

## Jdbc Recipes By Mahmoud Parsian

1 -- Introduction to JDBC -- 2 -- Presenting Information to Users -- 3 -- Querying the Database -- 4 -- Updating the Database -- 5 -- Advanced JDBC Topics -- 6 -- An eCommerce Example -- 7 -- How to Stay Current with JDBC -- 8 -- Appendix.

If you are ready to dive into the MapReduce framework for processing large datasets, this practical book takes you step by step through the algorithms and tools you need to build distributed MapReduce applications with Apache Hadoop or Apache Spark. Each chapter provides a recipe for solving a massive computational problem, such as building a recommendation system. You'll learn how to implement the appropriate MapReduce solution with code that you can use in your projects. Dr. Mahmoud Parsian covers basic design patterns, optimization techniques, and data mining and machine learning solutions for problems in bioinformatics, genomics, statistics, and social network analysis. This book also includes an overview of MapReduce, Hadoop, and Spark. Topics include: Market basket analysis for a large set of transactions Data mining algorithms (K-means, KNN, and Naive Bayes) Using huge genomic data to sequence DNA and RNA Naive Bayes theorem and Markov chains for data and market prediction Recommendation algorithms and pairwise document similarity Linear regression, Cox regression, and Pearson correlation Allelic frequency and mining DNA Social network analysis (recommendation systems, counting triangles, sentiment analysis)

Get ready to unlock the power of your data. With the fourth edition of this comprehensive guide, you'll learn how to build and maintain reliable, scalable, distributed systems with Apache Hadoop. This book is ideal for programmers looking to analyze datasets of any size, and for administrators who want to set up and run Hadoop clusters. Using Hadoop 2 exclusively, author Tom White presents new chapters on YARN and several Hadoop-related projects such as Parquet, Flume, Crunch, and Spark. You'll learn about recent changes to Hadoop, and explore new case studies on Hadoop's role in healthcare systems and genomics data processing. Learn fundamental components such as MapReduce, HDFS, and YARN Explore MapReduce in depth, including steps for developing applications with it Set up and maintain a Hadoop cluster running HDFS and MapReduce on YARN Learn two data formats: Avro for data serialization and Parquet for nested data Use data ingestion tools such as Flume (for streaming data) and Sqoop (for bulk data transfer) Understand how high-level data processing tools like Pig, Hive, Crunch, and Spark work with Hadoop Learn the HBase distributed database and the ZooKeeper distributed configuration service

Ajax, or Asynchronous JavaScript and XML, exploded onto the scene in the spring of 2005 and remains the hottest story among web developers. With its rich combination of technologies, Ajax provides a strong foundation for creating interactive web applications with XML or JSON-based web services by using JavaScript in the browser to process the web server response. Ajax Design Patterns shows you best practices that can dramatically improve your web development projects. It investigates how others have successfully dealt with conflicting design principles in the past and then relays that information directly to you. The patterns outlined in the book fall into four categories: Foundational technology: Examines the raw technologies required for Ajax development Programming: Exposes techniques that developers have discovered to ensure their Ajax applications are maintainable Functionality and usability: Describes the types of user interfaces you'll come across in Ajax applications, as well as the new types of functionality that Ajax makes possible Development: Explains the process being used to monitor, debug, and test Ajax applications Ajax Design Patterns will also get you up to speed with core Ajax technologies, such as XMLHttpRequest, the DOM, and JSON. Technical discussions are followed by code examples so you can see for yourself just what is-and isn't-possible with Ajax. This handy reference will help you to produce high-quality Ajax architectures, streamline web application performance, and improve the user experience. Michael Mahemoff holds a PhD in

*Computer Science and Software Engineering from the University of Melbourne, where his thesis was "Design Reuse in Software Engineering and Human-Computer Interaction." He lives in London and consults on software development issues in banking, health care, and logistics. "Michael Mahemoff's Ajax Design Patterns is a truly comprehensive compendium of webapplication design expertise, centered around but not limited to Ajax techniques. Polished nuggets of design wisdom are supported by tutorials and real-world code examples resulting in a book that serves not only as an intermediate to expert handbook but also as an extensive reference for building rich interactive web applications." --Brent Ashley, remote scripting pioneer A Deep Dive into How Distributed Data Systems Work*

*Data Algorithms*

*Step By Step Java GUI With JDBC & MySQL : Practical approach to build database desktop application with project based examples*

*PySpark Recipes*

*Expert Oracle Application Express*

*GUI Development for SQLite-Based Applications with NetBeans*

**JDBC is the key Java technology for relational database access. Oracle is arguably the most widely used relational database platform in the world. In this book, Donald Bales brings these two technologies together, and shows you how to leverage the full power of Oracle's implementation of JDBC. You begin by learning the all-important mysteries of establishing database connections. This can be one of the most frustrating areas for programmers new to JDBC, and Donald covers it well with detailed information and examples showing how to make database connections from applications, applets, Servlets, and even from Java programs running within the database itself. Next comes thorough coverage of JDBC's relational SQL features. You'll learn how to issue SQL statements and get results back from the database, how to read and write data from large, streaming data types such as BLOBs, CLOBs, and BFILEs, and you'll learn how to interface with Oracle's other built-in programming language, PL/SQL. If you're taking advantage of the Oracle's relatively new ability to create object tables and column objects based on user-defined datatypes, you'll be pleased with Don's thorough treatment of this subject. Don shows you how to use JPublisher and JDBC to work seamlessly with Oracle database objects from within Java programs. You'll also learn how to access nested tables and arrays using JDBC. Donald concludes the book with a discussion of transaction management, locking, concurrency, and performance--topics that every professional JDBC programmer must be familiar with. If you write Java programs to run against an Oracle database, this book is a must-have.**

**In this book, you will learn how to build from scratch a criminal records management database system using Java/SQLite. 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. In chapter one, you will create Bank database and its four tables. In chapter two, 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 chapter three, 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 chapter four, 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 five, 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 chapter six, you will create Crime database and its six tables. In chapter seven, you will be taught how to extract image features, utilizing `BufferedImage` class, in Java GUI. In chapter eight, 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 nine, 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 ten, 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 eleven, 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.

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, 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 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.

**A comprehensive Java guide, with samples, exercises, casestudies, and step-by-step instruction** *Beginning Java Programming: The Object Oriented Approach* is a straightforward resource for getting started with one of the world's most enduringly popular programming languages. Based on classes taught by the authors, the book starts with the basics and gradually builds into more advanced concepts. The approach utilizes an integrated development environment that allows readers to immediately apply what they learn, and includes step-by-step instruction with plenty of sample programs. Each chapter contains exercises based on real-world business and educational scenarios, and the final chapter uses case studies to combine several concepts and put readers' new skills to the test. *Beginning Java Programming: The Object Oriented Approach* provides both the information and the tools beginners need to develop Java skills, from the general concepts of object-oriented programming. Learn to: Understand the Java language and object-oriented concept implementation Use Java to access and manipulate external data Make applications accessible to users with GUIs Streamline workflow with object-oriented patterns The book is geared for those who want to use Java in an applied environment while learning at the same time. Useful as either a course text or a stand-alone self-study program, *Beginning Java Programming* is a thorough, comprehensive guide.

**Data Analytics with Spark Using Python**

**Data Pipelines Pocket Reference**

**Storage and Analysis at Internet Scale**

**Over 60 recipes for implementing big data processing and analytics using Apache Spark and Python**

**Hadoop: The Definitive Guide**

**Lightning-Fast Big Data Analysis**

First book to market on metadata specific recipes related to JDBC and its use with MySQL and Oracle, databases standard to Java. Compliant with the new Java EE 5. Provides cut and paste code templates that can be

immediately customized and applied in each developer's application development.

This book comes as an answer for students, lecturers, or the general public who want to learn Java GUI programming starting from scratch. This book is suitable for beginner learners who want to learn Java GUI programming from the basic to the database level. This book is also present for JAVA learners who want to increase their level of making GUI-based database applications for small, medium, or corporate businesses level. The discussion in this book is not wordy and not theoretical. Each discussion in this book is presented in a concise and clear brief, and directly to the example that implements the discussion. Beginner learners who want to learn through this book should not be afraid of losing understanding of the programming concepts, because this book in detail discusses the concepts of Java programming from the basic to the advanced level. By applying the concept of learning by doing, this book will guide you step by step to start Java GUI programming from the basics until you are able to create database applications using JDBC and MySQL. Here are the material that you will learn in this book. CHAPTER 1 : This chapter will give you brief and clear introduction about how to create desktop application using Java GUI starting from how to setup your environments, create your first project, understand various control for your form, and understand how to interact with your form using event handling. CHAPTER 2 : This chapter will discuss clearly about the concept and the implementatiton of data types and variables in Java GUI. CHAPTER 3 : This chapter will discuss in detail about how to make decisions or deal with a condition in the program. This chapter is the first step to deeper understanding of logics in programming. This chapter specifically discusses relational operators and logical operators, if statements, if-else statements, and switch-case statements, and how to implement all of these conditional statements using Java GUI. CHAPTER 4 : This chapter will discuss in detail the looping statements in Java including for statement, while statement, do-while statement, break statement, and continue statement. All of these looping statements will be implemented using Java GUI. CHAPTER 5 : This chapter will discuss how to use methods to group codes based on their funcitonality. This discussion will also be the first step for programmers to learn how to create efficient program code. This chapter will discuss in detail the basics of methods, methods with return values, how to pass parameters to methods, how to overload your methods, and how to make recursive methods. CHAPTER 6 : This chapter will discuss in detail how to create and use arrays, read and write file operations, and how to display data stored in arrays or files in graphical form. CHAPTER 7 : This chapter will discuss in detail the basics of MySQL, how to access databases using JDBC and MySQL, and how to perform CRUD operations using JDBC and MySQL.

CHAPTER 8 : In this chapter we will discuss more about Java GUI programming. This chapter will discuss in detail about how to make a program that consists of multi forms, how to create MDI application, and how to create report using iReport with data stored in a database.

Write powerful SQL statements and PL/SQL programs Learn to access Oracle databases through SQL statements and construct PL/SQL programs with guidance from Oracle expert, Jason Price. Published by Oracle Press, Oracle Database 11g SQL explains how to retrieve and modify database information, use SQL Plus and SQL Developer, work with database objects, write PL/SQL programs, and much more. Inside, you'll find in-depth coverage of the very latest SQL features and tools, performance optimization techniques, advanced queries, Java support, and XML. This book contains everything you need to master SQL. Explore SQL Plus and SQL Developer Use SQL SELECT, INSERT, UPDATE, and DELETE statements Write PL/SQL programs Create tables, sequences, indexes, views, and triggers Write advanced queries containing complex analytical functions Create database objects and collections to handle abstract data Use large objects to handle multimedia files containing music and movies Write Java programs to access an Oracle Database using JDBC Tune your SQL statements to make them execute faster Explore the XML capabilities of the Oracle Database Master the very latest Oracle Database 11g features, such as PIVOT and UNPIVOT, flashback archives, and much more Expert Oracle Application Express brings you groundbreaking insights into developing with Oracle's enterprise-level, rapid-development tool from some of the best practitioners in the field today. Oracle Application Express (APEX) is an entirely web-based development framework that is built into every edition of Oracle Database. The framework rests upon Oracle's powerful PL/SQL language, enabling power users and developers to rapidly develop applications that easily scale to hundreds, even thousands of concurrent users. The 13 authors of Expert Oracle Application Express build their careers around APEX. They know what it takes to make the product sing—developing secure applications that can be deployed globally to users inside and outside a large enterprise. The authors come together in this book to share some of their deepest and most powerful insights into solving the difficult problems surrounding scalability, globalization, configuration and lifecycle management, and more. You'll learn about debugging and performance, deep secrets to customizing your application user interface, how to secure applications from intrusion, and about deploying globally in multiple languages. Expert Oracle Application Express is truly a book that will move you and your skillset a big step towards the apex of Application Express development. Presents best-practices and development insights from leading experts in the field Addresses globalization, scalability, security, and other concerns

of enterprise-level development Shows how to customize APEX for your own application needs

Learn JDBC By Example: A Quick Start Guide to MariaDB and SQL Server Driven Programming

Oracle Database 11g SQL

Practical Performant Programming for Humans

JDBC API Tutorial and Reference

Discover Java

**Learn the algorithms and tools you need to build MapReduce applications with Hadoop and Spark for processing gigabyte, terabyte, or petabyte-sized datasets on clusters of commodity hardware. With this practical book, author Mahmoud Parsian, head of the big data team at Illumina, takes you step-by-step through the design of machine-learning algorithms, such as Naive Bayes and Markov Chain, and shows you how to apply them to clinical and biological datasets, using MapReduce design patterns. Apply MapReduce algorithms to clinical and biological data, such as DNA-Seq and RNA-Seq Use the most relevant regression/analytical algorithms used for different biological data types Apply t-test, joins, top-10, and correlation algorithms using MapReduce/Hadoop and Spark**

**In the last ten years IT has brought fundamental changes to the way the world works. Not only has it increased the speed of operations and communications, but it has also undermined basic assumptions of traditional business models and increased the number of variables. Today, the survival of major corporations is challenged by a world-wide marketplace, international operations, outsourcing, global communities, a changing workforce, security threats, business continuity, web visibility, and customer expectations. Enterprises must constantly adapt or they will be unable to compete. Fred Cummins, an EDS Fellow, presents IT as a key enabler of the agile enterprise. He demonstrates how the convergence of key technologies—including SOA, BPM and emerging enterprise and data models—can be harnessed to transform the enterprise. Cummins mines his 25 years experience to provide IT leaders, as well as enterprise architects and management consultants, with the critical information, skills, and insights they need to partner with management and redesign the enterprise for continuous change. No other book puts IT at the center of this transformation, nor integrates these technologies for this purpose. Shows how to integrate and deploy critical**



**technologies to foster agility Details how to design an enterprise architecture that takes full advantage of SOA, BPM, business rules, enterprise information management, business models, and governance Outlines IT's critical mission in providing an integration infrastructure and key services, while optimizing technology adoption throughout the enterprise Illustrates concepts with examples and cases from large and small commercial enterprises Shows how to create systems that recognize and respond to the need for change Identifies the unique security issues that arise with SOA and shows how to deploy a framework of technologies and processes that address them**

**Quickly find solutions to common programming problems encountered while processing big data. Content is presented in the popular problem-solution format. Look up the programming problem that you want to solve. Read the solution. Apply the solution directly in your own code. Problem solved! PySpark Recipes covers Hadoop and its shortcomings. The architecture of Spark, PySpark, and RDD are presented. You will learn to apply RDD to solve day-to-day big data problems. Python and NumPy are included and make it easy for new learners of PySpark to understand and adopt the model. What You Will Learn Understand the advanced features of PySpark2 and SparkSQL Optimize your code Program SparkSQL with Python Use Spark Streaming and Spark MLlib with Python Perform graph analysis with GraphFrames Who This Book Is For Data analysts, Python programmers, big data enthusiasts**

**Data pipelines are the foundation for success in data analytics. Moving data from numerous diverse sources and transforming it to provide context is the difference between having data and actually gaining value from it. This pocket reference defines data pipelines and explains how they work in today's modern data stack. You'll learn common considerations and key decision points when implementing pipelines, such as batch versus streaming data ingestion and build versus buy. This book addresses the most common decisions made by data professionals and discusses foundational concepts that apply to open source frameworks, commercial products, and homegrown solutions. You'll learn: What a data pipeline is and how it works How data is moved and processed on modern data infrastructure, including cloud platforms Common tools and products used by data engineers to build pipelines How**

## **pipelines support analytics and reporting needs Considerations for pipeline maintenance, testing, and alerting**

### **Java In Practice: JDBC And Database Applications**

#### **JDBC**

#### **Universal Data Access for the Java 2 Platform**

#### **With SOA, BPM and MBM**

#### **Oracle Database Programming using Java and Web Services**

#### **Data Algorithms with Spark**

The traditional division of labor between the database (which only stores and manages SQL and XML data for fast, easy data search and retrieval) and the application server (which runs application or business logic, and presentation logic) is obsolete. Although the books primary focus is on programming the Oracle Database, the concepts and techniques provided apply to most RDBMS that support Java including Oracle, DB2, Sybase, MySQL, and PostgreSQL. This is the first book to cover new Java, JDBC, SQLJ, JPublisher and Web Services features in Oracle Database 10g Release 2 (the coverage starts with Oracle 9i Release 2). This book is a must-read for database developers audience (DBAs, database applications developers, data architects), Java developers (JDBC, SQLJ, J2EE, and OR Mapping frameworks), and to the emerging Web Services assemblers. Describes pragmatic solutions, advanced database applications, as well as provision of a wealth of code samples. Addresses programming models which run within the database as well as programming models which run in middle-tier or client-tier against the database. Discusses languages for stored procedures: when to use proprietary languages such as PL/SQL and when to use standard languages such as Java; also running non-Java scripting languages in the database. Describes the Java runtime in the Oracle database 10g (i.e., OracleJVM), its architecture, memory management, security management, threading, Java execution, the Native Compiler (i.e., NCOMP), how to make Java known to SQL and PL/SQL, data types mapping, how to call-out to external Web components, EJB components, ERP frameworks, and external databases. Describes JDBC programming and the new Oracle JDBC 10g features, its advanced connection services (pooling, failover, load-balancing, and the fast database event notification mechanism) for clustered databases (RAC) in Grid environments. Describes SQLJ programming and the latest Oracle SQLJ 10g features , contrasting it with JDBC. Describes the latest Database Web services features, Web services concepts and Services Oriented Architecture (SOA) for DBA, the database as Web services provider and the database as Web services consumer. Abridged coverage of JPublisher 10g, a versatile complement to JDBC, SQLJ and Database Web Services.

A beginning programmer's guide to Java explains how to design object-oriented code, reuse existing applets, and explore Sun's Java development kit

JDBC Recipes A Problem-Solution Approach Apress

\* The only standard size JDBC "cookbook" in market with clear specification of problems and ready-to-be-used working code solutions (in a cut-and-paste fashion) that work for at least two leading databases such as MySQL and Oracle. • Most existing JDBC-related books provide only generic solutions, which might not work on any vendor ' s database. This book shows the importance of "vendor" factor for solving JDBC problems. • Complete coverage of database and result set "metadata" (which is missing from most JDBC books).

Essential PySpark for Scalable Data Analytics

Beginning Java Programming

Creating Web 2.0 Sites with Programming and Usability Patterns

Recipes for Scaling Up with Hadoop and Spark

JDBC Metadata, MySQL, and Oracle Recipes

Machine Learning Pocket Reference

A guide to the `java.sql` package demonstrates variables, methods, client-server architecture, three-tier database access, JDBC, query optimization, and interface design.

Learn how to use, deploy, and maintain Apache Spark with this comprehensive guide, written by the creators of the open-source cluster-computing framework. With an emphasis on improvements and new features in Spark 2.0, authors Bill Chambers and Matei Zaharia break down Spark topics into distinct sections, each with unique goals. You'll explore the basic operations and common functions of Spark's structured APIs, as well as Structured Streaming, a new high-level API for building end-to-end streaming applications. Developers and system administrators will learn the fundamentals of monitoring, tuning, and debugging Spark, and explore machine learning techniques and scenarios for employing MLlib, Spark's scalable machine-learning library. Get a gentle overview of big data and Spark Learn about DataFrames, SQL, and Datasets—Spark's core APIs—through worked examples Dive into Spark's low-level APIs, RDDs, and execution of SQL and DataFrames Understand how Spark runs on a cluster Debug, monitor, and tune Spark clusters and applications Learn the power of Structured Streaming, Spark's stream-processing engine Learn how you can apply MLlib to a variety of problems, including classification or recommendation

Data is bigger, arrives faster, and comes in a variety of formats—and it all needs to be processed at scale for analytics or machine learning. But how can you process such varied workloads efficiently? Enter Apache Spark. Updated to include Spark 3.0, this second edition shows data engineers and data scientists why structure and unification in Spark matters. Specifically, this book explains how to perform simple and complex data analytics and employ machine learning algorithms. Through step-by-step walk-throughs, code snippets, and notebooks, you'll be able to: Learn Python, SQL, Scala, or Java high-level Structured APIs Understand Spark operations and SQL Engine Inspect, tune, and debug Spark operations with Spark configurations and Spark UI Connect to data sources: JSON, Parquet, CSV, Avro, ORC, Hive, S3, or Kafka Perform analytics on batch and streaming data using Structured Streaming Build reliable data pipelines with open source Delta Lake and Spark Develop machine learning pipelines with MLlib and productionize models using MLflow

This hands-on introduction to 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: MySQL 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 MySQL Connector/J; How to integrate external libraries into projects; How the basic MySQL 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 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 third 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 chapter four, you will study how to query the six tables. In chapter five, you will be shown how to create SQLite database and tables with Java. In chapter six, 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 chaptered 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 chapter seven, 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 eight, 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 nine, 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 ten, 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/MySQL/SQLite programmer.

A Guide to the Business Analysis Body of Knowledge

Achieving Extreme Performance with Oracle Exadata

Ajax Design Patterns

A beginner's guide to harnessing the power and ease of PySpark 3

Learning PySpark

Java In Action: An Excellent Guide to Explore JDBC And Database Applications

***Data in all domains is getting bigger. How can you work with it efficiently? Recently updated for Spark 1.3, this book introduces Apache Spark, the open source cluster computing system that makes data analytics fast to write and fast to run. With Spark, you can tackle big datasets quickly through simple APIs in Python, Java, and Scala. This edition includes new information on Spark SQL, Spark Streaming, setup, and Maven coordinates. Written by the developers of Spark, this book will have data scientists and engineers up and running in no time. You'll learn how to express parallel jobs with just a few lines of code, and cover applications from simple batch jobs to stream processing and machine learning. Quickly dive into Spark capabilities such as distributed datasets, in-memory caching, and the interactive shell Leverage Spark's powerful built-in libraries, including Spark SQL, Spark Streaming, and MLLib Use one programming paradigm instead***

*of mixing and matching tools like Hive, Hadoop, Mahout, and Storm Learn how to deploy interactive, batch, and streaming applications Connect to data sources including HDFS, Hive, JSON, and S3 Master advanced topics like data partitioning and shared variables*

*Combine the power of Apache Spark and Python to build effective big data applications Key Features Perform effective data processing, machine learning, and analytics using PySpark Overcome challenges in developing and deploying Spark solutions using Python Explore recipes for efficiently combining Python and Apache Spark to process data Book Description Apache Spark is an open source framework for efficient cluster computing with a strong interface for data parallelism and fault tolerance. The PySpark Cookbook presents effective and time-saving recipes for leveraging the power of Python and putting it to use in the Spark ecosystem. You'll start by learning the Apache Spark architecture and how to set up a Python environment for Spark. You'll then get familiar with the modules available in PySpark and start using them effortlessly. In addition to this, you'll discover how to abstract data with RDDs and DataFrames, and understand the streaming capabilities of PySpark. You'll then move on to using ML and MLlib in order to solve any problems related to the machine learning capabilities of PySpark and use GraphFrames to solve graph-processing problems. Finally, you will explore how to deploy your applications to the cloud using the spark-submit command. By the end of this book, you will be able to use the Python API for Apache Spark to solve any problems associated with building data-intensive applications. What you will learn Configure a local instance of PySpark in a virtual environment Install and configure Jupyter in local and multi-node environments Create DataFrames from JSON and a dictionary using pyspark.sql Explore regression and clustering models available in the ML module Use DataFrames to transform data used for modeling Connect to PubNub and perform aggregations on streams Who this book is for The PySpark Cookbook is for you if you are a Python developer looking for hands-on recipes for using the Apache Spark 2.x ecosystem in the best possible way. A thorough understanding of Python (and some familiarity with Spark) will help you get the best out of the book.*

*This book provides the definitive description of the JDBC API, the technology that enables universal data access for the Java programming language. This new edition has been updated and expanded to cover all of the JDBC 2.0 API, including the JDBC 2.0 core API and the JDBC Standard Extension API, the package that facilitates building server-side applications. Containing in-depth explanations that go beyond the specification, this complete resource pairs a step-by-step tutorial with a comprehensive reference to all of the classes and interfaces. For those new to Java technology, this book includes an introduction to the Java programming language and to SQL. It builds on this basic knowledge to walk you through creating a JDBC application - from setting up a database and establishing a connection to retrieving values from result sets and using prepared statements. In addition, the authors provide many examples along the way that demonstrate how to execute common tasks. It then proceeds to more advanced topics, focusing on the new features of the JDBC 2.0 API, including scrollable and updatable result sets, batch updates, SQL3 data types, custom mapping, and more.*

*Solve Data Analytics Problems with Spark, PySpark, and Related Open Source Tools Spark is at the heart of today's Big Data revolution, helping data professionals supercharge efficiency and performance in a wide range of data processing and analytics tasks. In this guide, Big Data expert Jeffrey Aven covers all you need to know to leverage Spark, together with its extensions, subprojects, and wider ecosystem. Aven combines a language-agnostic introduction to foundational Spark concepts with extensive programming examples utilizing the popular and intuitive PySpark development environment. This guide's focus on Python makes it widely accessible to large audiences of data professionals, analysts, and developers—even those with little Hadoop or Spark experience. Aven's broad coverage ranges from basic to advanced Spark programming, and Spark SQL to machine learning. You'll learn how to efficiently manage all forms of data with Spark: streaming, structured, semi-structured, and unstructured. Throughout, concise topic overviews quickly get you up to speed, and extensive hands-on exercises prepare you to solve real problems. Coverage includes:*

- Understand Spark's evolving role in the Big Data and Hadoop ecosystems*
- Create Spark clusters*

**using various deployment modes • Control and optimize the operation of Spark clusters and applications • Master Spark Core RDD API programming techniques • Extend, accelerate, and optimize Spark routines with advanced API platform constructs, including shared variables, RDD storage, and partitioning • Efficiently integrate Spark with both SQL and nonrelational data stores • Perform stream processing and messaging with Spark Streaming and Apache Kafka • Implement predictive modeling with SparkR and Spark MLlib**  
**The Object-Oriented Approach**  
**Building the Agile Enterprise**  
**FROM ZERO TO JDBC HERO**  
**High Performance Python**  
**PySpark Cookbook**  
**Big Data Processing Made Simple**

Your Python code may run correctly, but you need it to run faster. Updated for Python 3, this expanded edition shows you how to locate performance bottlenecks and significantly speed up your code in high-data-volume programs. By exploring the fundamental theory behind design choices, High Performance Python helps you gain a deeper understanding of Python's implementation. How do you take advantage of multicore architectures or clusters? Or build a system that scales up and down without losing reliability? Experienced Python programmers will learn concrete solutions to many issues, along with war stories from companies that use high-performance Python for social media analytics, productionized machine learning, and more. Get a better grasp of NumPy, Cython, and profilers Learn how Python abstracts the underlying computer architecture Use profiling to find bottlenecks in CPU time and memory usage Write efficient programs by choosing appropriate data structures Speed up matrix and vector computations Use tools to compile Python down to machine code Manage multiple I/O and computational operations concurrently Convert multiprocessing code to run on local or remote clusters Deploy code faster using tools like Docker

\* First book on the market that covers building high-performance Java applications on the Oracle database—using the latest versions of both the Oracle database (10g) and the JDBC API (3.0). \* Promotes and explains an "anti black box" approach to Oracle development complete with benchmark code) that will allow developers to write highly efficient, high performance Oracle JDBC applications. \* A new book from the prestigious OakTable Press, which Apress will be strongly promoting and supporting throughout 2004.

Build data-intensive applications locally and deploy at scale using the combined powers of Python and Spark 2.0 About This Book Learn why and how you can efficiently use Python to process data and build machine learning models in Apache Spark 2.0 Develop and deploy efficient, scalable real-time Spark solutions Take your understanding of using Spark with Python to the next level with this jump start guide Who This Book Is For If you are a Python developer who wants to learn about the Apache Spark 2.0 ecosystem, this book is for you. A firm understanding of Python is expected to get the best out of the book. Familiarity with Spark would be useful, but is not mandatory. What You Will Learn Learn about

Apache Spark and the Spark 2.0 architecture Build and interact with Spark DataFrames using Spark SQL Learn how to solve graph and deep learning problems using GraphFrames and TensorFrames respectively Read, transform, and understand data and use it to train machine learning models Build machine learning models with MLlib and ML Learn how to submit your applications programmatically using spark-submit Deploy locally built applications to a cluster In Detail Apache Spark is an open source framework for efficient cluster computing with a strong interface for data parallelism and fault tolerance. This book will show you how to leverage the power of Python and put it to use in the Spark ecosystem. You will start by getting a firm understanding of the Spark 2.0 architecture and how to set up a Python environment for Spark. You will get familiar with the modules available in PySpark. You will learn how to abstract data with RDDs and DataFrames and understand the streaming capabilities of PySpark. Also, you will get a thorough overview of machine learning capabilities of PySpark using ML and MLlib, graph processing using GraphFrames, and polyglot persistence using Blaze. Finally, you will learn how to deploy your applications to the cloud using the spark-submit command. By the end of this book, you will have established a firm understanding of the Spark Python API and how it can be used to build data-intensive applications. Style and approach This book takes a very comprehensive, step-by-step approach so you understand how the Spark ecosystem can be used with Python to develop efficient, scalable solutions. Every chapter is standalone and written in a very easy-to-understand manner, with a focus on both the hows and the whys of each concept.

Get started with distributed computing using PySpark, a single unified framework to solve end-to-end data analytics at scale Key Features Discover how to convert huge amounts of raw data into meaningful and actionable insights Use Spark's unified analytics engine for end-to-end analytics, from data preparation to predictive analytics Perform data ingestion, cleansing, and integration for ML, data analytics, and data visualization Book Description Apache Spark is a unified data analytics engine designed to process huge volumes of data quickly and efficiently. PySpark is Apache Spark's Python language API, which offers Python developers an easy-to-use scalable data analytics framework. Essential PySpark for Scalable Data Analytics starts by exploring the distributed computing paradigm and provides a high-level overview of Apache Spark. You'll begin your analytics journey with the data engineering process, learning how to perform data ingestion, cleansing, and integration at scale. This book helps you build real-time analytics pipelines that help you gain insights faster. You'll then discover methods for building cloud-based data lakes, and explore Delta Lake, which brings reliability to data lakes. The book also covers Data Lakehouse, an emerging paradigm, which combines the structure and performance of a data warehouse with the scalability of cloud-based data lakes. Later, you'll perform scalable data science and machine learning tasks using PySpark, such as data preparation, feature engineering, and model training and productionization. Finally, you'll learn ways to scale out standard Python ML libraries along with a new pandas API on top of PySpark called Koalas. By the end of this PySpark book, you'll be able to harness the power of PySpark to solve business problems. What you will learn Understand the role of distributed computing in the world of big data Gain an appreciation for Apache Spark as the de facto go-to for big data processing Scale out your data analytics process using Apache Spark Build data pipelines using data lakes, and perform data visualization with PySpark and Spark SQL Leverage the cloud to build truly scalable and real-



time data analytics applications Explore the applications of data science and scalable machine learning with PySpark Integrate your clean and curated data with BI and SQL analysis tools Who this book is for This book is for practicing data engineers, data scientists, data analysts, and data enthusiasts who are already using data analytics to explore distributed and scalable data analytics. Basic to intermediate knowledge of the disciplines of data engineering, data science, and SQL analytics is expected. General proficiency in using any programming language, especially Python, and working knowledge of performing data analytics using frameworks such as pandas and SQL will help you to get the most out of this book.

Database Programming with JDBC and Java

Data Management at Scale

Expert Oracle JDBC Programming

A Problem-Solution Approach

JDBC Recipes

Spark: The Definitive Guide

**"Business analysis involves understanding how organizations function to accomplish their purposes and defining the capabilities an organization requires to provide products and services to external stakeholders. ... [This guide contains] a framework that describes the business analysis tasks that must be performed in order to understand how a solution will deliver value to the sponsoring organization." - page 3.**

**When it comes to choosing, using, and maintaining a database, understanding its internals is essential. But with so many distributed databases and tools available today, it's often difficult to understand what each one offers and how they differ. With this practical guide, Alex Petrov guides developers through the concepts behind modern database and storage engine internals. Throughout the book, you'll explore relevant material gleaned from numerous books, papers, blog posts, and the source code of several open source databases. These resources are listed at the end of parts one and two. You'll discover that the most significant distinctions among many modern databases reside in subsystems that determine how storage is organized and how data is distributed. This book examines:**

- Storage engines: Explore storage classification and taxonomy, and dive into B-Tree-based and immutable Log Structured storage engines, with differences and use-cases for each**
- Storage building blocks: Learn how database files are organized to build efficient storage, using auxiliary data structures such as Page Cache, Buffer Pool and Write-Ahead Log**
- Distributed systems: Learn step-by-step how nodes and processes connect and build complex communication patterns**
- Database clusters: Which consistency models are commonly used by modern databases and how distributed storage systems achieve consistency**

**Master the foundations of T-SQL with the right balance of conceptual and practical content. Get hands-on guidance—including exercises**

**and code samples—that show you how to develop code to query and modify data. You'll gain a solid understanding of the T-SQL language and good programming practices, and learn to write more efficient and powerful queries. Discover how to: Apply T-SQL fundamentals, create tables, and define data integrity Understand logical query processing Query multiple tables using joins and subqueries Simplify code and improve maintainability with table expressions Explore pivoting techniques and how to handle grouping sets Write code that modifies data Isolate inconsistent data and address deadlock and blocking scenarios**

**As data management and integration continue to evolve rapidly, storing all your data in one place, such as a data warehouse, is no longer scalable. In the very near future, data will need to be distributed and available for several technological solutions. With this practical book, you'll learn how to migrate your enterprise from a complex and tightly coupled data landscape to a more flexible architecture ready for the modern world of data consumption. Executives, data architects, analytics teams, and compliance and governance staff will learn how to build a modern scalable data landscape using the Scaled Architecture, which you can introduce incrementally without a large upfront investment. Author Piethein Strengtholt provides blueprints, principles, observations, best practices, and patterns to get you up to speed. Examine data management trends, including technological developments, regulatory requirements, and privacy concerns Go deep into the Scaled Architecture and learn how the pieces fit together Explore data governance and data security, master data management, self-service data marketplaces, and the importance of metadata**

**Database Internals**

**A Problem-Solution Approach with PySpark2**

**Microsoft SQL Server 2008 T-SQL Fundamentals**

**Practical Guide for Java Programmers**

**Learning Spark**

**Java Programming with Oracle JDBC**

*Maximize Oracle Exadata Capabilities Leverage all of the powerful features available in the Oracle Exadata Database Machine using the proven techniques inside this Oracle Press guide. Written by Oracle experts, Achieving Extreme Performance with Oracle Exadata shows you how to take full advantage of this complete, optimized package of software, servers, and storage. Best practices for enterprise deployments, high availability, administration, backup and recovery, data warehousing, online transaction processing, consolidation, and migration are included in this authoritative resource. Take advantage of the tightly integrated hardware and software in the Oracle Exadata Database Machine Work with Oracle Exadata software features, including Smart Scans, Oracle Exadata Hybrid Columnar Compression, storage indexes, Oracle Exadata Smart Flash Cache, and*

*I/O Resource Manager Understand Oracle Exadata Database Machine balanced hardware architecture Architect, administer, and monitor Oracle Exadata Storage Servers Deploy data warehouses on the Oracle Exadata Database Machine Run online transaction processing (OLTP) workloads on the Oracle Exadata Database Machine Consolidate databases with and migrate databases to the Oracle Exadata Database Machine With detailed notes, tables, and examples, this handy reference will help you navigate the basics of structured machine learning. Author Matt Harrison delivers a valuable guide that you can use for additional support during training and as a convenient resource when you dive into your next machine learning project. Ideal for programmers, data scientists, and AI engineers, this book includes an overview of the machine learning process and walks you through classification with structured data. You'll also learn methods for clustering, predicting a continuous value (regression), and reducing dimensionality, among other topics. This pocket reference includes sections that cover: Classification, using the Titanic dataset Cleaning data and dealing with missing data Exploratory data analysis Common preprocessing steps using sample data Selecting features useful to the model Model selection Metrics and classification evaluation Regression examples using k-nearest neighbor, decision trees, boosting, and more Metrics for regression evaluation Clustering Dimensionality reduction Scikit-learn pipelines*

*Apache Spark's speed, ease of use, sophisticated analytics, and multilanguage support makes practical knowledge of this cluster-computing framework a required skill for data engineers and data scientists. With this hands-on guide, anyone looking for an introduction to Spark will learn practical algorithms and examples using PySpark. In each chapter, author Mahmoud Parsian shows you how to solve a data problem with a set of Spark transformations and algorithms. You'll learn how to tackle problems involving ETL, design patterns, machine learning algorithms, data partitioning, and genomics analysis. Each detailed recipe includes PySpark algorithms using the PySpark driver and shell script. With this book, you will: Learn how to select Spark transformations for optimized solutions Explore powerful transformations and reductions including `reduceByKey()`, `combineByKey()`, and `mapPartitions()` Understand data partitioning for optimized queries Build and apply a model using PySpark design patterns Apply motif-finding algorithms to graph data Analyze graph data by using the GraphFrames API Apply PySpark algorithms to clinical and genomics data Learn how to use and apply feature engineering in ML algorithms Understand and use practical and pragmatic data design patterns*

*This book explains relational theory in practice, and demonstrates through two projects how you can apply it to your use of MariaDB 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 MariaDB 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 MariaDB and SQL Server. As you would expect, this book shows how to build from scratch two different databases: MariaDB 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 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 two, you will create a PostgreSQL database, named Bank, and its tables. In chapter three, 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 four, 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 five, 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 six, you will be taught how to create a SQL Server database, named Crime, and its tables. In chapter seven, you will be taught how to extract image features, utilizing BufferedImage class, in Java GUI. In chapter eight, 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 nine, 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 ten, 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 eleven, 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/MariaDB/SQL Server programmer.*

*Working with Structured Data in Python*