JDBCLayerd:

DbConn.java

```java
package com.ey.jdbc.util;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.SQLException;

public class DbConn {
public static Connection getConnection() throws SQLException,ClassNotFoundException {
                Class.forName("oracle.jdbc.OracleDriver");
                Connection
con=DriverManager.getConnection("jdbc:oracle:thin:@localhost:9501/XE","system","rps@123");
                return con;
            }
        }
```

ProductClient.java

```java
package com.ey.jdbc.client;
import java.sql.SQLException;
import com.ey.jdbc.model.Product;
import com.ey.jdbc.service.ProductService;
import com.ey.jdbc.service.ProductServiceImpl;
public class ProductClient {

  public static void main(String[] args) throws SQLException, ClassNotFoundException {
    ProductService ps = new ProductServiceImpl();

     // inserting
   // ps.insertProduct(new Product(101, "Laptop", 54000.0));
    // ps.insertProduct(new Product(102, "Fridge", 50000.0));
   //   ps.insertProduct(new Product(103, "Cooler", 40000.0));
    //deleting
   //   ps.deleteproduct(102)
     //updating
   // ps.updateproduct(101, new Product(101, "Laptop",40000.0));
    // Listing
     ps.getAllProducts().stream().forEach(p -> System.out.println(p));
  }
}
```

Product.java

```java
package com.ey.jdbc.model;

public class Product {

  private Integer id;
  private String name;
  private Double price;
```

```java
    public Product() {

    }

    public Product(Integer id, String name, Double price) {
        super();
        this.id = id;
        this.name = name;
        this.price = price;
    }

    public Integer getId() {
        return id;
    }

    public void setId(Integer id) {
        this.id = id;
    }

    public String getName() {
        return name;
    }

    public void setName(String name) {
        this.name = name;
    }

    public Double getPrice() {
        return price;
    }

    public void setPrice(Double price) {
        this.price = price;
    }

    @Override
    public String toString() {
        return "Product [id=" + id + ", name=" + name + ", price=" + price + "]";
    }
}
```

ProductService.java

```java
package com.ey.jdbc.service;

import java.sql.SQLException;
import java.util.List;
import com.ey.jdbc.model.Product;

public interface ProductService {
    void insertProduct(Product product) throws SQLException, ClassNotFoundException;
```

```java
    void deleteProduct(Integer pid) throws SQLException, ClassNotFoundException;
    void updateProduct(Integer pid, Product product) throws SQLException, ClassNotFoundException;
    List<Product> getAllProducts() throws SQLException, ClassNotFoundException;
    Product getProduct(Integer pid) throws SQLException, ClassNotFoundException;
}
```

ProductServiceImpl.java

```java
package com.ey.jdbc.service;

import java.sql.Connection;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.sql.Statement;
import java.util.ArrayList;
import java.util.List;
import com.ey.jdbc.model.Product;
import com.ey.jdbc.util.DbConn;

public class ProductServiceImpl implements ProductService {

    @Override
    public void insertProduct(Product product) throws SQLException, ClassNotFoundException {
        PreparedStatement pst = DbConn.getConnection().prepareStatement("insert into product
values(?, ?, ?)");
        pst.setInt(1, product.getId());
        pst.setString(2, product.getName());
        pst.setDouble(3, product.getPrice());
        pst.execute();
    }

    @Override
    public void deleteProduct(Integer pid) throws SQLException, ClassNotFoundException {
        PreparedStatement pst = DbConn.getConnection().prepareStatement("delete from product
where id=?");
        pst.setInt(1, pid);
        pst.execute();
        // Implement logger
        System.out.println("Product deleted");
    }

    @Override
    public void updateProduct(Integer pid, Product product) throws SQLException,
ClassNotFoundException {
        Connection con = DbConn.getConnection();
        con.setAutoCommit(false);
        try {
            PreparedStatement pst = con.prepareStatement("update product set name=?, price=? where
id=?");
            pst.setString(1, product.getName());
```

```java
        pst.setDouble(2, product.getPrice());
        pst.setInt(3, pid);
        pst.execute();
        con.commit();
      } catch (Exception e) {
        con.rollback();
        e.printStackTrace();
      }
      // Implement logger
      System.out.println("Product updated");
    }

    @Override
    public List<Product> getAllProducts() throws SQLException, ClassNotFoundException {
      Statement st = DbConn.getConnection().createStatement(ResultSet.TYPE_SCROLL_INSENSITIVE,
ResultSet.CONCUR_UPDATABLE);
      ResultSet rs = st.executeQuery("select * from product");
      List<Product> productList = new ArrayList<>();
      while (rs.next()) {
        Product p = new Product();
        p.setId(rs.getInt(1));
        p.setName(rs.getString(2));
        p.setPrice(rs.getDouble(3));
        productList.add(p);
      }
      return productList;
    }

    @Override
    public Product getProduct(Integer pid) throws SQLException, ClassNotFoundException {
      PreparedStatement pst = DbConn.getConnection().prepareStatement("select * from product
where id=?");
      pst.setInt(1, pid);
      ResultSet rs = pst.executeQuery();
      Product p = new Product();
      while (rs.next()) {
        p.setId(rs.getInt(1));
        p.setName(rs.getString(2));
        p.setPrice(rs.getDouble(3));
      }
      return p;
    }
}
```