**Mini Project 2 (Sprint 1, Sprint 2)(Product Management):**

**Main Package:**

package main;

import java.io.FileInputStream;

import java.io.FileNotFoundException;

import java.io.FileOutputStream;

import java.io.IOException;

import java.io.ObjectInputStream;

import java.io.ObjectOutputStream;

import java.util.\*;

import service.Productservice;

import bean.Product;

public class ProductOperation {

public static void main(String[] args) throws FileNotFoundException, IOException, ClassNotFoundException {

Scanner sc=new Scanner(System.in);

Productservice ps=new Productservice();

HashMap hm=new HashMap<Integer, Product>();

int num,a=100,count=0;

boolean flag=true;

String id = null;

float price;

//ObjectOutputStream out=new ObjectOutputStream(new FileOutputStream("newobjectfile.txt"));

//out.writeObject(ps);

Product p=new Product();

ObjectOutputStream out=new ObjectOutputStream(new FileOutputStream("newobjectfile.txt"));

out.writeObject(p);

do

{

System.out.println("1 for Add product\n2 for Update product\n3 for Delete product\n4 for Display all products\n5 for retrive price\n6 for exit.");

int choose =sc.nextInt();

switch(choose)

{

case 1:

System.out.println("Add product");

sc.nextLine();

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

String name=sc.nextLine();

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

price=sc.nextFloat();

id=ps.addProduct(a, name, price);

a++;

System.out.println("This Product Id="+id);

break;

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

id=sc.next();

hm=ps.displayAllProduct();

Collection c1=hm.values();

Iterator i1=c1.iterator();

while(i1.hasNext())

{

Product pc=(Product)i1.next();

if(pc.getPid().equals(id))

{

count=0;

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

price=sc.nextFloat();

num=ps.updateProduct(id, price);

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

}

else

{

count=1;

break;

}

}

if(count==1)

{

System.out.println("Product Id is incorrect");

}

break;

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

id=sc.next();

hm=ps.displayAllProduct();

Collection c2=hm.values();

Iterator i2=c2.iterator();

while(i2.hasNext())

{

Product pc=(Product)i2.next();

if(pc.getPid().equals(id))

{

count=0;

num=ps.deleteProduct(id);

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

}

else

{

count=1;

break;

}

}

if(count==1)

{

System.out.println("Product Id is incorrect");

}

break;

case 4: hm=ps.displayAllProduct();

Collection c=hm.values();

Iterator i=c.iterator();

while(i.hasNext())

{

System.out.println(i.next());

}

break;

case 5: System.out.println("Enter product Id:");

id=sc.next();

price=ps.retrieveProductPrice(id);

System.out.println("Product price="+price);

break;

case 6: System.out.println("Thankyou...");

flag=false;

break;

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

break;

}

}while(flag);

}

}

**Service Package:**

package service;

import java.io.Serializable;

import java.util.HashMap;

import bean.Product;

public class Productservice implements Serializable

{

HashMap hm = new HashMap<String, Product>();

String pid = "pid";

String ppid = "pid";

public String addProduct(int a, String name,float price)

{

pid = ppid + a;

Product pd = new Product(pid,name,price);

hm.put(pid,pd);

return pid;

}

public int updateProduct(String pid,float price)

{

Product p = (Product) hm.get(pid);

p.setPrice(price);

return 1;

}

public int deleteProduct(String pid)

{

hm.remove(pid);

return 1;

}

public HashMap displayAllProduct()

{

return hm;

}

public float retrieveProductPrice(String pid)

{

Product p = (Product) hm.get(pid);

return p.getPrice();

}

}

**Bean Package:**

**package** bean;

**import** java.io.Serializable;

**public** **class** Product **implements** Serializable

{

**private** String pid;

**private** String pname;

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

**public** Product(String pid, String pname, **float** price)

{

**super**();

**this**.pid = pid;

**this**.pname = pname;

**this**.price = price;

}

**public** String getPid()

{

**return** pid;

}

**public** **void** setPid(String 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;

}

@Override

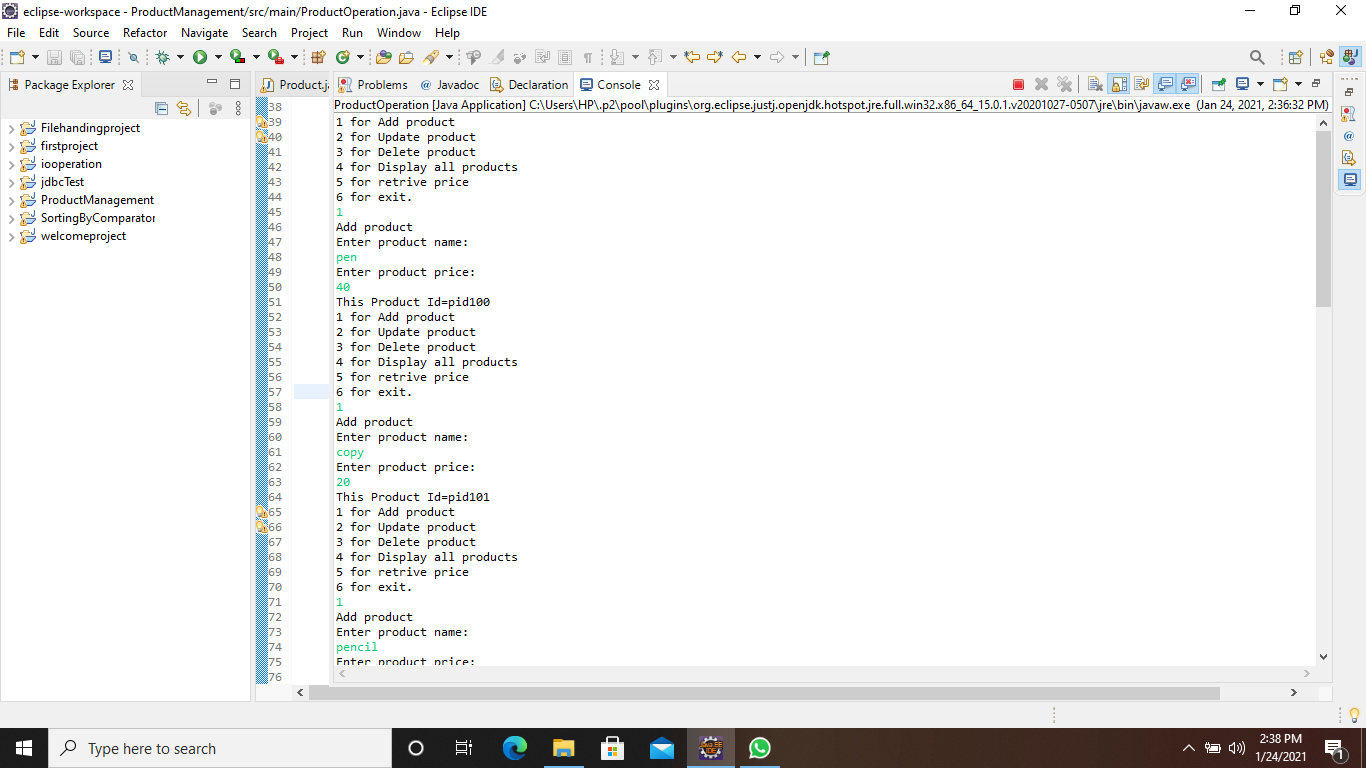
**public** String toString() {

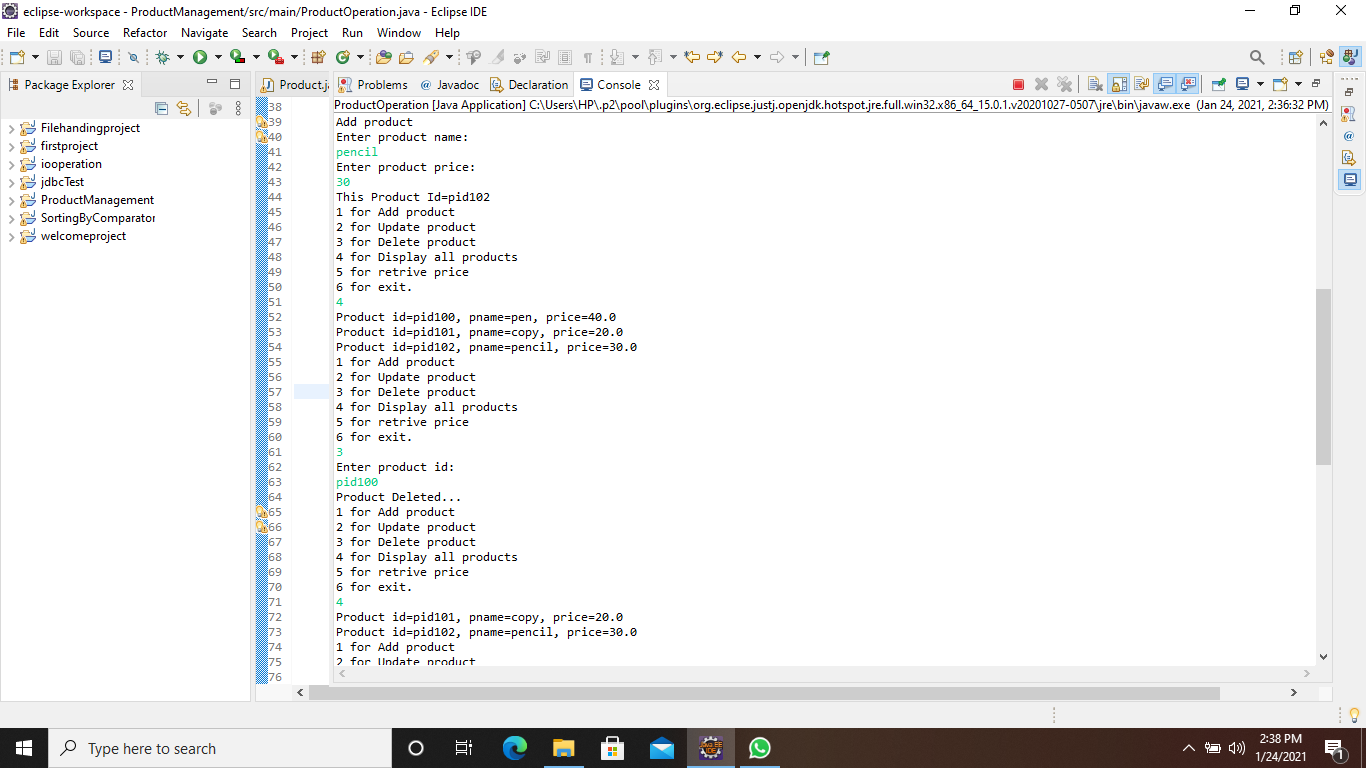
**return** "Product id=" + pid + ", pname=" + pname + ", price=" + price + "";

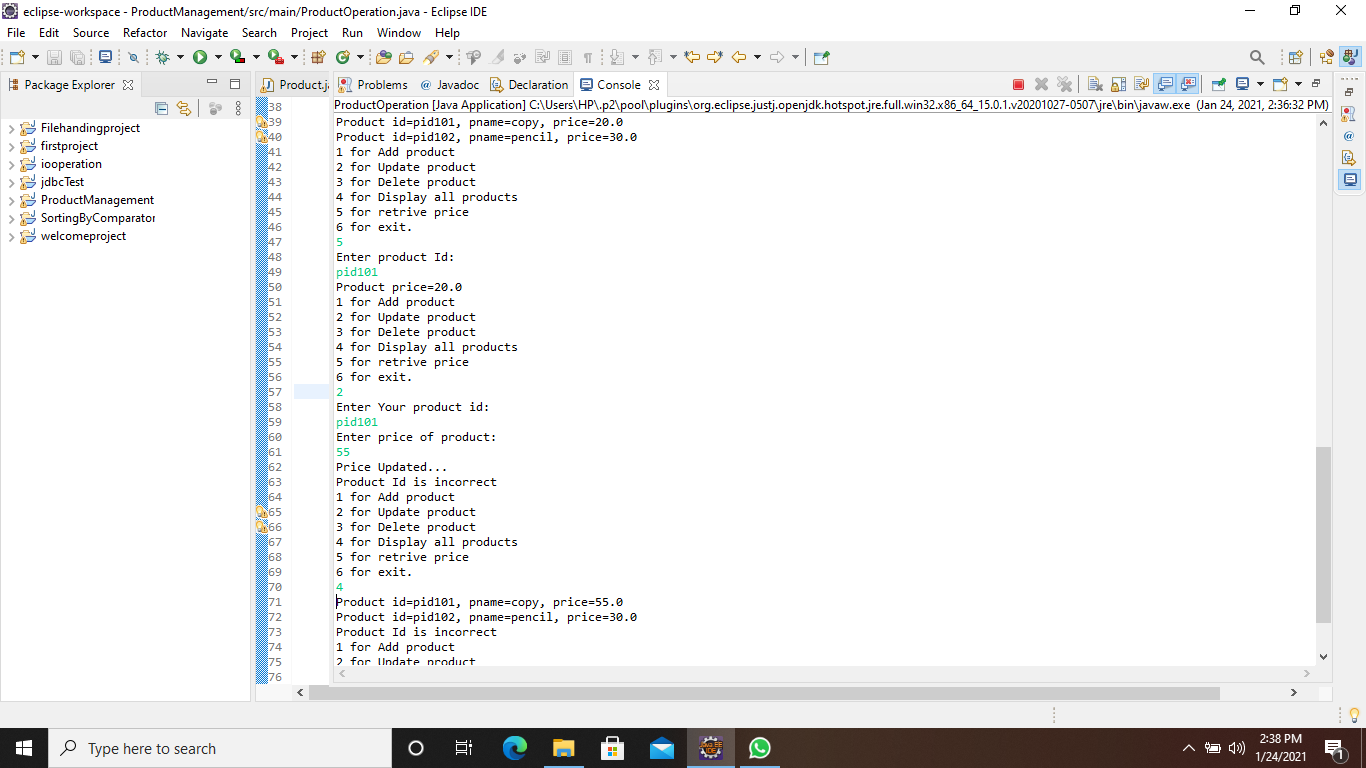
}

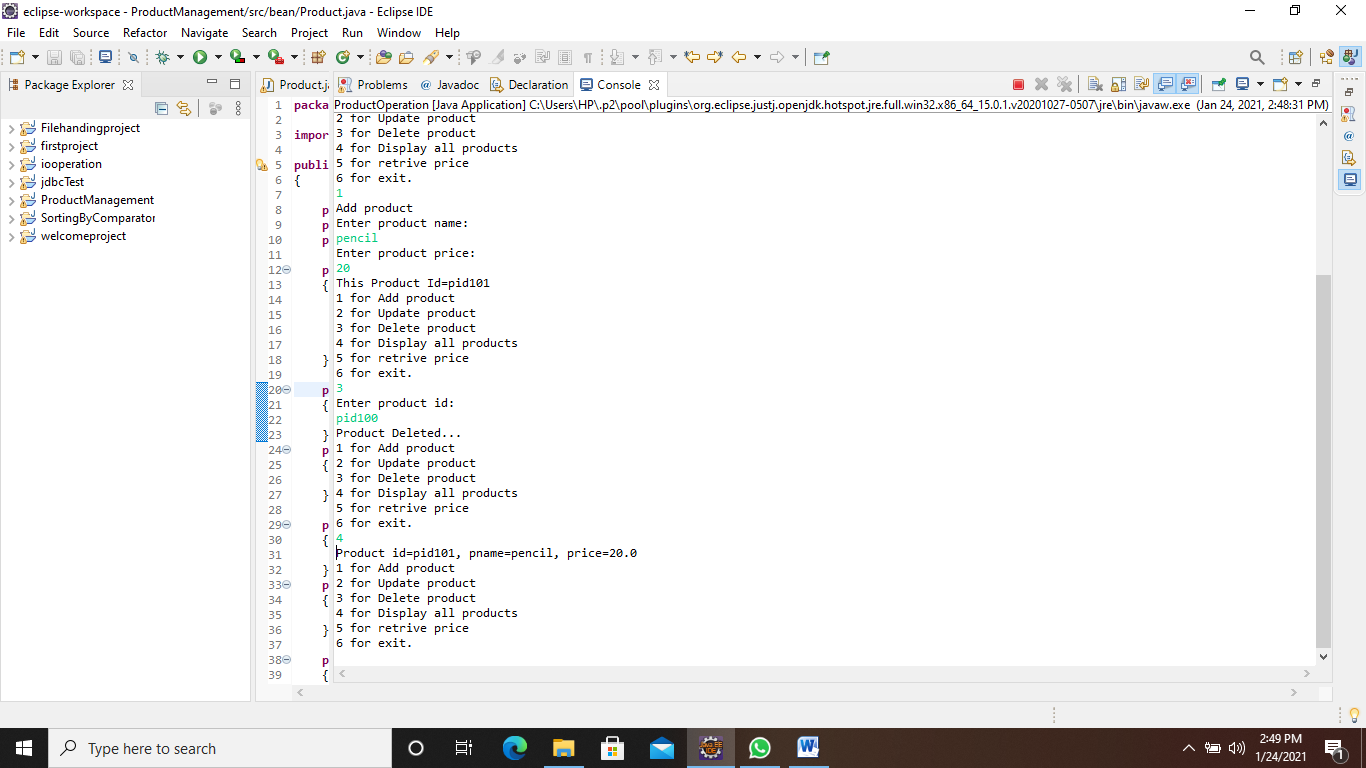
}

**Output:**

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