Parent`, and `Tuition` and make queries over those tables. In chapter six and chapter seven, you will get introduction of postgresql. And then, you will learn querying data from the postgresql using Python including establishing a database connection, creating a statement object, executing the query, processing the resultset object, querying data using a statement that returns multiple rows, querying data using a statement that has parameters, inserting data into a table using Python, updating data in postgresql database using Python, calling postgresql stored function using Python, deleting data from a postgresql table using Python, and

postgresql Python transaction. In chapter eight, you will create and configure PostgreSQL database. In this chapter, you will create Suspect table in crime database. This table has eleven columns: suspect_id (primary key), suspect_name, birth_date, case_date, report_date, suspect_status, arrest_date, mother_name, address, telephone, and photo. You will also create GUI to display, edit, insert, and delete for this table. In chapter nine, you will create a table with the name Feature_Extraction, which has eight columns: feature_id (primary key), suspect_id (foreign key), feature1, feature2, feature3, feature4, feature5, and feature6. The six fields (except keys) will have a VARCHAR data type (200). You will also create GUI to display, edit, insert, and delete for this table. In chapter ten, you will create two tables, Police and Investigator. The Police table has six columns: police_id (primary key), province, city, address, telephone, and photo. The Investigator table has eight columns: investigator_id (primary key), investigator_name, rank, birth_date, gender, address, telephone, and photo. You will also create GUI to display, edit, insert, and delete for both tables. In chapter eleven, you will create two tables, Victim and Case_File. The Victim table has nine columns: victim_id (primary key), victim_name, crime_type, birth_date, crime_date, gender, address, telephone, and photo. The Case_File table has seven columns: case_file_id (primary key), suspect_id (foreign key), police_id (foreign key), investigator_id (foreign key), victim_id (foreign key), status, and description. You will create GUI to display, edit, insert, and delete for both tables as well.

*The most updated PostgreSQL book on the market, covering version 8.0 *Highlights the most popular PostgreSQL APIs, including C, Perl, PHP, and Java *This is two books in one; it simultaneously covers key relational database design principles, while teaching PostgreSQL

PostgreSQL has become the most advanced open source database on the market. This book adopts a step-by-step approach to meet almost every requirement you can think of while deploying PostgreSQL in production environments. You will not only learn how to design and manage your database but also discover how to administer and secure the database.

Thoroughly updated with material related to the GRASS6, the third edition includes new sections on attribute database management and SQL support, vector networks analysis, lidar data processing and new graphical user interfaces. All chapters were updated with numerous practical examples using the first release of a comprehensive, state-of-the-art geospatial data set.

In this book, you will learn how to build from scratch a PostgreSQL database management system using Java. In designing a GUI and as an IDE, you will make use of the NetBeans tool. Gradually and step by step, you will be taught how to utilize PostgreSQL in Java. In the first chapter, you will learn: How to install NetBeans, JDK 11, and the PostgreSQL connector; How to integrate external libraries into projects; How the basic PostgreSQL commands are used; How to query statements to create databases, create tables, fill tables, and manipulate table contents is done. In the first chapter, you will learn: How to install NetBeans, JDK 11, and the PostgreSQL connector; How to integrate external libraries into projects; How the basic PostgreSQL commands are used; How to query statements to create databases, create tables, fill tables, and manipulate table contents is done. In the second chapter, you will learn querying data from the postgresql using jdbc including establishing a database

connection, creating a statement object, executing the query, processing the resultset object, querying data using a statement that returns multiple rows, querying data using a statement that has parameters, inserting data into a table using jdbc, updating data in postgresql database using jdbc, calling postgresql stored function using jdbc, deleting data from a postgresql table using jdbc, and postgresql jdbc transaction. In the third chapter, you will study: Creating the initial three table projects in the school database: Teacher table, TClass table, and Subject table; Creating database configuration files; Creating a Java GUI for viewing and navigating the contents of each table; Creating a Java GUI for inserting and editing tables; and Creating a Java GUI to join and query the three tables. In the fourth chapter, you will learn: Creating the main form to connect all forms; Creating a project will add three more tables to the school database: the Student table, the Parent table, and Tuition table; Creating a Java GUI to view and navigate the contents of each table; Creating a Java GUI for editing, inserting, and deleting records in each table; Creating a Java GUI to join and query the three tables and all six. In the last chapter, you will study how to query the six tables. Finally, this book is hopefully useful and can improve database programming skills for every Java/PostgreSQL programmer.

This book is a Python/PostgreSQL version of the Python/MySQL book which was written by the author. What underlies the writing of this book is the growing popularity of the PostgreSQL database server lately and more and more programmers migrating from MySQL to PostgreSQL. In this book, you will learn to build a school database project, step by step. A number of widgets from PyQt will be used for the user interface. In the first and second chapter, you will get introduction of postgresql. And then, you will learn querying data from the postgresql using Python including establishing a database connection, creating a statement object, executing the query, processing the resultset object, querying data using a statement that returns multiple rows, querying data using a statement that has parameters, inserting data into a table using Python, updating data in postgresql database using Python, calling postgresql stored function using Python, deleting data from a postgresql table using Python, and postgresql Python transaction. In the fourth chapter, you will study: Creating the initial three table in the School database project: Teacher table, Class table, and Subject table; Creating database configuration files; Creating a Python GUI for viewing and navigating the contents of each table. Creating a Python GUI for inserting and editing tables; and Creating a Python GUI to merge and query the three tables. In last chapter, you will learn: Creating the main form to connect all forms; Creating a project that will add three more tables to the school database: the Student table, the Parent table, and the Tuition table; Creating a Python GUI to view and navigate the contents of each table; Creating a Python GUI for editing, inserting, and deleting records in each table; Create a Python GUI to merge and query the three tables and all six tables.

Python Programming for Raspberry Pi® In just 24 sessions of one hour or less, Sams Teach Yourself Python Programming for Raspberry Pi in 24 Hours teaches you Python programming on Raspberry Pi, so you can start creating awesome projects for home automation, home theater, gaming, and more. Using this book's straight-forward, step-by-step approach, you'll move from the absolute basics all the way through network and web connections, multimedia, and even connecting with electronic circuits for sensing and robotics. Every lesson and case study application builds on what you've

already learned, giving you a rock-solid foundation for real-world success! Step-by-step instructions carefully walk you through the most common Raspberry Pi Python programming tasks. Quizzes at the end of each chapter help you test your knowledge. By the Way notes present interesting information related to the discussion. Did You Know? tips offer advice or show you easier ways to perform tasks. Watch Out! cautions alert you to possible problems and give you advice on how to avoid them. Richard Blum has administered systems and networks for more than 25 years. He has published numerous Linux and open source books, and is an online instructor for web programming and Linux courses used by colleges across the United States. His books include Ubuntu Linux Secrets; Linux for Dummies, Ninth Edition; PostgreSQL 8 for Windows; and Professional Linux Programming. Christine Bresnahan began working as a systems administrator more than 25 years ago. Now an Adjunct Professor at Ivy Tech Community College, she teaches Python programming, Linux administration and computer security. She is coauthor of The Linux Bible, Eighth Edition. With Blum, she also coauthored Linux Command Line & Shell Scripting Bible, Second Edition. Get your Raspberry Pi and choose the right low-cost peripherals Set up Raspian Linux and the Python programming environment Learn Python basics, including arithmetic and structured commands Master Python 3 lists, tuples, dictionaries, sets, strings, files, and modules Reuse the same Python code in multiple locations with functions Manipulate string data efficiently with regular expressions Practice simple object-oriented programming techniques Use exception handling to make your code more reliable Program modern graphical user interfaces with Raspberry Pi and OpenGL Create Raspberry Pi games with the PyGame library Learn network, web, and database techniques you can also use in business software Write Python scripts that send email Interact with other devices through Raspberry Pi's GPIO interface Walk through example Raspberry Pi projects that inspire you to do even more On the Web: Register your book at informit.com/title/9780672337642 for access to all code examples from the book, as well as update and corrections as they become available.

In this book, you will create two MariaDB and PostgreSQL driven projects using PyQt. The step-by-step guide in this book is expected to help the reader's confidence to become a programmer who can solve database programming problems. A progressive project is provided to demonstrate how to apply the concepts of MariaDB and PostgreSQL using Python. In second chapter, you will learn PyQt that consists of a number of Python bindings for cross-platform applications that combine all the strengths of Qt and Python. By using PyQt, you can include all Qt libraries in Python code, so you can write GUI applications in Python. In other words, you can use PyQt to access all the features provided by Qt through Python code. Because PyQt depends on the Qt libraries at run time, you need to install PyQt. In third chapter, you will learn: How to create the initial three tables project in the School database: Teacher, Class, and Subject tables; How to create database configuration files; How to create a Python GUI for inserting and editing tables; How to create a Python GUI to join and query the three tables. In fourth chapter, you will learn how to: Create a main form to connect all forms; Create a project will add three more tables to the school database: Student, Parent, and Tuition tables; Create a Python GUI for inserting and editing tables; Create a Python GUI to join and query over the three tables. In this chapter, you will join the six classes, Teacher, TClass, Subject, Student, Parent, and Tuition and make queries over

those tables. In chapter five, you will create and configure PostgreSQL database. In this chapter, you will create Suspect table in crime database. This table has eleven columns: suspect_id (primary key), suspect_name, birth_date, case_date, report_date, suspect_status, arrest_date, mother_name, address, telephone, and photo. You will also create GUI to display, edit, insert, and delete for this table. In chapter six, you will create a table with the name Feature_Extraction, which has eight columns: feature_id (primary key), suspect_id (foreign key), feature1, feature2, feature3, feature4, feature5, and feature6. The six fields (except keys) will have a VARCHAR data type (200). You will also create GUI to display, edit, insert, and delete for this table. In chapter seven, you will create two tables, Police and Investigator. The Police table has six columns: police_id (primary key), province, city, address, telephone, and photo. The Investigator table has eight columns: investigator_id (primary key), investigator_name, rank, birth_date, gender, address, telephone, and photo. You will also create GUI to display, edit, insert, and delete for both tables. In chapter eight, you will create two tables, Victim and Case_File. The Victim table has nine columns: victim_id (primary key), victim_name, crime_type, birth_date, crime_date, gender, address, telephone, and photo. The Case_File table has seven columns: case_file_id (primary key), suspect_id (foreign key), police_id (foreign key), investigator_id (foreign key), victim_id (foreign key), status, and description. You will create GUI to display, edit, insert, and delete for both tables as well.

In this book, you will create two desktop applications using Python GUI and PostgreSQL. This book is a Python/PostgreSQL version of the Python/MySQL book which was written by the author. What underlies the writing of this book is the growing popularity of the PostgreSQL database server lately and more and more programmers migrating from MySQL to PostgreSQL. In this book, you will learn to build a school database project, step by step. A number of widgets from PyQt will be used for the user interface. In the first and second chapter, you will get introduction of postgresql. And then, you will learn querying data from the postgresql using Python including establishing a database connection, creating a statement object, executing the query, processing the resultset object, querying data using a statement that returns multiple rows, querying data using a statement that has parameters, inserting data into a table using Python, updating data in postgresql database using Python, calling postgresql stored function using Python, deleting data from a postgresql table using Python, and postgresql Python transaction. In the fourth chapter, you will study: Creating the initial three table in the School database project: Teacher table, Class table, and Subject table; Creating database configuration files; Creating a Python GUI for viewing and navigating the contents of each table. Creating a Python GUI for inserting and editing tables; and Creating a Python GUI to merge and query the three tables. In chapter five, you will learn: Creating the main form to connect all forms; Creating a project that will add three more tables to the school database: the Student table, the Parent table, and the Tuition table; Creating a Python GUI to view and navigate the contents of each table; Creating a Python GUI for editing, inserting, and deleting records in each table; Create a Python GUI to merge and query the three tables and all six tables. In chapter six, you will create and configure PostgreSQL database. In this chapter, you will create Suspect table in crime database. This table has eleven columns: suspect_id (primary key), suspect_name, birth_date, case_date, report_date, suspect_status, arrest_date,

mother_name, address, telephone, and photo. You will also create GUI to display, edit, insert, and delete for this table. In chapter seven, you will create a table with the name Feature_Extraction, which has eight columns: feature_id (primary key), suspect_id (foreign key), feature1, feature2, feature3, feature4, feature5, and feature6. The six fields (except keys) will have a VARCHAR data type (200). You will also create GUI to display, edit, insert, and delete for this table. In chapter eight, you will create two tables, Police and Investigator. The Police table has six columns: police_id (primary key), province, city, address, telephone, and photo. The Investigator table has eight columns: investigator_id (primary key), investigator_name, rank, birth_date, gender, address, telephone, and photo. You will also create GUI to display, edit, insert, and delete for both tables. In chapter nine, you will create two tables, Victim and Case_File. The Victim table has nine columns: victim_id (primary key), victim_name, crime_type, birth_date, crime_date, gender, address, telephone, and photo. The Case_File table has seven columns: case_file_id (primary key), suspect_id (foreign key), police_id (foreign key), investigator_id (foreign key), victim_id (foreign key), status, and description. You will create GUI to display, edit, insert, and delete for both tables as well.

This book is for anyone who's worked with Clojure and wants to use it to start developing applications for the Web. Experience or familiarity with basic Clojure syntax is a must, and exposure to Leiningen (or other similar build tools such as Maven) would be helpful.

PostgreSQL was designed to run on UNIX-like platforms. However, PostgreSQL was then also designed to be portable so that it could run on various platforms such as Mac OS X, Solaris, and Windows. PostgreSQL is free and open source software. Its source code is available under PostgreSQL license, a liberal open source license. You are free to use, modify and distribute PostgreSQL in any form. PostgreSQL requires very minimum maintained efforts because of its stability. Therefore, if you develop applications based on PostgreSQL, the total cost of ownership is low in comparison with other database management systems. In Chapter 2, you will learn: Connecting to a PostgreSQL database – shows you how to setup a simple PHP application structure and connect to a PostgreSQL database; Creating new PostgreSQL database tables – walks you through the steps of creating database tables in PostgreSQL using PHP; Inserting data into PostgreSQL tables – guides you how to use insert data into a table using PHP PDO; Updating data in the table – provides you with the steps of updating data in the database tables; Querying data from a table – shows you various ways to query data in the PostgreSQL database from PHP; Performing transactions – explains the transaction concept and shows you how to perform transactions in PHP; Working with the binary large objects (BLOB) – shows you how to insert, select, and delete the large objects in the PostgreSQL using PHP; Calling PostgreSQL stored procedures – explains you the steps of calling PostgreSQL stored procedures from PHP; Deleting data in a PostgreSQL table using PHP PDO – teaches you how to delete data from the PostgreSQL table in the PHP application using PDO. In Chapter 3, you will learn managing table structure and views including postgresql data types, postgresql create table, postgresql select into statement, postgresql create table as, using postgresql serial to create auto-increment column, identity column, alter table, drop table, truncate table, check constraint, not-null constraint, foreign key, primary key, unique constraint,

managing postgresql views, creating updatable views, materialized views, creating updatable views using the with check option clause, and recursive view. In Chapter 4, you will learn statements, operators, and clauses including select, order by, select distinct, limit, fetch, in, between, postgresql like, is null, alias, joins, inner join, postgresql left join, self-join, full outer join, cross join, natural join, group by, having, intersect operator, except operator, grouping sets, cube, and rollup. In Chapter 5, you will learn postgresql trigger, aggregate, and string functions including creating the first trigger in postgresql, managing postgresql trigger, aggregate functions, avg function, max function, min function, sum function, postgresql concat function, ascii function, trim function, length function, substring function, regexp_matches function, regexp_replace function, replace function, to_number function, and to_char function.

What is this book about? With the release of PHP 5 and the Zend Engine 2, PHP finally graduates from its earliest days as a lightweight scripting syntax to a powerful object oriented programming language that can hold its own against the Java and .NET architectures that currently dominate corporate software development. This book has a pragmatic focus on how to use PHP in the larger scheme of enterprise-class software development. What does this book cover? Unlike Java or .NET, there is little discussion of the application of design patterns, component architectures, and best-practices to the development of applications using PHP. Software written in the absence of this sort of higher-order architecture will never be able to match the robust frameworks that Java and .NET ship with out of the box. This book addresses this issue by covering the following material: Part 1 discusses the OO concepts that were initially explored in Beginning PHP 5 and a demonstration of how to implement them in PHP 5. This section also covers UML modeling and provides a brief introduction to project management techniques that are covered in more depth in Part 4. Parts 2 and 3 present objects and object hierarchies that, when completed, comprise a robust toolkit that developers will be able to reuse on future projects. These chapters are designed to arm the professional PHP developer with the sort of constructs that are available out of the box with platforms such as Java and .NET — from simple utility classes like Collection and Iterator, to more complex constructs like Model/View/Controller architectures and state machines. Part 4 shows how to use the toolkit from Parts 2 and 3 to create real-world applications. We look at the development of a robust contact management system that will leverage the componentry and concepts already discussed and introduce project management and software architecture concepts that enable developers to accurately identify business requirements, design scalable, extensible platforms, and handle change management effectively. It covers the waterfall and spiral project management paradigms and include a discussion on eXtreme Programming and other approaches to software development. The Appendices include an extended discussion on the effective use of CVS, introduce the Zend Studio IDE and related tools, and discuss performance tuning and scalability.

Get a 65% discount starting today until 31 December 2020. Only for the 100 buyers. Use this code DNSPSSKULJNSP to redeem. Take advantage of this limited opportunity. This book learns about developing web services based on REST architecture using Deno. Deno is the latest server runtime environment for typescript and javascript in addition to node.js which is well known to date. Yes, deno was created by Ryan Dahl who created node.js itself, will deno be the next node.js successor? Of

course there are reasons behind developing a new runtime for executing typescript and javascript. Architecturally, for deno runtime javascript it still uses Google Engine V8 just like the previous node.js, but this time the deno was built using Rust and TypeScript languages, while node.js was built with C ++ and JavaScript. For asynchronous runtime and event driven deno use the open source library, Tokio. Deno support typescript built-in or out of the box in the sense can be used directly without having to first configure settings, unlike node.js. The use of javascript is also supported in addition to typescript. Deno is more secure than node.js, because by default deno cannot access files, environment access, network, without explicit declaration. What is discussed in this book? Here are the points: - Introduction and installation of deno along with visual studio code as a code editor - Use standard modules for http servers - Use of third party modules such as oak to handle requests, responses, and routing - Creating a controller and routing for CRUD functionality for the postgresql database - Using Denon to automate the compilation and deno project running - Implementation of middleware for authentication - Implement bcrypt module for password hashing - Implementation of authentication using JWT - Implementation of https server - Refactoring module - Repository pattern - Access user defined functions and stored procedures in postgresql - Bundling project - The use of PM2 as monitoring tools - The use of denoDB ORM Hopefully this book can be another alternative as a source of learning exercises, tutorials, or references for those who want to learn Deno programming.

This book guides animal ecologists, biologists and wildlife and data managers through a step-by-step procedure to build their own advanced software platforms to manage and process wildlife tracking data. This unique, problem-solving-oriented guide focuses on how to extract the most from GPS animal tracking data, while preventing error propagation and optimizing analysis performance. Based on the open source PostgreSQL/PostGIS spatial database, the software platform will allow researchers and managers to integrate and harmonize GPS tracking data together with animal characteristics, environmental data sets, including remote sensing image time series, and other bio-logged data, such as acceleration data. Moreover, the book shows how the powerful R statistical environment can be integrated into the software platform, either connecting the database with R, or embedding the same tools in the database through the PostgreSQL extension PI/R. The client/server architecture allows users to remotely connect a number of software applications that can be used as a database front end, including GIS software and WebGIS. Each chapter offers a real-world data management and processing problem that is discussed in its biological context; solutions are proposed and exemplified through ad hoc SQL code, progressively exploring the potential of spatial database functions applied to the respective wildlife tracking case. Finally, wildlife tracking management issues are discussed in the increasingly widespread framework of collaborative science and data sharing. GPS animal telemetry data from a real study, freely available online, are used to demonstrate the proposed examples. This book is also suitable for undergraduate and graduate students, if accompanied by the basics of databases.

Over 90 recipes to help data scientists and AI engineers orchestrate modern ETL/ELT workflows and perform analytics using Azure services more easily
Key Features
Discover how to work with different SQL and NoSQL data stores in Microsoft Azure
Create and execute real-time processing solutions using Azure Databricks, Azure

Stream Analytics, and Azure Data Explorer Design and execute batch processing solutions using Azure Data Factory Book Description Data engineering is a growing field that focuses on preparing data for analysis. This book uses various Azure services to implement and maintain infrastructure to extract data from multiple sources, and then transform and load it for data analysis. This book takes you through different techniques for performing big data engineering using Microsoft cloud services. It begins by showing you how Azure Blob storage can be used for storing large amounts of unstructured data and how to use it for orchestrating a data workflow. You'll then work with different Cosmos DB APIs and Azure SQL Database. Moving on, you'll discover how to provision an Azure Synapse database and find out how to ingest and analyze data in Azure Synapse. As you advance, you'll cover the design and implementation of batch processing solutions using Azure Data Factory, and understand how to manage, maintain, and secure Azure Data Factory pipelines. You'll also design and implement batch processing solutions using Azure Databricks and then manage and secure Azure Databricks clusters and jobs. In the concluding chapters, you'll learn how to process streaming data using Azure Stream Analytics and Data Explorer. By the end of this Azure book, you'll have gained the knowledge you need to be able to orchestrate batch and real-time ETL workflows in Microsoft Azure. What you will learn Use Azure Blob storage for storing large amounts of unstructured data Perform CRUD operations on the Cosmos Table API Implement elastic pools and business continuity with Azure SQL Database Ingest and analyze data using Azure Synapse Analytics Develop Data Factory data flows to extract data from multiple sources Manage, maintain, and secure Azure Data Factory pipelines Process streaming data using Azure Stream Analytics and Data Explorer Who this book is for This book is for database administrators, database developers, and extract, load, transform (ETL) developers looking to build expertise in Azure Data engineering using a recipe-based approach. Technical architects and database architects with experience in designing data or ETL applications either on-premise or on any other cloud vendor who want to learn Azure Data engineering concepts will also find this book useful. Prior knowledge of Azure fundamentals and data engineering concepts is needed.

In this book, you will learn PyQt5 with accompanied by a step-by-step tutorial to develop postgresql-base applications. In the first chapter, you will learn to use several widgets in PyQt5: Display a welcome message; Use the Radio Button widget; Grouping radio buttons; Displays options in the form of a check box; and Display two groups of check boxes. In chapter two, you will learn to use the following topics: Using Signal / Slot Editor; Copy and place text from one Line Edit widget to another; Convert data types and make a simple calculator; Use the Spin Box widget; Use scrollbars and sliders; Using the Widget List; Select a number of list items from one Widget List and display them on another Widget List widget; Add items to the Widget List; Perform operations on the Widget List; Use the Combo Box widget; Displays data selected by the user from the Calendar Widget; Creating a hotel reservation application; and Display tabular data using Table Widgets. In the next two chapters, you will get introduction of postgresql. And then, you will learn querying data from the postgresql using Python including establishing a database connection, creating a statement object, executing the query, processing the resultset object, querying data using a statement that returns multiple rows, querying data using a statement that has parameters,

inserting data into a table using Python, updating data in postgresql database using Python, calling postgresql stored function using Python, deleting data from a postgresql table using Python, and postgresql Python transaction. In the fourth chapter, you will study: Creating the initial three table in the School database project: Teacher table, Class table, and Subject table; Creating database configuration files; Creating a Python GUI for viewing and navigating the contents of each table. Creating a Python GUI for inserting and editing tables; and Creating a Python GUI to merge and query the three tables. In last chapter, you will learn: Creating the main form to connect all forms; Creating a project that will add three more tables to the school database: the Student table, the Parent table, and the Tuition table; Creating a Python GUI to view and navigate the contents of each table; Creating a Python GUI for editing, inserting, and deleting records in each table; Create a Python GUI to merge and query the three tables and all six tables. Finally, this book is hopefully useful for you.

Learn the secrets of developing successful database systems, using FileMaker Pro 8, from FileMaker Pro experts.

Prepare for Microsoft Exam 70-778—and help demonstrate your real-world mastery of Power BI data analysis and visualization. Designed for experienced BI professionals and data analysts ready to advance their status, Exam Ref focuses on the critical thinking and decision-making acumen needed for success at the MCSA level. Focus on the expertise measured by these objectives: Consume and transform data by using Power BI Desktop Model and visualize data Configure dashboards, reports, and apps in the Power BI Service This Microsoft Exam Ref: Organizes its coverage by exam objectives Features strategic, what-if scenarios to challenge you Assumes you have experience consuming and transforming data, modeling and visualizing data, and configuring dashboards using Excel and Power BI

"PostgreSQL" leads users through the internals of an open-source database.

Throughout the book are explanations of data structures and algorithms, each backed by a concrete example from the actual source code. Each section contains information about performance implications, debugging techniques, and pointers to more information (on the Web and in book form).

A practical guide to administer, monitor and replicate your PostgreSQL 10 database Key Features Get to grips with the capabilities of PostgreSQL 10 to administer your database more efficiently Monitor, tune, secure and protect your database for optimal performance A step-by-step, recipe-based guide to help you tackle any problem in PostgreSQL 10 administration with ease Book Description PostgreSQL is a powerful, open source database management system with an enviable reputation for high performance and stability. With many new features in its arsenal, PostgreSQL 10 allows users to scale up their PostgreSQL infrastructure. This book takes a step-by-step, recipe-based approach to effective PostgreSQL administration. Throughout this book, you will be introduced to these new features such as logical replication, native table partitioning, additional query parallelism, and much more. You will learn how to tackle a variety of problems that are basically the pain points for any database administrator - from creating tables to managing views, from improving performance to securing your database. More importantly, the book pays special attention to topics such as monitoring roles, backup, and recovery of your PostgreSQL 10 database, ensuring high availability, concurrency, and replication. By the end of this book, you will know

everything you need to know to be the go-to PostgreSQL expert in your organization. What you will learn Get to grips with the newly released PostgreSQL 10 features to improve database performance and reliability Manage open source PostgreSQL versions 10 on various platforms. Explore best practices for planning and designing live databases Select and implement robust backup and recovery techniques in PostgreSQL 10 Explore concise and clear guidance on replication and high availability Discover advanced technical tips for experienced users Who this book is for This book is for database administrators, data architects, developers, or anyone with an interest in planning for, or running, live production databases using PostgreSQL. It is most suited to those looking for hands-on solutions to any problem associated with PostgreSQL administration.

Thinking of migrating to PostgreSQL? This updated guide helps you quickly understand and use the 9.3 release of this open source database system. You'll not only learn about its unique enterprise-class features, but also discover that PostgreSQL is more than just a database system—it's also an impressive application platform. Using numerous examples, this book shows you how to achieve tasks that are difficult or impossible in other databases. The second edition covers LATERAL queries, augmented JSON support, materialized views, and other key topics. If you're an existing PostgreSQL user, you'll pick up gems you may have missed along the way. Learn basic administration tasks, such as role management, database creation, backup, and restore Apply the psql command-line utility and the pgAdmin graphical administration tool Explore PostgreSQL tables, constraints, and indexes Learn powerful SQL constructs not generally found in other databases Use several different languages to write database functions Tune your queries to run as fast as your hardware will allow Query external and variegated data sources with Foreign Data Wrappers Learn how to replicate data, using built-in replication features

In this book, you will learn how to build from scratch a criminal records management database system using Java/PostgreSQL. All Java code for digital image processing in this book is Native Java. Intentionally not to rely on external libraries, so that readers know in detail the process of extracting digital images from scratch in Java. There are only three external libraries used in this book: Connector / J to facilitate Java to MySQL connections, JCalendar to display calendar controls, and JFreeChart to display graphics. Digital image techniques to extract image features used in this book are grascaling, sharpening, inverting, blurring, dilation, erosion, closing, opening, vertical prewitt, horizontal prewitt, Laplacian, horizontal sobel, and vertical sobel. For readers, you can develop it to store other advanced image features based on descriptors such as SIFT and others for developing descriptor based matching. In the first chapter, you will learn: How to install NetBeans, JDK 11, and the PostgreSQL connector; How to integrate external libraries into projects; How the basic PostgreSQL commands are used; How to query statements to create databases, create tables, fill tables, and manipulate table contents is done. In the first chapter, you will learn: How to install NetBeans, JDK 11, and the PostgreSQL connector; How to integrate external libraries into projects; How the basic PostgreSQL commands are used; How to query statements to create databases, create tables, fill tables, and manipulate table contents is done. In the second chapter, you will learn querying data from the postgresql using jdbc including establishing a database connection, creating a statement object,

executing the query, processing the resultset object, querying data using a statement that returns multiple rows, querying data using a statement that has parameters, inserting data into a table using jdbc, updating data in postgresql database using jdbc, calling postgresql stored function using jdbc, deleting data from a postgresql table using jdbc, and postgresql jdbc transaction. In third chapter, you will be taught how to extract image features, utilizing BufferedImage class, in Java GUI. In the fourth chapter, you will be taught how to create Crime database and its tables. In the fifth chapter, you will be taught to create Java GUI to view, edit, insert, and delete Suspect table data. This table has eleven columns: suspect_id (primary key), suspect_name, birth_date, case_date, report_date, suspect_status, arrest_date, mother_name, address, telephone, and photo. In the sixth chapter, you will be taught to create Java GUI to view, edit, insert, and delete Feature_Extraction table data. This table has eight columns: feature_id (primary key), suspect_id (foreign key), feature1, feature2, feature3, feature4, feature5, and feature6. All six fields (except keys) will have a BLOB data type, so that the image of the feature will be directly saved into this table. In the seventh chapter, you will add two tables: Police_Station and Investigator. These two tables will later be joined to Suspect table through another table, File_Case, which will be built in the seventh chapter. The Police_Station has six columns: police_station_id (primary key), location, city, province, telephone, and photo. The Investigator has eight columns: investigator_id (primary key), investigator_name, rank, birth_date, gender, address, telephone, and photo. Here, you will design a Java GUI to display, edit, fill, and delete data in both tables. In the eighth chapter, you will add two tables: Victim and File_Case. The File_Case table will connect four other tables: Suspect, Police_Station, Investigator and Victim. The Victim table has nine columns: victim_id (primary key), victim_name, crime_type, birth_date, crime_date, gender, address, telephone, and photo. The File_Case has seven columns: file_case_id (primary key), suspect_id (foreign key), police_station_id (foreign key), investigator_id (foreign key), victim_id (foreign key), status, and description. Here, you will also design a Java GUI to display, edit, fill, and delete data in both tables. Finally, this book is hopefully useful for you.

Master over 100 recipes to design and implement a highly available server with the advanced features of PostgreSQL About This Book Create a PostgreSQL cluster that stays online even when disaster strikes Avoid costly downtime and data loss that can ruin your business Updated to include the newest features introduced in PostgreSQL 9.6 with hands-on industry-driven recipes Who This Book Is For If you are a PostgreSQL DBA working on Linux systems who want a database that never gives up, this book is for you. If you've ever experienced a database outage, restored from a backup, spent hours trying to repair a malfunctioning cluster, or simply want to guarantee system stability, this book is definitely for you. What You Will Learn Protect your data with PostgreSQL replication and management tools such as Slony, Bucardo, pglogical, and WAL-E Hardware planning to help your database run efficiently Prepare for catastrophes and prevent them before they happen Reduce database resource contention with connection pooling using pgpool and PgBouncer Automate monitoring and alerts to visualize cluster activity using Nagios and collected Construct a robust software stack that can detect and fix outages Learn simple PostgreSQL High Availability with Patroni, or dive into the full power of Pacemaker. In Detail Databases

are nothing without the data they store. In the event of a failure - catastrophic or otherwise - immediate recovery is essential. By carefully combining multiple servers, it's even possible to hide the fact a failure occurred at all. From hardware selection to software stacks and horizontal scalability, this book will help you build a versatile PostgreSQL cluster that will survive crashes, resist data corruption, and grow smoothly with customer demand. It all begins with hardware selection for the skeleton of an efficient PostgreSQL database cluster. Then it's on to preventing downtime as well as troubleshooting some real life problems that administrators commonly face. Next, we add database monitoring to the stack, using collectd, Nagios, and Graphite. And no stack is complete without replication using multiple internal and external tools, including the newly released pglogical extension. Pacemaker or Raft consensus tools are the final piece to grant the cluster the ability to heal itself. We even round off by tackling the complex problem of data scalability. This book exploits many new features introduced in PostgreSQL 9.6 to make the database more efficient and adaptive, and most importantly, keep it running. Style and approach This book contains practical recipes that will help the reader solve real world problems related to high availability in PostgreSQL. Every recipe is explained in detail, with relevant explanations, tips and tricks provided for quicker and easier understanding.

Python has various database drivers for PostgreSQL. Currently, the psycopg is the most popular PostgreSQL database adapter for the Python language. The psycopg fully implements the Python DB-API 2.0 specification. The current version of the psycopg is 2 or psycopg2. The psycopg2 database adapter implemented in C as a libpq wrapper resulting in both fast and secure. The psycopg2 provides many useful features such as client-side and server-side cursors, asynchronous notification and communication, COPY command support, etc. PostgreSQL was designed to run on UNIX-like platforms. However, PostgreSQL was then also designed to be portable so that it could run on various platforms such as Mac OS X, Solaris, and Windows. PostgreSQL is free and open source software. Its source code is available under PostgreSQL license, a liberal open source license. You are free to use, modify and distribute PostgreSQL in any form. PostgreSQL requires very minimum maintained efforts because of its stability. Therefore, if you develop applications based on PostgreSQL, the total cost of ownership is low in comparison with other database management systems. In Chapter 2, you will learn querying data from the postgresql using Python including establishing a database connection, creating a statement object, executing the query, processing the resultset object, querying data using a statement that returns multiple rows, querying data using a statement that has parameters, inserting data into a table using Python, updating data in postgresql database using Python, calling postgresql stored function using Python, deleting data from a postgresql table using Python, and postgresql Python transaction. In Chapter 3, you will learn managing table structure and views including postgresql data types, postgresql create table, postgresql select into statement, postgresql create table as, using postgresql serial to create auto-increment column, identity column, alter table, drop table, truncate table, check constraint, not-null constraint, foreign key, primary key, unique constraint, managing postgresql views, creating updatable views, materialized views, creating updatable views using the with check option clause, and recursive view. In Chapter 4, you will learn statements, operators, and clauses including select, order by, select distinct, limit, fetch, in,

between, postgresql like, is null, alias, joins, inner join, postgresql left join, self-join, full outer join, cross join, natural join, group by, having, intersect operator, except operator, grouping sets, cube, and rollup. In Chapter 5, you will learn postgresql trigger, aggregate, and string functions including creating the first trigger in postgresql, managing postgresql trigger, aggregate functions, avg function, max function, min function, sum function, postgresql concat function, ascii function, trim function, length function, substring function, regexp_matches function, regexp_replace function, replace function, to_number function, and to_char function.

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