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JDBC CASESTUDY

JDBCOperations.java

```
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.util.Scanner;

public class JDBCOperations {

    static public void display() throws Exception{
        // TODO Auto-generated method stub
        Scanner sc=new Scanner(System.in);
        Class.forName("oracle.jdbc.OracleDriver");

        Connection con=DriverManager.getConnection(
            "jdbc:oracle:thin:1/123@localhost:1521:xe","hr","hr");

        PreparedStatement ps=con.prepareStatement("select * from books");
        ResultSet rs =ps.executeQuery();
        System.out.println("fetching available books.please wait");
        Thread.sleep(1200);
        while(rs.next()) {
            System.out.println(rs.getInt(1)+" "+rs.getString(2));
        }
    }

    static public void delete() throws Exception{
        // TODO Auto-generated method stub
        Scanner sc=new Scanner(System.in);
        Class.forName("oracle.jdbc.OracleDriver");

        Connection con=DriverManager.getConnection(
            "jdbc:oracle:thin:1/123@localhost:1521:xe","hr","hr");

        PreparedStatement ps=con.prepareStatement("delete from books where
bookid=?");
        System.out.println("enter book id:");
        int id=sc.nextInt();
```

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        ps.setInt(1, id);
        int rows=ps.executeUpdate();
        System.out.println("deleting record.please wait");
        Thread.sleep(1200);
        System.out.println("successfully deleted the record");
    }
    static public void insert() throws Exception{
        // TODO Auto-generated method stub
        Scanner sc=new Scanner(System.in);
        Class.forName("oracle.jdbc.OracleDriver");

        Connection con=DriverManager.getConnection(
            "jdbc:oracle:thin:1/123@localhost:1521:xe","hr","hr");

        PreparedStatement ps=con.prepareStatement("insert into books
values(?,?,?, ?,?)");
        System.out.println("enter book id: ");
        int id=Integer.valueOf(sc.nextLine());
        System.out.println("enter book name: ");
        String bookname=sc.nextLine();
        System.out.println("enter book Author: ");
        String author=sc.nextLine();
        System.out.println("enter book cost: ");
        int cost=Integer.valueOf(sc.nextLine());
        System.out.println("enter book Publisher: ");
        String publisher=sc.nextLine();
        ps.setInt(1,id);
        ps.setString(2,bookname);
        ps.setString(3,author);
        ps.setInt(4,cost);
        ps.setString(5,publisher);
        int rows=ps.executeUpdate();
        System.out.println("PLEASE WAIT");
        Thread.sleep(1200);
        System.out.println("Successfully inserted ");
    }

    static public void search() throws Exception{
        // TODO Auto-generated method stub
        Scanner sc=new Scanner(System.in);
        Class.forName("oracle.jdbc.OracleDriver");

        Connection con=DriverManager.getConnection(
            "jdbc:oracle:thin:1/123@localhost:1521:xe","hr","hr");

```

```

        PreparedStatement ps=con.prepareStatement("select * from books
where bookid=?");
        System.out.println("enter book id:");
        int id=sc.nextInt();
        ps.setInt(1, id);
        int rows=ps.executeUpdate();
        System.out.println("PLEASE WAIT.Fetching results.");
        Thread.sleep(1200);
        if(rows==0)
            System.out.println("no book found with id :"+id);
        ResultSet rs=ps.executeQuery();
        while(rs.next()) {
            System.out.println(rs.getInt(1)+" "+rs.getString(2)+"
"+rs.getString(3)+" "+rs.getInt(4)+" "+rs.getString(5));
        }
    }

    static public void update() throws Exception {
        // TODO Auto-generated method stub
        Scanner sc=new Scanner(System.in);
        Class.forName("oracle.jdbc.OracleDriver");

        Connection con=DriverManager.getConnection(
        "jdbc:oracle:thin:1/123@localhost:1521:xe","hr","hr");
        PreparedStatement ps=null;
        System.out.println("enter book id:");
        int id=sc.nextInt();
        System.out.println("enter the attribute you want to
update:(bookname,author,cost,publisher)");
        String attr=sc.next();

        if(attr.toLowerCase().equals("bookname")) {
            ps=con.prepareStatement("update books set bookname=? where
bookid=?");
            System.out.println("enter new bookname:");
            String bookname=sc.next();
            ps.setString(1, bookname);
            ps.setInt(2, id);
        }
        else if(attr.toLowerCase().equals("author")) {
            ps=con.prepareStatement("update books set author=?
where bookid=?");
            System.out.println("enter new author name:");
            String authorname=sc.next();

```

```

        ps.setString(1, authorname);
        ps.setInt(2, id);
    }
    else if(attr.toLowerCase().equals("cost")) {
        ps=con.prepareStatement("update books set cost=? where
bookid=?");

        System.out.println("enter new cost:");
        int cost=sc.nextInt();
        ps.setInt(1, cost);
        ps.setInt(2, id);
    }
    else if(attr.toLowerCase().equals("publisher")) {
        ps=con.prepareStatement("update books set publisher=?
where bookid=?");

        System.out.println("enter new publisher :");
        String publisher=sc.next();
        ps.setString(1, publisher);
        ps.setInt(2, id);
    }
    System.out.println("updating record.please wait");
    Thread.sleep(1200);
    int rows=ps.executeUpdate();

    if(rows>0)
        System.out.println("successfully updated the record");
    else
        System.out.println("updation of record failed.please try
again");
    }

}

```

UserRegistration.java:

```

import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.util.Scanner;

public class UserRegistration {

    static public boolean isUserExists(String email) throws Exception{
        Class.forName("oracle.jdbc.OracleDriver");
    }
}

```

```

        Connection con=DriverManager.getConnection(
        "jdbc:oracle:thin:1/123@localhost:1521:xe","hr","hr");
        PreparedStatement ps=con.prepareStatement("select * from login where
email=?");
        ps.setString(1, email);
        int rows=ps.executeUpdate();
        if(rows>0)
            return true;
        return false;
    }

    static public boolean newuser() throws Exception{
        // TODO Auto-generated method stub
        Scanner sc=new Scanner(System.in);
        System.out.println("enter your full name:");
        String fullname=sc.nextLine();
        System.out.println("enter your email:");
        String email=sc.nextLine();
        System.out.println("enter your password:");
        String password=sc.nextLine();

        boolean userExist=isUserExists(email);
        if(userExist){
            System.out.println("THE USER IS ALREADY REGISTERED WITH
THIS APPLICATION");
            System.out.println("LOGIN AS EXISTING USER");

        }
        else {
            Class.forName("oracle.jdbc.OracleDriver");

            Connection con=DriverManager.getConnection(
            "jdbc:oracle:thin:1/123@localhost:1521:xe","hr","hr");

            PreparedStatement ps=con.prepareStatement("insert into login
values(?,?,?)");
            ps.setString(1,fullname);
            ps.setString(2,email);
            ps.setString(3,password);
            int rows=ps.executeUpdate();
            if(rows>0) {
                System.out.println("user registration is successful");
                System.out.println("please log in to the application");
            }
        }
    }
}

```

```

        return true;
    }
    else {
        System.out.println("user registration is failed");
        System.out.println("please try again.");
        return false;
    }
}
return false;
}
}

```

UserLogin.java

```

import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.util.Scanner;

public class UserLogin {
    static public void login() throws Exception {
        // TODO Auto-generated method stub
        Scanner sc=new Scanner(System.in);
        System.out.println("Enter your email");
        String email=sc.nextLine();
        System.out.println("Enter your password");
        String password=sc.nextLine();
        Class.forName("oracle.jdbc.OracleDriver");

        Connection con=DriverManager.getConnection(
            "jdbc:oracle:thin:1/123@localhost:1521:xe","hr","hr");

        PreparedStatement ps=con.prepareStatement("select password from login
where email=?");
        ps.setString(1, email);
        ResultSet rs=ps.executeQuery();
        rs.next();
        String pass=rs.getString(1);
        if(password.equals(pass)) {
            System.out.println("login is successful");
            System.out.println("Redirecting you to home page ");
            Thread.sleep(1000);
            Main.menu();
        }
    }
}

```

```

        else {
            System.out.println("wrong username or password");
            System.out.println("please try again");
        }
    }
}

```

Main.java

```

import java.util.Scanner;

public class Main {
    static Scanner sc=new Scanner(System.in);
    static public void menu() throws Exception{
        // TODO Auto-generated method stub
        System.out.println("***** Menu *****");

        while(true) {
            System.out.println("select one of the options");
            System.out.println("1.search book");
            System.out.println("2.add book");
            System.out.println("3.Update book");
            System.out.println("4.Delete book");
            System.out.println("5.DisplayAvailableBook");
            System.out.println("6.Exit");

            System.out.println("enter your choice");
            int choice=sc.nextInt();
            switch(choice) {
                case 1:JDBCOperations.search();
                break;
                case 2:JDBCOperations.insert();
                break;
                case 3:JDBCOperations.update();
                break;
                case 4:JDBCOperations.delete();
                break;
                case 5:JDBCOperations.display();
                break;
                case 6:System.out.println("***** THANK YOU *****");
                System.exit(0);
                default:System.out.println("wrong choice");
            }
        }
    }
}

```

```

    }
    public static void main(String[] args) throws Exception{
        // TODO Auto-generated method stub

        System.out.println("***** WELCOME TO LIBRARY MANAGEMENT
SYSTEM *****");
        System.out.println();
        while(true) {
            System.out.println("Please enter your option");
            System.out.println("1.New User");
            System.out.println("2.Existing User");

            int userchoice=sc.nextInt();
            switch(userchoice) {
                case 1:UserRegistration.newuser();
                break;
                case 2:UserLogin.login();
                break;
            }

        }
    }
}

```

SCREENSHOTS:

Registration and login:

***** WELCOME TO LIBRARY MANAGEMENT SYSTEM *****

Please enter your option

- 1.New User
- 2.Existing User

1

enter your full name:

harsha vardhan

enter your email:

harsha@gmail.com

enter your password:

harsha

user registration is successful

please log in to the application

Please enter your option

- 1.New User
- 2.Existing User

2

Enter your email

harsha@gmail.com

Enter your password

harsha

login is successful

Redirecting you to home page

***** Menu *****

select one of the options

- 1.search book
- 2.add book
- 3.Update book
- 4.Delete book
- 5.DisplayAvailableBook
- 6.Exit

enter your choice

Search book:

Redirecting you to home page

***** Menu *****

select one of the options

- 1.search book
- 2.add book
- 3.Update book
- 4.Delete book
- 5.DisplayAvailableBook
- 6.Exit

enter your choice

1

enter book id:

104

PLEASE WAIT.Fetching results.

104 harrypotter simula 500 augtin

Add Book:

select one of the options

1.search book

2.add book

3.Update book

4.Delete book

5.DisplayAvailableBook

6.Exit

enter your choice

2

enter book id:

108

enter book name:

ikigai

enter book Author:

sriram

enter book cost:

500

enter book Publisher:

subhash

PLEASE WAIT

Successfully inserted

.....

Update book:

select one of the options

1.search book

2.add book

3.Update book

4.Delete book

5.DisplayAvailableBook

6.Exit

enter your choice

3

enter book id:

108

enter the attribute you want to update:(bookname,author,cost,publisher)

author

enter new author name:

mahesh

updating record.please wait

successfully updated the record

Delete book:

```
select one of the options
1.search book
2.add book
3.Update book
4.Delete book
5.DisplayAvailableBook
5.Exit
enter your choice
4
enter book id:
101
deleting record.please wait
successfully deleted the record
```

Display available books:

```
select one of the options
1.search book
2.add book
3.Update book
4.Delete book
5.DisplayAvailableBook
6.Exit
enter your choice
5
fetching available books.please wait
104 harrypotter
108 ikigai
102 harry
.....
```

Exit:

```
102 harry
select one of the options
1.search book
2.add book
3.Update book
4.Delete book
5.DisplayAvailableBook
6.Exit
enter your choice
6
***** THANK YOU *****
```