



Internship Project On

BOOK SHOP

Presented By,
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INTRODUCTION

This is my portfolio project which demonstrates my abilities in building a JDBC (Java Database Connectivity) using MySQL and Java Eclipse IDE, Here I have developed the code for Java Crud operation where user can process books information like Book name, Edition, Price and Quantity by displaying the data on a Window builder GUI.

SOFTWARE TOOLS

- Java Eclipse IDE
- MySQL Database
- Windows Builder GUI
- MySQL Connector jar
- rs2xml.jar



JDBC(Java Database Connectivity)

A. What is JDBC ?

JDBC stands for Java Database Connectivity. JDBC is a Java API to connect and execute the query with the database. It is a part of JavaSE (Java Standard Edition). JDBC API uses JDBC drivers to connect with the database.

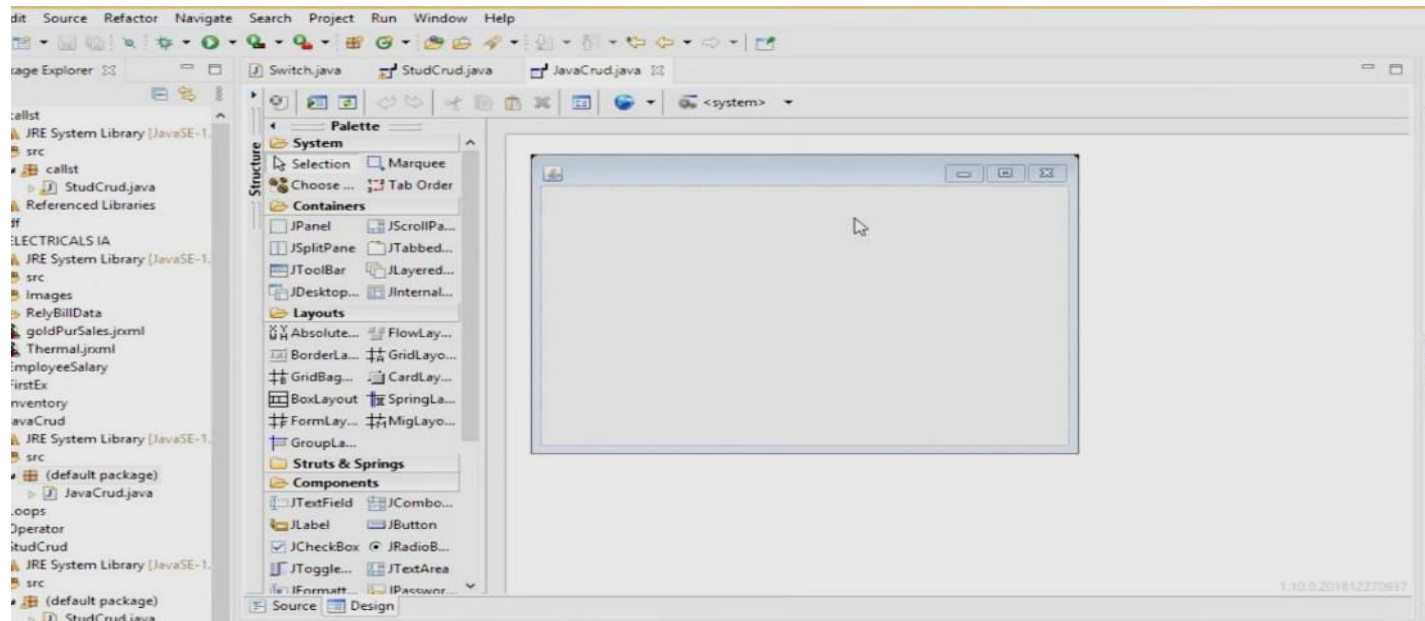
We can use JDBC API to access tabular data stored in any relational database. By the help of JDBC API, we can save, update, delete and fetch data from the database. What is API ? API (Application programming interface) is a document that contains a description of all the features of a product or software. It represents classes and interfaces that software programs can follow to communicate with each other. An API can be created for applications, libraries, operating systems, etc.

There are 4 types of Driver Software's:

1. Type1 Driver : JDBC-ODBC Bridge
2. Type2 Driver : Native API Driver
3. Type3 Driver : Network Protocol Driver
4. Type4 Driver : Pure Java Driver/ Thin Driver

STEPS FOR CREATE THE PROJECT :

- Create New Java Project File and Give name as Bookshop then Create class name BookShop.java .
- Download Windows builder Using Eclipse Marketplace and then Going to Design Application Windows For Our project file that is steps , Firstly Right Click on project → New → Others → Windows Builder → Swing Designer → Application Window . This Application Window Shows below pic then Resize it.



- Design Application Window :-

- From the Using Palette i.e., Left Side Palette from application window There are many tools We want to used in our project Design that are Section wise i.e., System, Containers, Layouts, Struct & Springs , Components etc.
- From The Palette Firstly Going to Components , Select and Drag JLabel as New Label for our Application window and Going to properties Change the Name Or Rename as a “Book Shop” and Using Properties also change Font and Bold it.
- Then , We Need to Design Registration Panel For that Select and Drag JPanel from Containers Going to properties of the panel then select border then Select TitledBorder Give Title as Registration. In Registration Panel Using JLabel Create Three Labels Rename it as Book Name , Edition , Price then Drag JTextField For all of these in front of each labels and Design Registration Panel. And Also Rename JTextField name as txtbname , txtedition and txtprice .
- After that We need to Create Buttons Save , Exit , Clear is in below the Registration Panel For that Select and Drag JButton From Components Rename it From Properties as Save , Exit and Clear

- Design Search Panel Select and Drag JPanel from Containers Going to properties of the panel then select border then Select TitledBorder Give Title as Search.
- After that Select and Design Scroll Pane in Application Windows i.e Right Side of Registration Panel Go to palette Select and Drag JScrollPane From Containers.
- Finally Design Update and Delete Buttons Select and Drag JButton From Components Rename it From Properties as Update and Delete .

APPLICATION WINDOWS DESIGN

Please login Shopkeeper

User Name

Password

Login

Book Shop Logout

Registration

Book Name

Edition

Price

Qty

Save Exit Clear

Serach

Book ID

Update Delete

id	bookName	edition	price	qty
----	----------	---------	-------	-----

J-Label

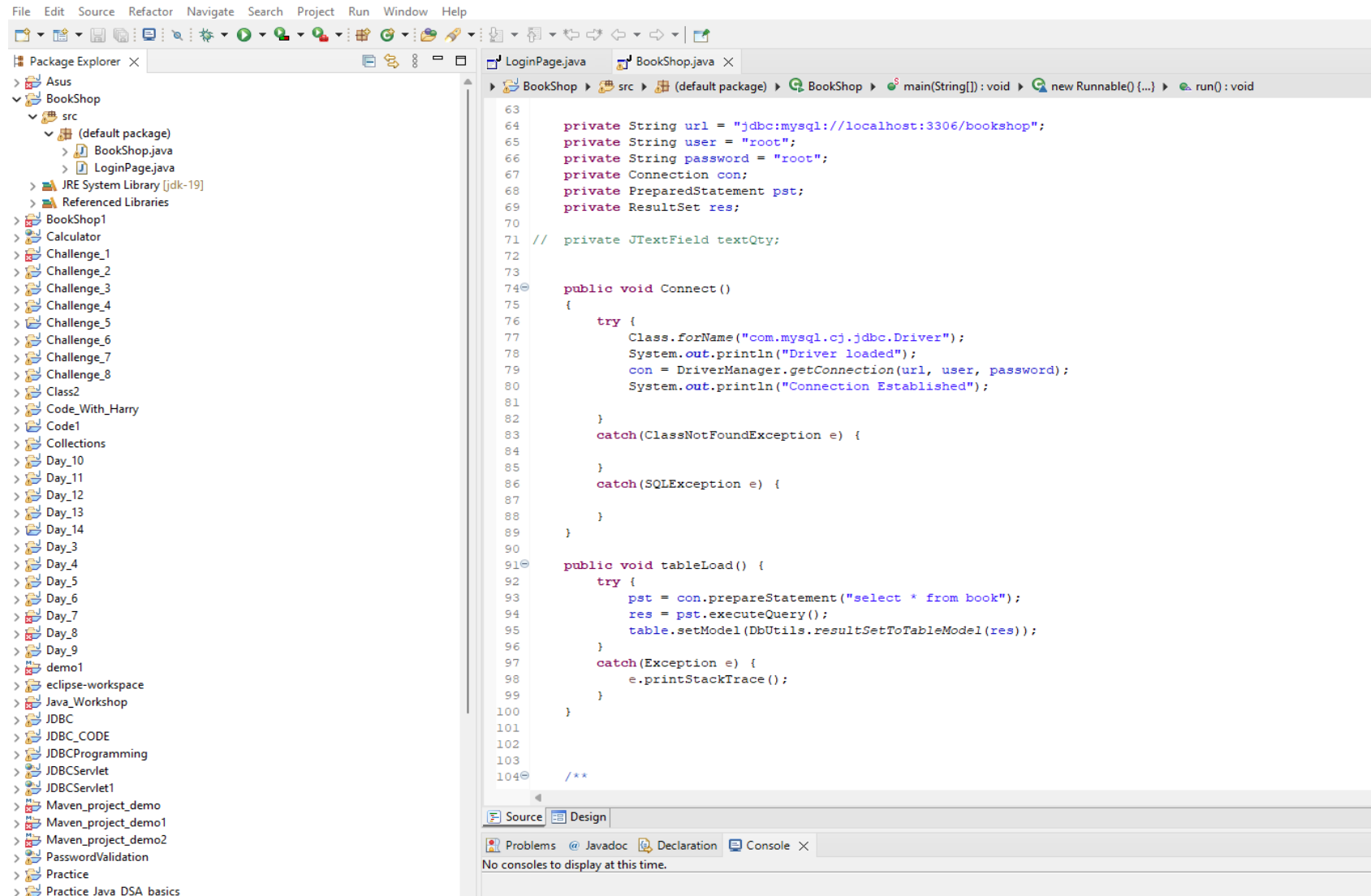
J-text field

J-Button

J-Panel

When we Add insert these J-text fields, J-Panels and J-buttons in J-frames Codes will be automatically generated.

JDBC SOURCE CODE



```
File Edit Source Refactor Navigate Search Project Run Window Help
Package Explorer X
Asus
BookShop
  src
    (default package)
      BookShop.java
      LoginPage.java
  JRE System Library [jdk-19]
  Referenced Libraries
BookShop1
Calculator
Challenge_1
Challenge_2
Challenge_3
Challenge_4
Challenge_5
Challenge_6
Challenge_7
Challenge_8
Class2
Code_With_Harry
Code1
Collections
Day_10
Day_11
Day_12
Day_13
Day_14
Day_3
Day_4
Day_5
Day_6
Day_7
Day_8
Day_9
demo1
eclipse-workspace
Java_Workshop
JDBC
JDBC_CODE
JDBCProgramming
JDBCServlet
JDBCServlet1
Maven_project_demo
Maven_project_demo1
Maven_project_demo2
PasswordValidation
Practice
Practice_Java_DSA_basics

BookShop.java
BookShop (default package) BookShop main(String[]): void new Runnable() {...} run(): void

63
64 private String url = "jdbc:mysql://localhost:3306/bookshop";
65 private String user = "root";
66 private String password = "root";
67 private Connection con;
68 private PreparedStatement pst;
69 private ResultSet res;
70
71 // private JTextField textQty;
72
73
74 public void Connect ()
75 {
76     try {
77         Class.forName("com.mysql.cj.jdbc.Driver");
78         System.out.println("Driver loaded");
79         con = DriverManager.getConnection(url, user, password);
80         System.out.println("Connection Established");
81     }
82 }
83 catch(ClassNotFoundException e) {
84
85 }
86 catch(SQLException e) {
87
88 }
89
90
91 public void tableLoad() {
92     try {
93         pst = con.prepareStatement("select * from book");
94         res = pst.executeQuery();
95         table.setModel(DbUtils.resultSetToTableModel(res));
96     }
97     catch(Exception e) {
98         e.printStackTrace();
99     }
100 }
101
102
103
104 /**

Source Design
Problems Javadoc Declaration Console X
No consoles to display at this time.
```

SQLYOG WINDOW

The screenshot displays the SQLYOG application interface. At the top is a menu bar with options: File, Edit, Favorites, Database, Table, Others, Tools, Powertools, Transactions, Window, and Help. Below the menu is a toolbar with various icons for database operations. The main window is divided into three panes:

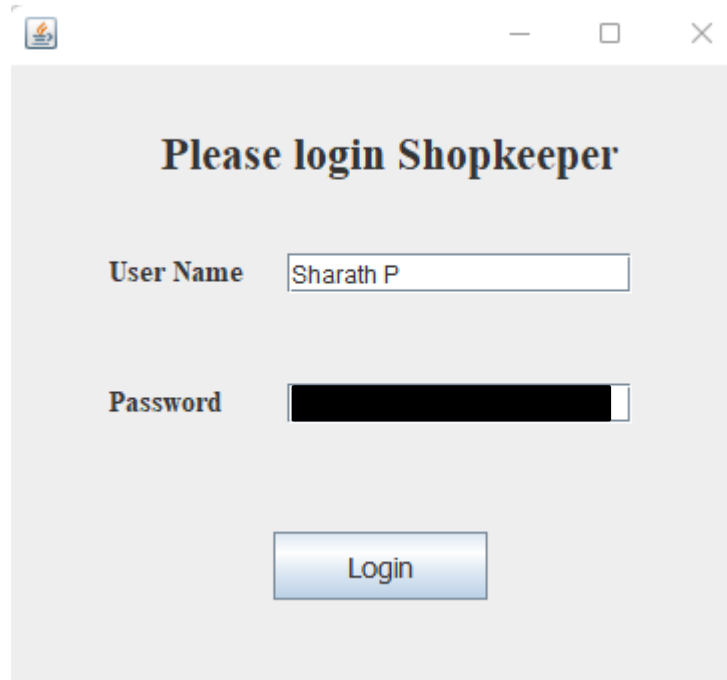
- Left Pane:** Shows a tree view of the database structure. The 'bookshop' database is selected, showing its tables: challenge_1, e_commerce, employee_details, information_schema, jdbc_test, jdbc_training, microservicesdb, mysql, performance_schema, school, student, and sys.
- Top Right Pane:** Displays the SQL query editor. The query is as follows:

```
1 CREATE DATABASE school;
2
3 USE bookshop;
4
5 `book`
6 SELECT * FROM employee WHERE empid = 102;
7
8 SELECT * FROM book;
9
10 CREATE TABLE shopowner (username VARCHAR(255), pwd VARCHAR(50));
11
12 INSERT INTO shopowner VALUES('Sharath P','1b16ME@4292023');
13
14 SELECT * FROM shopowner;
15
16 DELETE FROM book WHERE id = 8;
17
18 ALTER TABLE book DROP qty ;
19
20 ALTER TABLE book ADD qty INT ;
21
22 DESCRIBE book;
23
```
- Bottom Right Pane:** Shows the result set of the query. It includes a toolbar with icons for saving, printing, and other actions. The result is a table with 5 columns: id, bookName, edition, price, and qty. The data is as follows:

id	bookName	edition	price	qty
1	Java	1	1000	10
2	Ramayana	5	2000	15
3	Raman	5	2000	5
4	Shivam	5	6000	(NULL)
5	python	3	500	(NULL)
6	Code with Ninja	6	5000	(NULL)
10	Rahna	2	258	(NULL)
11	Kavyamimamse	8	2000	(NULL)

OUTPUT WINDOWS

Login Page



A screenshot of a Java Swing window titled "Please login Shopkeeper". The window has a light gray background and a standard Windows-style title bar with a minimize button, a maximize button, and a close button. Inside the window, there are two text input fields. The first field is labeled "User Name" and contains the text "Sharath P". The second field is labeled "Password" and is filled with black characters. Below these fields is a blue "Login" button.

Here also JDBC crud
Operation is performed
To validate the password
Existing in the database.

Data processing Page

The screenshot shows a Java Swing window titled "Book Shop". It features a "Registration" section on the left with input fields for "Book Name", "Edition", "Price", and "Qty", and buttons for "Save", "Exit", and "Clear". Below this is a "Serach" (sic) section with a "Book ID" input field. On the right, there is a table displaying book data and buttons for "Update" and "Delete". A "Logout" button is located in the top right corner.

id	bookName	edition	price	qty
1	Java	1	1000	10
2	Ramayana	5	2000	15
3	Raman	5	2000	5
4	Shivam	5	6000	
5	python	3	500	
6	Code with ...	6	5000	
10	Rahna	2	258	
12	ServletCode	1	1000	5

JDBC crud Operation is Performed which are as Follows in further slides

JDBC OPERATIONS

Record Added

Book Shop

Logout

Registration

Book Name

Mahabharatha

Edition

1

Price

1000

Qty

5

Save

Exit

Clear

Search

Book ID

id	bookName	edition	price	qty
1	Java	1	1000	10
2	Ramayana	5	2000	15
3	Raman	5	2000	5
4	Shivam	5	6000	
5	python	3	500	
6	Code with ...	6	5000	
10	Rahna	2	258	
12	ServletCode	1	1000	5

Message

Record Added

OK

Update

Delete

Record Updated

Book Shop

Logout

Registration

Book Name

Mahabharatha

Edition

1

Price

1000

Qty

5

Save

Exit

Clear

Search

Book ID

13

id	bookName	edition	price	qty
1	Java	1	1000	10
2	Ramayana	5	2000	15
3	Raman	5	2000	5
4	Shivam	5	6000	
5	python	3	500	
6	Code with ...	6	5000	
10	Rahna	2	258	
12	ServletCode	1	1000	5

Message

Record Updated

OK

Update

Delete

JDBC OPERATIONS

Record Deleted

The screenshot shows a Java Swing application window titled "Book Shop". The window contains a "Registration" section with input fields for "Book Name" (containing "ServletCode"), "Edition" (containing "1"), "Price" (containing "1000"), and "Qty" (containing "5"). Below these are "Save", "Exit", and "Clear" buttons. There is also a "Serach" section with a "Book ID" field containing "12" and "Update" and "Delete" buttons. A table displays book inventory with columns: id, bookName, edition, price, and qty. The table has 12 rows, with the last row (id 12, bookName ServletCode, edition 1, price 1000, qty 5) highlighted in blue. A "Logout" button is in the top right. A "Message" dialog box is open in the center, displaying an information icon, the text "Record Deleted", and an "OK" button.

id	bookName	edition	price	qty
1	Java	1	1000	10
2	Ramayana	5	2000	15
3	Raman	5	2000	5
4	Shivam	5	6000	
5	python	3	500	
6	Code with ...	6	5000	
10	Rahna	2	258	
12	ServletCode	1	1000	5

SQL Database

1 Result 2 Profiler 3 Messages 4 Table Data 5 Info					
(Read Only)					
<input type="checkbox"/>	id	bookName	edition	price	qty
<input type="checkbox"/>	1	Java	1	1000	10
<input type="checkbox"/>	2	Ramayana	5	2000	15
<input type="checkbox"/>	3	Raman	5	2000	5
<input type="checkbox"/>	4	Shivam	5	6000	(NULL)
<input type="checkbox"/>	5	python	3	500	(NULL)
<input type="checkbox"/>	6	Code with Ninja	6	5000	(NULL)
<input type="checkbox"/>	10	Rahna	2	258	(NULL)
<input type="checkbox"/>	11	Kavyamimamse	8	2000	14

CONCLUSION

In this project I learnt Window Builder GUI usage for user interaction and it was easy to develop code since J frame tools automatically generates the partial code.

Thank you