**SUPERSET ID: 6391783**

**Exercise 2: Implementing the Factory Method Pattern**

**CODE:**

**Product.java**

package com.ecommerce.factory;

public interface Product {

void displayDetails();

}

**Electronics.java**

package com.ecommerce.factory;

public class Electronics implements Product {

public void displayDetails() {

System.out.println("Category: Electronics - Includes gadgets like laptops, mobiles, etc.");

}

}

**Clothing.java**

package com.ecommerce.factory;

public class Clothing implements Product {

public void displayDetails() {

System.out.println("Category: Clothing - Includes shirts, jeans, jackets, etc.");

}

}

**Furniture.java**

package com.ecommerce.factory;

public class Furniture implements Product {

public void displayDetails() {

System.out.println("Category: Furniture - Includes tables, chairs, beds, etc.");

}

}

**ProductFactory.java**

package com.ecommerce.factory;

public class ProductFactory {

public static Product getProduct(String type) {

if (type.equalsIgnoreCase("electronics")) {

return new Electronics();

} else if (type.equalsIgnoreCase("clothing")) {

return new Clothing();

} else if (type.equalsIgnoreCase("furniture")) {

return new Furniture();

} else {

return null;

}

}

}

**Main.java**

package com.ecommerce.factory;

import java.util.Scanner;

public class Main {

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

System.out.println("Enter product category (Electronics, Clothing,Furniture):");

String category = sc.nextLine();

Product product = ProductFactory.getProduct(category);

if (product != null) {

product.displayDetails();

} else {

System.out.println("❌ Invalid category entered.");

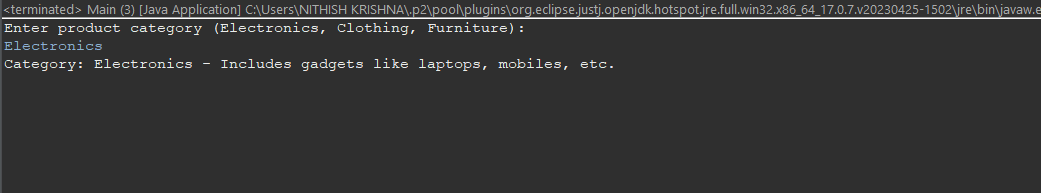
}

sc.close();

}

}

**OUTPUT SCREENSHOT:**

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