# Experiment No. __10__

**Date of performance:** 11/11/22

**Date of Submission:** 11/11/22

**SAP Id: 500091584**

**Roll No.: R2142210822**

**Name of the Student: Ujjwal Kumar Gupta**

1. **Title:** **JDBC**

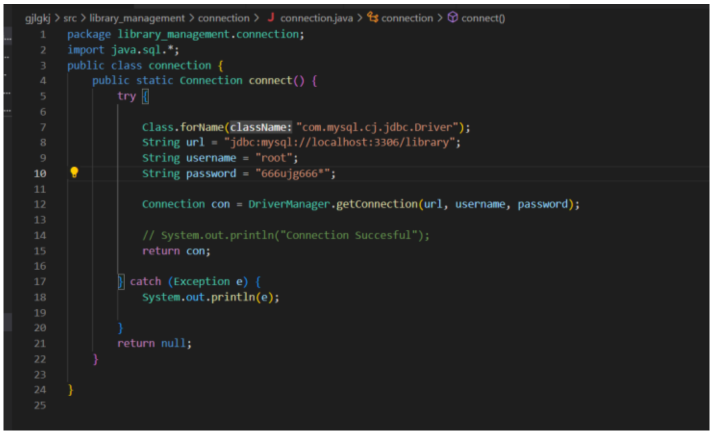
2. **Objective:** **JDBC**

3. **List of lab activities:**

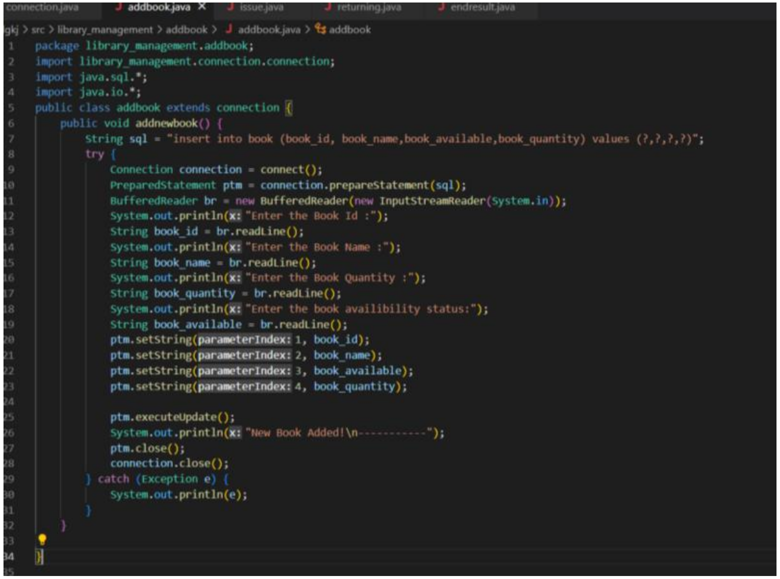
   1) Create a database table to store the records of employee in a company. Use getConnection functionto connect the database. The statement object uses executeUpdate function to create a table.

   2) Create a database of employee of company in mysql and then use java program to access thedatabase for inserting information of employees in database. The SQL statement can be used toview the details of the data of employees in the database.

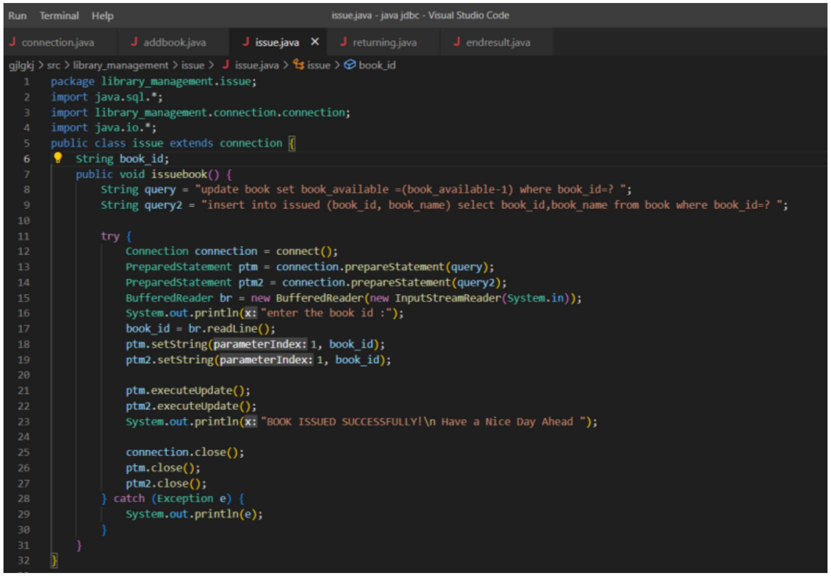
4. **Algorithm/Flowchart and Code followed by Output screenshot (2samples for each program):**


gjlgkj > src > library_management > connection > connection.java > connection > connect()

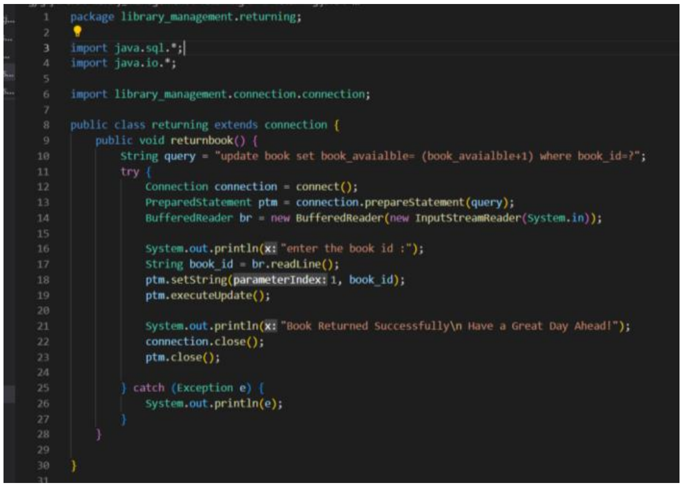
```java
package library_management.connection;
import java.sql.*;
public class connection {
    public static Connection connect() {
        try {

            Class.forName(className: "com.mysql.cj.jdbc.Driver");
            String url = "jdbc:mysql://localhost:3306/library";
            String username = "root";
            String password = "666ujg666*";

            Connection con = DriverManager.getConnection(url, username, password);

            // System.out.println("Connection Succesful");
            return con;

        } catch (Exception e) {
            System.out.println(e);

        }
        return null;
    }

}
```


connection.java
addbook.java
issue.java
returning.java
endresult.java
gkj > src > library_management > addbook > addbook.java > addbook

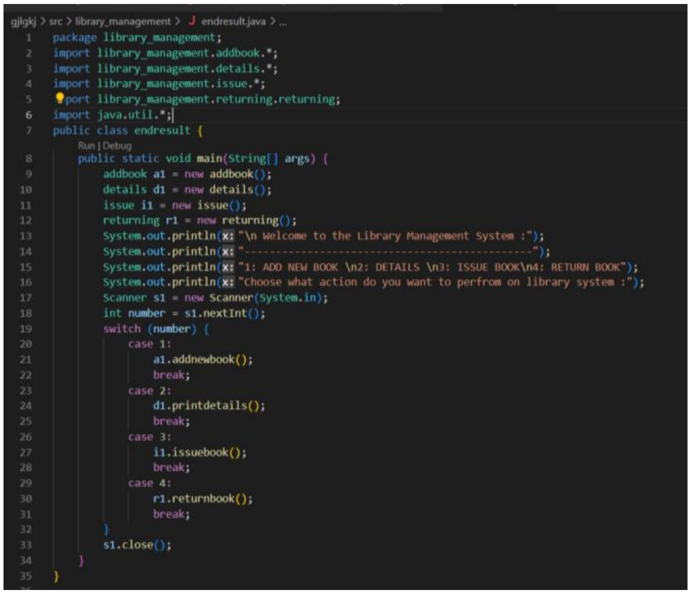
```java
package library_management.addbook;
import library_management.connection.connection;
import java.sql.*;
import java.io.*;
public class addbook extends connection {
    public void addnewbook() {
        String sql = "insert into book (book_id, book_name,book_available,book_quantity) values (?,?,?,?)";
        try {
            Connection connection = connect();
            PreparedStatement ptm = connection.prepareStatement(sql);
            BufferedReader br = new BufferedReader(new InputStreamReader(System.in));
            System.out.println(x: "Enter the Book Id :");
            String book_id = br.readLine();
            System.out.println(x: "Enter the Book Name :");
            String book_name = br.readLine();
            System.out.println(x: "Enter the Book Quantity :");
            String book_quantity = br.readLine();
            System.out.println(x: "Enter the book availibility status:");
            String book_available = br.readLine();
            ptm.setString(parameterIndex: 1, book_id);
            ptm.setString(parameterIndex: 2, book_name);
            ptm.setString(parameterIndex: 3, book_available);
            ptm.setString(parameterIndex: 4, book_quantity);

            ptm.executeUpdate();
            System.out.println(x: "New Book Added!\n-----------");
            ptm.close();
            connection.close();
        } catch (Exception e) {
            System.out.println(e);
        }
    }

}
```


Run
Terminal
Help
issue.java - java jdbc - Visual Studio Code
connection.java
addbook.java
issue.java
returning.java
endresult.java
gjlgkj > src > library_management > issue > issue.java > issue > book_id

```java
package library_management.issue;
import java.sql.*;
import library_management.connection.connection;
import java.io.*;
public class issue extends connection {
    String book_id;
    public void issuebook() {
        String query = "update book set book_available =(book_available-1) where book_id=? ";
        String query2 = "insert into issued (book_id, book_name) select book_id,book_name from book where book_id=? ";

        try {
            Connection connection = connect();
            PreparedStatement ptm = connection.prepareStatement(query);
            PreparedStatement ptm2 = connection.prepareStatement(query2);
            BufferedReader br = new BufferedReader(new InputStreamReader(System.in));
            System.out.println(x: "enter the book id :");
            book_id = br.readLine();
            ptm.setString(parameterIndex: 1, book_id);
            ptm2.setString(parameterIndex: 1, book_id);

            ptm.executeUpdate();
            ptm2.executeUpdate();
            System.out.println(x: "BOOK ISSUED SUCCESSFULLY!\n Have a Nice Day Ahead ");

            connection.close();
            ptm.close();
            ptm2.close();
        } catch (Exception e) {
            System.out.println(e);
        }
    }
}
```



```java
package library_management.returning;

import java.sql.*;
import java.io.*;

import library_management.connection.connection;

public class returning extends connection {
    public void returnbook() {
        String query = "update book set book_avaialble= (book_avaialble+1) where book_id=?";
        try {
            Connection connection = connect();
            PreparedStatement ptm = connection.prepareStatement(query);
            BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

            System.out.println(x: "enter the book id :");
            String book_id = br.readLine();
            ptm.setString(parameterIndex: 1, book_id);
            ptm.executeUpdate();

            System.out.println(x: "Book Returned Successfully\n Have a Great Day Ahead!");
            connection.close();
            ptm.close();

        } catch (Exception e) {
            System.out.println(e);
        }
    }

}
```



gjlgkj > src > library_management > endresult.java > ...

```java
package library_management;
import library_management.addbook.*;
import library_management.details.*;
import library_management.issue.*;
port library_management.returning.returning;
import java.util.*;
public class endresult {
    Run | Debug
    public static void main(String[] args) {
        addbook a1 = new addbook();
        details d1 = new details();
        issue i1 = new issue();
        returning r1 = new returning();
        System.out.println(x: "\n Welcome to the Library Management System :");
        System.out.println(x: "--------------------------------------------");
        System.out.println(x: "1: ADD NEW BOOK \n2: DETAILS \n3: ISSUE BOOK\n4: RETURN BOOK");
        System.out.println(x: "Choose what action do you want to perfrom on library system :");
        Scanner s1 = new Scanner(System.in);
        int number = s1.nextInt();
        switch (number) {
            case 1:
                a1.addnewbook();
                break;
            case 2:
                d1.printdetails();
                break;
            case 3:
                i1.issuebook();
                break;
            case 4:
                r1.returnbook();
                break;
        }
        s1.close();
    }
}
```

## 5. Brief notes about all the concepts related to the lab experiment