

Day5_JDBC_Assignment

Task1:

Queries:

```
use testdb;
```

```
create table testdb.Assignments (course_id INT PRIMARY KEY,course_name  
VARCHAR(100),faculty VARCHAR(100),credits INT);
```

```
select * from Assignments;
```

JDBC Operations:

```
package jdbc;  
  
import java.sql.Connection;  
import java.sql.DriverManager;  
import java.sql.SQLException;  
  
public class jdbcq1 {  
  
    private static final String URL = "jdbc:mysql://localhost:3306/testdb";  
    private static final String USER = "root";  
    private static final String PASSWORD = "Manikanta@4236";  
  
    public static Connection getConnection() throws SQLException {  
        Connection conn = DriverManager.getConnection(URL, USER, PASSWORD);  
        System.out.println("Connected to the database");  
        return conn;  
    }  
}
```

Output:

Connected to the database

➤ Insertcourse.java:

```
package jdbc;  
  
import java.sql.Connection;
```

```

import java.sql.PreparedStatement;

import java.util.Scanner;

public class jdbcInsert {

    public static void main(String[] args) {

        try {

            Scanner sc = new Scanner(System.in);

            Connection conn = jdbcq1.getConnection() {

                System.out.print("Enter Course ID:");

                int id = sc.nextInt();

                sc.nextLine();

                System.out.print("Enter Course Name:");

                String name = sc.nextLine();

                System.out.print("Enter Faculty:");

                String faculty = sc.nextLine();

                System.out.print("Enter Credits:");

                int credits = sc.nextInt();

                String query = "INSERT INTO courses VALUES (?, ?, ?, ?)";

                PreparedStatement ps = conn.prepareStatement(query);

                ps.setInt(1, id);

                ps.setString(2, name);

                ps.setString(3, faculty);

                ps.setInt(4, credits);

                int rows = ps.executeUpdate();

                System.out.println(rows > 0 ? "Course inserted" : "Insertion failed.");

            } catch (Exception e) {

                e.printStackTrace();

            }

        }

    }

}

```

Output:

Connected to the database

Enter Course ID:1

Enter Course Name :CSS

Enter Faculty:Dhatri

Enter Credits:5

Course inserted

➤ Selectcourse.java:

```
package jdbc;

import java.sql.Connection;
import java.sql.ResultSet;
import java.sql.Statement;

public class JdbcSelect {

    public static void main(String[] args) {

        try (Connection conn = jdbcq1.getConnection(); Statement stmt
            = conn.createStatement();

            ResultSet rs = stmt.executeQuery("SELECT * FROM courses")) {

            System.out.println("Course List:");

            while (rs.next()) {

                System.out.println("ID:" + rs.getInt("course_id") +

                    ",Name:" + rs.getString("course_name") +

                    ",Faculty:" + rs.getString("faculty") +

                    ",Credits:" + rs.getInt("credits"));

            }

        } catch (Exception e) {

            e.printStackTrace();

        }

    }

}
```

Output:

Connected to the database

Course List:

ID:1,Name:Html,Faculty:parvathi,Credits:5

ID:3,Name:sql,Faculty:mani,Credits:5

ID:4,Name:Python,Faculty:Gayathri,Credits:5

ID:10,Name:Java,Faculty:Hari,Credits:5

➤ **Updatecourse.java:**

```
package Courserereg;

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

public class JdbcUpdate {

    public static void main(String[] args) {
        try (Scanner sc = new Scanner(System.in);
            Connection conn = Jdbcq1.getConnection()) {
            System.out.print("Enter Course ID to update:");
            int id = sc.nextInt();
            sc.nextLine();

            System.out.print("Enter new Faculty:");
            String faculty = sc.nextLine();

            System.out.print("Enter new Credits:");
            int credits = sc.nextInt();

            String query = "UPDATE courses SET faculty=?,credits=? WHERE course_id=?";
            PreparedStatement ps = conn.prepareStatement(query);

            ps.setString(1,faculty);
            ps.setInt(2,credits);
            ps.setInt(3,id);

            int rows = ps.executeUpdate();

            System.out.println(rows > 0 ? "Course updated successfully." : "No course found with given ID.");
        } catch (Exception e) {
            e.printStackTrace();
        }
    }
}
```

```
}
```

Output:

Connected to the database

Enter Course ID to update:

1

Enter new Faculty:Siva

Enter new Credits:5

Course updated successfully.

➤ Deletecourse.java:

```
package Courseereg;

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

public class JdbcDelete {

    public static void main(String[] args) {
        try (Scanner sc = new Scanner(System.in);
            Connection conn = Jdbcq1.getConnection()) {
            System.out.print("Enter Course ID to delete: ");
            int id = sc.nextInt();
            String query = "DELETE FROM courses WHERE course_id=?";
            PreparedStatement ps = conn.prepareStatement(query);
            ps.setInt(1, id);
            int rows = ps.executeUpdate();
            System.out.println(rows > 0 ? "Course deleted successfully.":"No course found with given ID.");
        } catch (Exception e) {
            e.printStackTrace();
        }
    }
}
```

Output:

Connected to the database

Enter Course ID to delete: 1

Course deleted successfully.

Task2:**Queries:**

```
use inventorydb;
```

```
create table inventorydb.products (product_id INT PRIMARY KEY,product_name  
VARCHAR(100),quantity INT,price DECIMAL(10,2));
```

```
select * from products;
```

JDBC Operations:

Dbutilization.java:

```
package Inventorysys;
```

```
import java.sql.Connection;
```

```
import java.sql.DriverManager;
```

```
import java.sql.SQLException;
```

```
public class Dbutilization {
```

```
private static final String URL "jdbc:mysql://localhost:3306/inventorydb";
```

```
private static final String USER = "root";
```

```
private static final String PASSWORD = "Likhita@2003";
```

```
public static Connection getConnection() throws SQLException {
```

```
Connection conn = DriverManager.getConnection(URL, USER, PASSWORD);
```

```
System.out.println("Connected to the database");
```

```
return conn;
```

```
}
```

```
}
```

Output:

Connected to the database

Insertinventory:

```
package Inventorysys;

import java.sql.Connection;

import java.sql.PreparedStatement;

import java.util.Scanner;

public class Insertinventory {

    public static void main(String[] args) {

        try (Scanner sc = new Scanner(System.in);

            Connection conn = Dbutilization.getConnection()) {

            System.out.print("Enter product ID:");

            int id = sc.nextInt();

            sc.nextLine();

            System.out.print("Enter product Name:");

            String name = sc.nextLine();

            System.out.print("Enter quantity:");

            int qty = sc.nextInt();

            System.out.print("Enter price:");

            double price = sc.nextDouble();

            String query = "INSERT INTO products VALUES (?, ?, ?, ?)";

            PreparedStatement ps = conn.prepareStatement(query);

            ps.setInt(1, id);

            ps.setString(2, name);

            ps.setInt(3, qty);

            ps.setDouble(4, price);

            int rows = ps.executeUpdate();

            System.out.println(rows > 0 ? "Product added":"Insertion failed.");

        } catch (Exception e) {

            e.printStackTrace();

        }

    }

}
```

```
}
```

Output:

Connected to the database

Enter product ID:1

Enter product Name:bottle

Enter quantity:100

Enter price:1000

Product added

SelectInventory:

```
package Inventorysys;

import java.sql.Connection;
import java.sql.ResultSet;
import java.sql.Statement;

public class Selectinventory {

    public static void main(String[] args) {

        try (Connection conn = Dbutilization.getConnection();

            Statement stmt = conn.createStatement();

            ResultSet rs = stmt.executeQuery("SELECT * FROM products")) {

            System.out.println("---- Product Inventory --- ");

            while (rs.next()) {

                System.out.println("ID: " + rs.getInt("product_id") +

                    ",Name:" + rs.getString("product_name") +

                    ",Quantity:" + rs.getInt("quantity") +

                    ",Price:" + rs.getDouble("price"));

            }

        } catch (Exception e) {

            e.printStackTrace();

        }

    }

}
```



```
}
```

Output:

Connected to the database

---- Product Inventory ----

ID: 1,Name:bottle,Quantity:100,Price:1000.0

ID: 2,Name:Steelbottle,Quantity:100,Price:10000.0

ID: 3,Name:Kidsbottle,Quantity:100,Price:15000.0

ID: 4,Name:Gymbottle,Quantity:100,Price:20000.0

Updateinventory.java:

```
package Inventoriesys;

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

public class Updateinventory {

    public static void main(String[] args) {

        try (Scanner sc = new Scanner(System.in);

            Connection conn = Dbutilization.getConnection()) {

            System.out.print("Enter product ID to update quantity: ");

            int id = sc.nextInt();

            System.out.print("Enter New Quantity: ");

            int qty = sc.nextInt();

            String query = "UPDATE products SET quantity = ? WHERE product_id = ?";

            PreparedStatement ps = conn.prepareStatement(query);

            ps.setInt(1, qty);

            ps.setInt(2, id);

            int rows = ps.executeUpdate();

            System.out.println(rows > 0 ? "Quantity updated!":"Product not found.");

        } catch (Exception e) {

            e.printStackTrace();

        }

    }

}
```

```
}  
}
```

Output:

Connected to the database

Enter product ID to update quantity: 1

Enter New Quantity: 200

Quantity updated!

Deleteinventory.java:

```
package Inventorystys;  
  
import java.sql.Connection;  
  
import java.sql.PreparedStatement;  
  
import java.util.Scanner;  
  
public class Deleteinventory {  
    public static void main(String[] args) {  
        try (Scanner sc = new Scanner(System.in);  
             Connection conn = Dbutilization.getConnection()) {  
            System.out.print("Enter Product ID to delete: ");  
            int id = sc.nextInt();  
            String query = "DELETE FROM products WHERE product_id = ?";  
            PreparedStatement ps = conn.prepareStatement(query);  
            ps.setInt(1, id);  
            int rows = ps.executeUpdate();  
            System.out.println(rows > 0 ? "Product deleted" : "Product not found");  
        } catch (Exception e) {  
            e.printStackTrace();  
        }  
    }  
}
```

Output:

Connected to the database

Enter Product ID to delete: 1

Product deleted