**Mini Project 2 (Sprint 3) with JDBC:**

**DemoTest:**

package main;

import java.util.Collection;

import java.util.Iterator;

import java.util.Scanner;

import bean.Product;

import service.Productservice;

public class DemoTest {

public static void main(String[] args) {

boolean flag=true;

int pid=100,j=0;

int idret[]=new int[50];

Scanner sc=new Scanner(System.in);

Productservice ps=new Productservice();

do

{

System.out.println("\n1 for Add product\n2 for Update product\n3 for Delete product\n4 for Display all products");

System.out.println("5 for Display all product price in ascending order");

System.out.println("6 for Display all product price in descending order");

System.out.println("7 for Display all product name in ascending order");

System.out.println("8 for Display all product name in descending order");

System.out.println("9 for Exit");

int choose =sc.nextInt();

switch(choose)

{

case 1: System.out.println("Add product");

pid++;

sc.nextLine();

System.out.println("Enter product name:");

String pname=sc.nextLine();

System.out.println("Enter product price:");

float price=sc.nextFloat();

//System.out.println("Enter date of purchase:");

if(price>500)

{

int i=ps.Addproduct(pid,pname,price);

idret[j]=i;

j++;

System.out.println("Product Added...");

}

else

{

System.out.println("Product Price should be greater then 500");

}

break;

case 2: System.out.println("Enter product id:");

int id=sc.nextInt();

int count=0;

for(int k=0;k<idret.length;k++)

{

if(id==idret[k])

{

count=0;

System.out.println("Enter new price:");

float pr=sc.nextFloat();

ps.Updateproduct(id,pr);

System.out.println("Price Updated Successfully...");

break;

}

else

{

count=1;

}

}

if(count==1)

{

System.out.println("Incorrect Id...");

}

break;

case 3: System.out.println("Enter product id:");

int did=sc.nextInt();

int count1=0;

for(int k=0;k<idret.length;k++)

{

if(did==idret[k])

{

count1=0;

ps.Deleteproduct(did);

System.out.println("Product Deleted Successfully...");

break;

}

else {

count1=1;

}

}

if(count1==1)

{

System.out.println("Incorrect Id...");

}

break;

case 4: ps.Displayallproduct().stream().forEach(p->System.out.println("Product id:"+p.getPid()+", Product name:"+p.getPname()+", Price:"+p.getPrice()+", Margin:"+p.getPrice()\*0.2));

break;

case 5: System.out.println("\nProducts in Ascending order of price:");

ps.DisplayallproductAsc().stream().forEach(p->System.out.println(p));

break;

case 6: System.out.println("\nProducts in Descending order of price:");

ps.DisplayallproductDesc().stream().forEach(p->System.out.println(p));

break;

case 7: System.out.println("\nProducts in Ascending order of Name:");

ps.DisplayallproductNameAsc().stream().forEach(p->System.out.println(p));

break;

case 8: System.out.println("\nProducts in Descending order of Name:");

ps.DisplayallproductNameDesc().stream().forEach(p->System.out.println(p));

break;

case 9: System.out.println("Thankyou...");

flag=false;

break;

default:System.out.println("Invalied choice...");

break;

}

}while(flag);

}

}

**Productservice:**

package service;

import bean.Product;

import Daolayer.ProductDao;

import java.util.List;

import java.util.stream.Collectors;

public class Productservice {

public List<Product> Displayallproduct()

{

ProductDao pd=new ProductDao();

//return pd.Displayallproduct().stream().collect(Collectors.toList());

return pd.Displayallproduct();

}

public List<Product> DisplayallproductAsc()

{

ProductDao pd=new ProductDao();

//return pd.Displayallproduct().stream().collect(Collectors.toList());

return pd.DisplayallproductAsc();

}

public List<Product> DisplayallproductDesc()

{

ProductDao pd=new ProductDao();

//return pd.Displayallproduct().stream().collect(Collectors.toList());

return pd.DisplayallproductDesc();

}

public List<Product> DisplayallproductNameAsc()

{

ProductDao pd=new ProductDao();

//return pd.Displayallproduct().stream().collect(Collectors.toList());

return pd.DisplayallproductNameAsc();

}

public List<Product> DisplayallproductNameDesc()

{

ProductDao pd=new ProductDao();

//return pd.Displayallproduct().stream().collect(Collectors.toList());

return pd.DisplayallproductNameDesc();

}

public int Addproduct(int id,String name,float price)

{

int i=id;

String nm=name;

float pr=price;

ProductDao pd=new ProductDao();

int id1=pd.Addproduct(i,nm,pr);

return id1;

}

public void Updateproduct(int uid, float uprice)

{

int upid=uid;

float upprice=uprice;

ProductDao pd=new ProductDao();

pd.Updateproduct(upid,upprice);

}

public void Deleteproduct(int did)

{

int deid=did;

ProductDao pd=new ProductDao();

pd.Deleteproduct(deid);

}

}

**ProductDuo:**

package Daolayer;

import java.sql.Connection;

import java.sql.DriverManager;

import java.sql.PreparedStatement;

import java.sql.ResultSet;

import java.sql.Statement;

import java.util.\*;

import bean.Product;

public class ProductDao {

public List<Product> Displayallproduct()

{

List<Product> listofproduct=new ArrayList<>();

try

{

Class.forName("com.mysql.cj.jdbc.Driver");

Connection con=DriverManager.getConnection("jdbc:mysql://localhost:3306/test","root", "ujjwal");

PreparedStatement pstmt = con.prepareStatement("select \* from product");

ResultSet rs = pstmt.executeQuery();

while(rs.next())

{

Product p=new Product();

p.setPid(rs.getInt(1));

p.setPname(rs.getString(2));

p.setPrice(rs.getFloat(3));

p.setStoreDate(rs.getString(4));

listofproduct.add(p);

}

}

catch(Exception e)

{

}

return listofproduct;

}

public List<Product> DisplayallproductAsc()

{

List<Product> listofproduct=new ArrayList<>();

try

{

Class.forName("com.mysql.cj.jdbc.Driver");

Connection con=DriverManager.getConnection("jdbc:mysql://localhost:3306/test","root", "ujjwal");

PreparedStatement pstmt = con.prepareStatement("select \* from product order by price ASC");

ResultSet rs = pstmt.executeQuery();

while(rs.next())

{

Product p=new Product();

p.setPid(rs.getInt(1));

p.setPname(rs.getString(2));

p.setPrice(rs.getFloat(3));

p.setStoreDate(rs.getString(4));

listofproduct.add(p);

}

}

catch(Exception e)

{

}

return listofproduct;

}

public List<Product> DisplayallproductNameAsc()

{

List<Product> listofproduct=new ArrayList<>();

try

{

Class.forName("com.mysql.cj.jdbc.Driver");

Connection con=DriverManager.getConnection("jdbc:mysql://localhost:3306/test","root", "ujjwal");

PreparedStatement pstmt = con.prepareStatement("select \* from product order by pname ASC");

ResultSet rs = pstmt.executeQuery();

while(rs.next())

{

Product p=new Product();

p.setPid(rs.getInt(1));

p.setPname(rs.getString(2));

p.setPrice(rs.getFloat(3));

p.setStoreDate(rs.getString(4));

listofproduct.add(p);

}

}

catch(Exception e)

{

}

return listofproduct;

}

public List<Product> DisplayallproductNameDesc()

{

List<Product> listofproduct=new ArrayList<>();

try

{

Class.forName("com.mysql.cj.jdbc.Driver");

Connection con=DriverManager.getConnection("jdbc:mysql://localhost:3306/test","root", "ujjwal");

PreparedStatement pstmt = con.prepareStatement("select \* from product order by pname DESC");

ResultSet rs = pstmt.executeQuery();

while(rs.next())

{

Product p=new Product();

p.setPid(rs.getInt(1));

p.setPname(rs.getString(2));

p.setPrice(rs.getFloat(3));

p.setStoreDate(rs.getString(4));

listofproduct.add(p);

}

}

catch(Exception e)

{

}

return listofproduct;

}

public List<Product> DisplayallproductDesc()

{

List<Product> listofproduct=new ArrayList<>();

try

{

Class.forName("com.mysql.cj.jdbc.Driver");

Connection con=DriverManager.getConnection("jdbc:mysql://localhost:3306/test","root", "ujjwal");

PreparedStatement pstmt = con.prepareStatement("select \* from product order by price DESC");

ResultSet rs = pstmt.executeQuery();

while(rs.next())

{

Product p=new Product();

p.setPid(rs.getInt(1));

p.setPname(rs.getString(2));

p.setPrice(rs.getFloat(3));

p.setStoreDate(rs.getString(4));

listofproduct.add(p);

}

}

catch(Exception e)

{

}

return listofproduct;

}

public int Addproduct(int i,String j,float k)

{

Product p=new Product();

p.setPid(i);

p.setPname(j);

p.setPrice(k);

try

{

Class.forName("com.mysql.cj.jdbc.Driver");

Connection con=DriverManager.getConnection("jdbc:mysql://localhost:3306/test","root", "ujjwal");

PreparedStatement pstmt=con.prepareStatement("insert into product values(?,?,?,?)");

pstmt.setInt(1, p.getPid());

pstmt.setString(2, p.getPname());

pstmt.setFloat(3, p.getPrice());

pstmt.setDate(4, null);

int res1=pstmt.executeUpdate();

}

catch(Exception e)

{

}

return p.getPid();

}

public void Updateproduct(int id,float price)

{

int i=id;

float p=price;

try

{

Class.forName("com.mysql.cj.jdbc.Driver");

Connection con=DriverManager.getConnection("jdbc:mysql://localhost:3306/test","root", "ujjwal");

PreparedStatement stmt=con.prepareStatement("Update product set price=? where pid=?");

stmt.setFloat(1, p);

stmt.setInt(2, i);

int res1=stmt.executeUpdate();

}

catch(Exception e)

{

}

}

public void Deleteproduct(int id)

{

int did=id;

try

{

Class.forName("com.mysql.cj.jdbc.Driver");

Connection con=DriverManager.getConnection("jdbc:mysql://localhost:3306/test","root", "ujjwal");

PreparedStatement pstmt=con.prepareStatement("delete from product where pid=?");

pstmt.setInt(1, did);

int res1=pstmt.executeUpdate();

}

catch(Exception e)

{

}

}

}

**Product:**

**package** bean;

**import** java.time.LocalDate;

**public** **class** Product {

**private** **int** pid;

**private** String pname;

**private** **float** price;

**private** String storeDate=**null**;

**public** **int** getPid() {

**return** pid;

}

**public** **void** setPid(**int** pid) {

**this**.pid = pid;

}

**public** String getPname() {

**return** pname;

}

**public** **void** setPname(String pname) {

**this**.pname = pname;

}

**public** **float** getPrice() {

**return** price;

}

**public** **void** setPrice(**float** price) {

**this**.price = price;

}

**public** String getStoreDate() {

**return** storeDate;

}

**public** **void** setStoreDate(String storeDate) {

**this**.storeDate = storeDate;

}

@Override

**public** String toString()

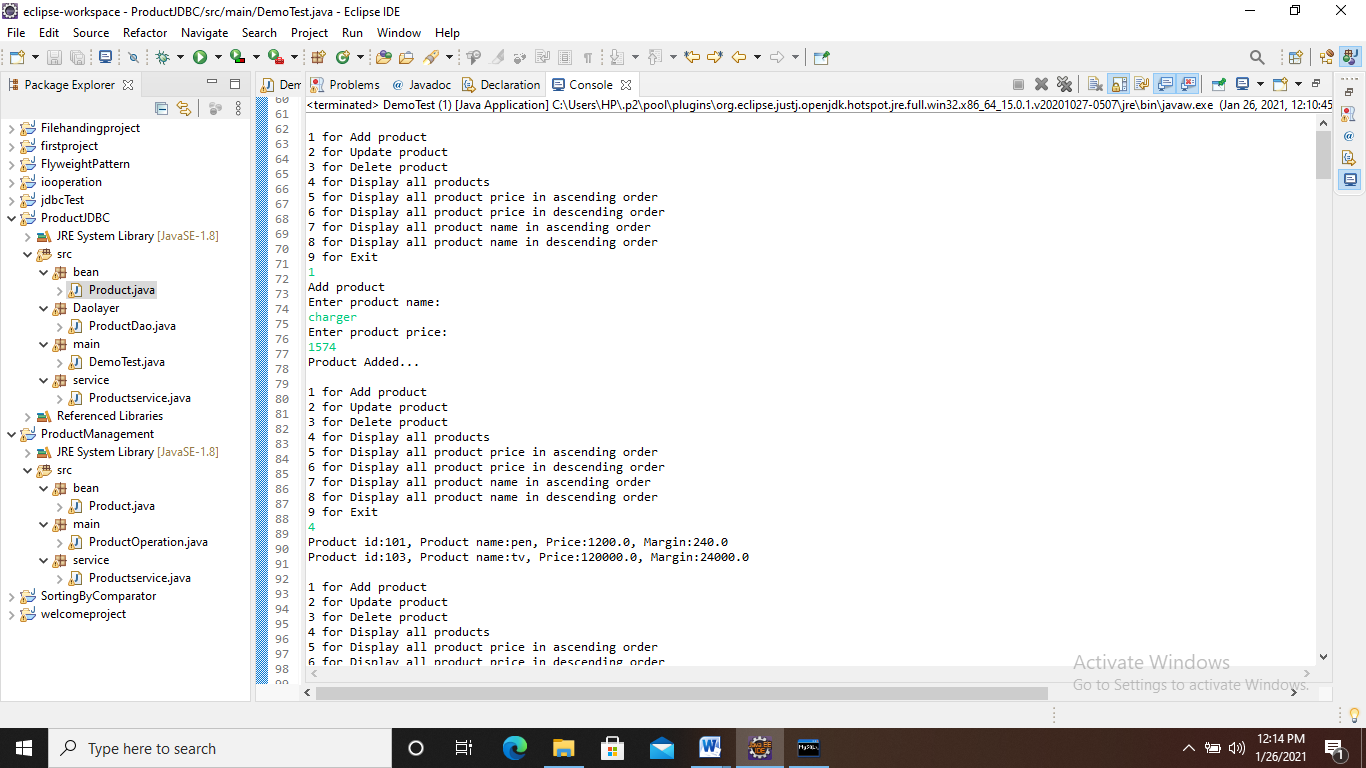
{

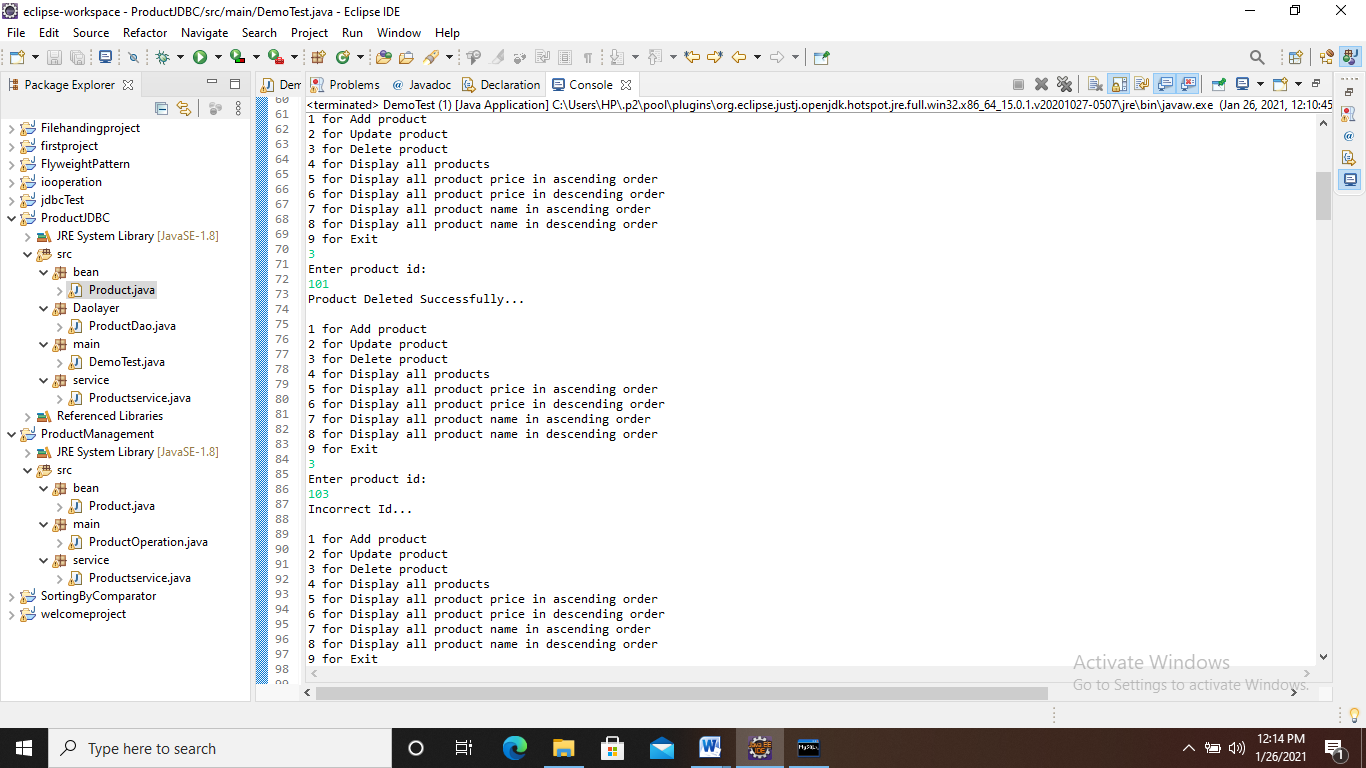
**return** "Product id="+pid+", Product name="+pname+", price="+price+", Date="+storeDate;

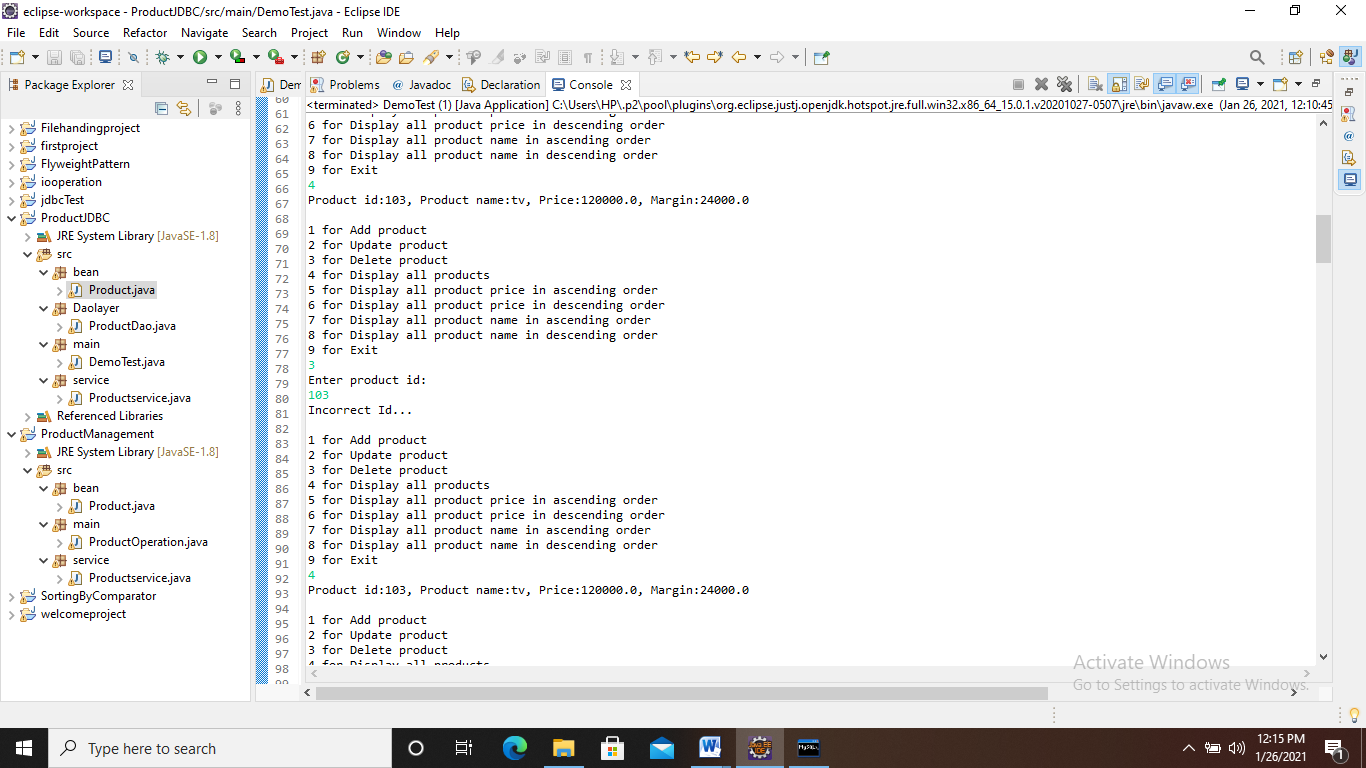
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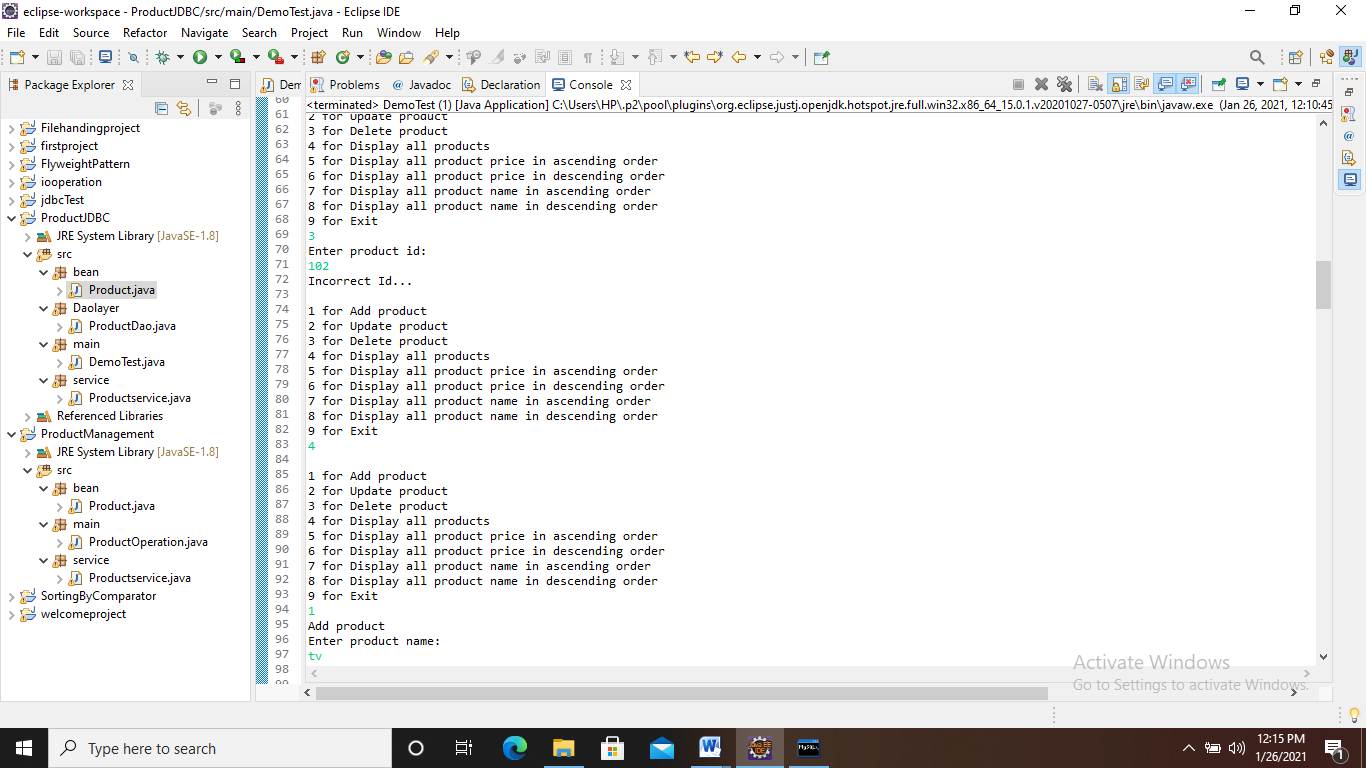
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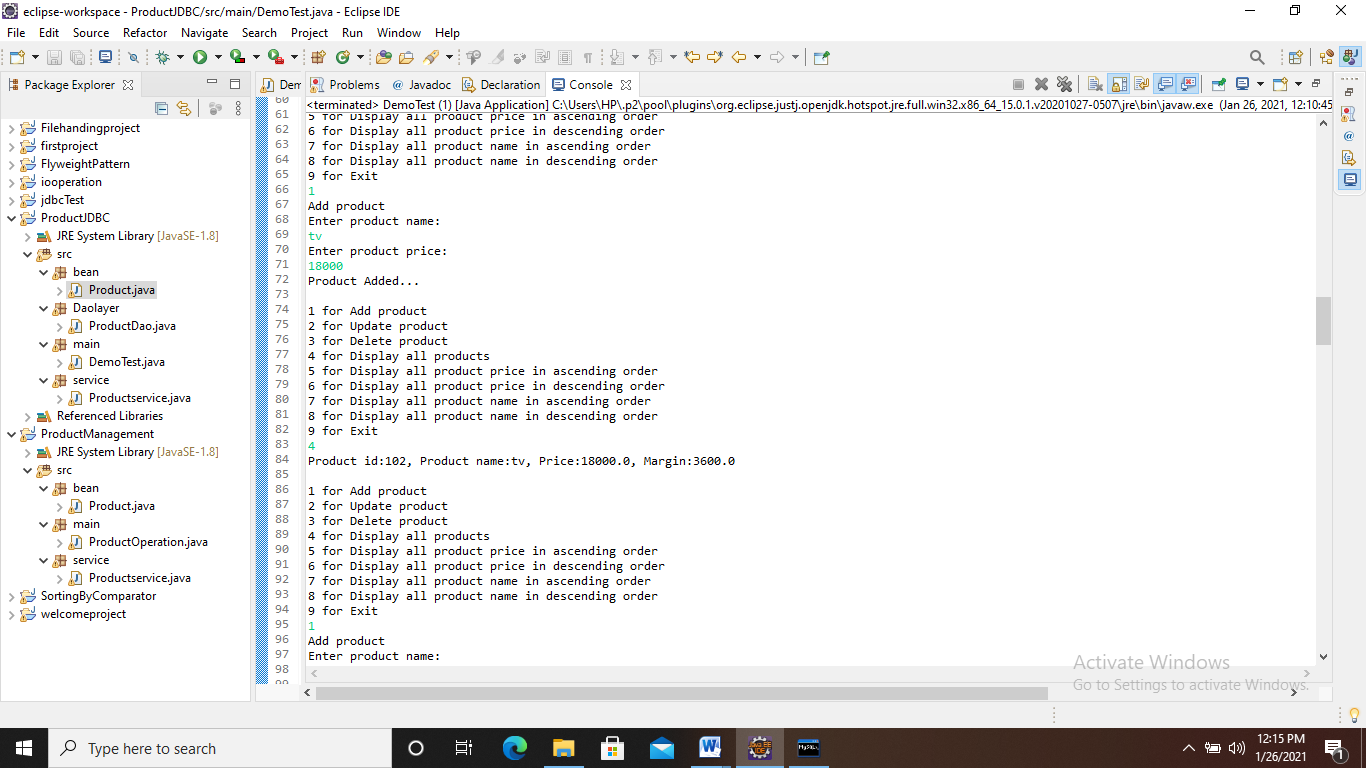
**Output:**

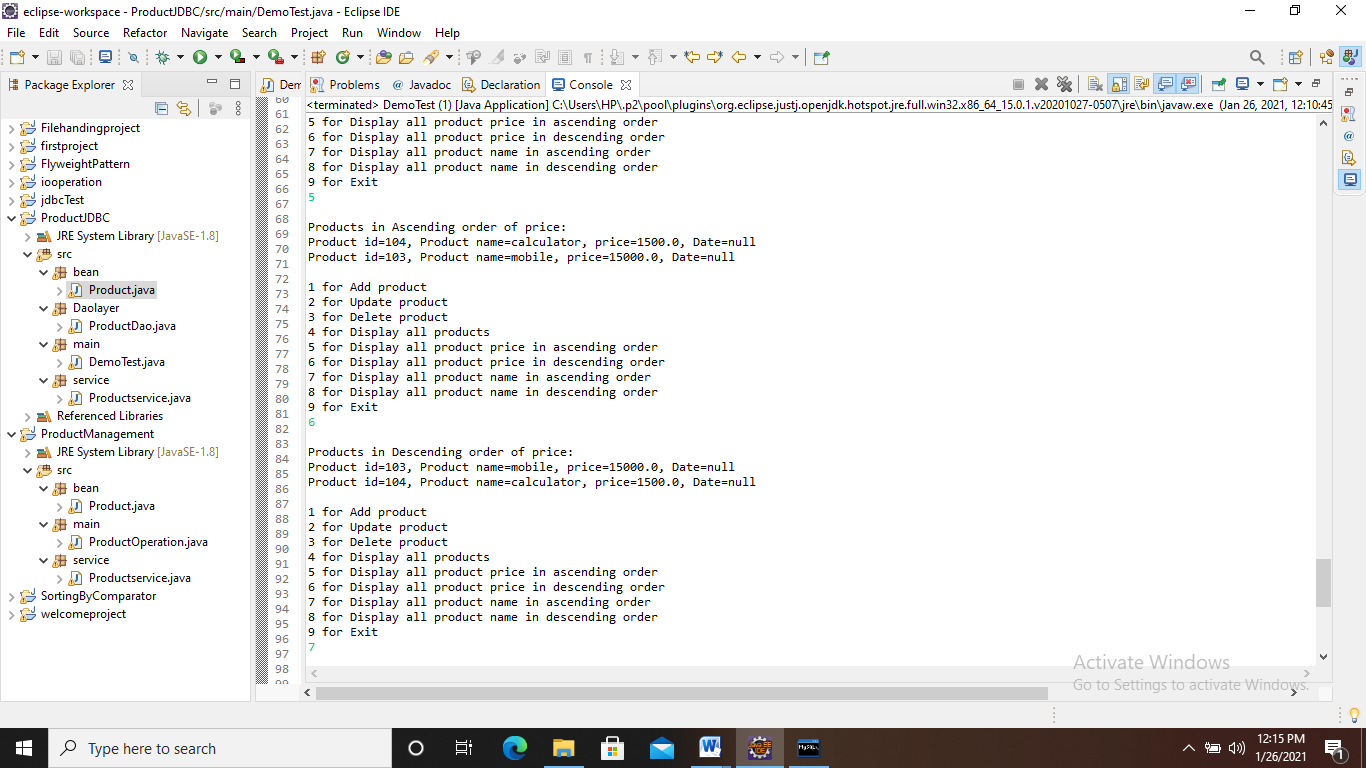
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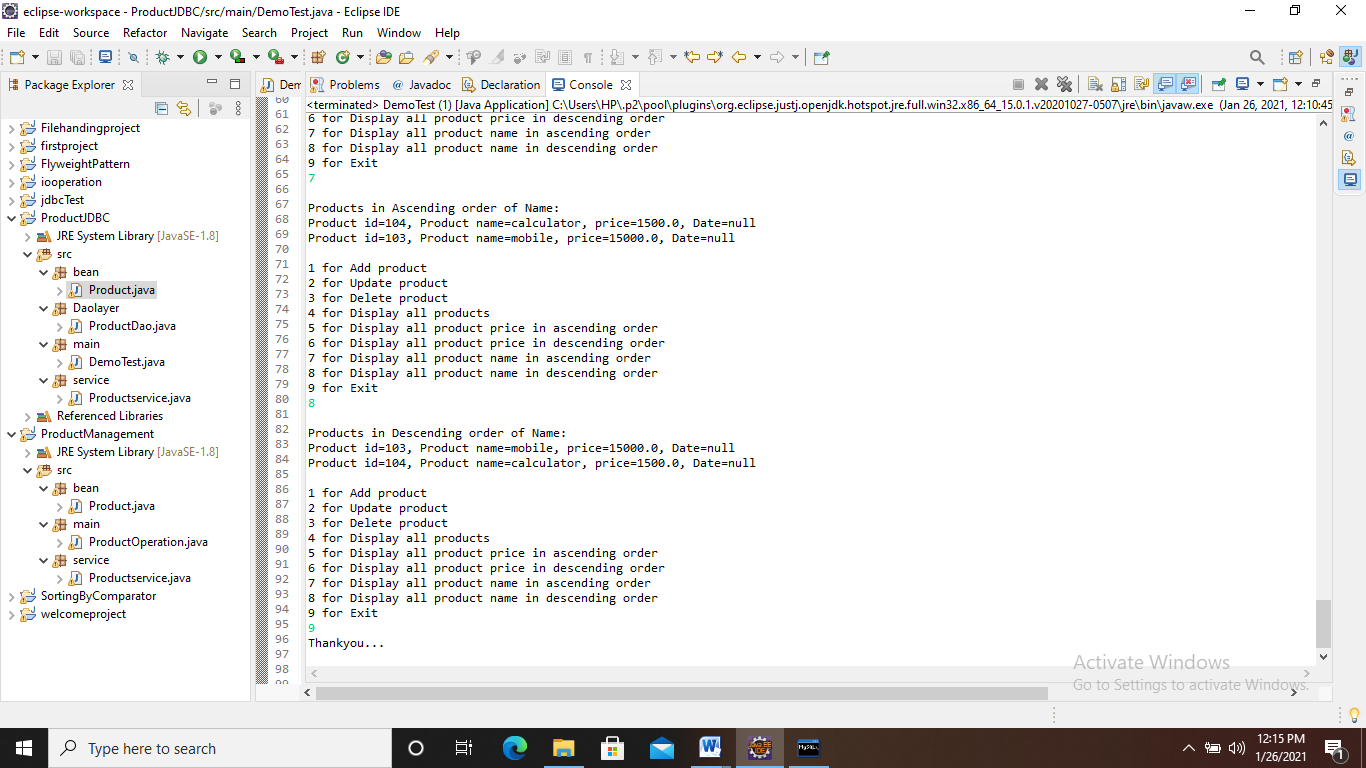
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