**Exercise 2: E-commerce Platform Search Function**

**Title:**

Search Function Implementation for E-commerce Platform

**Description:**

In this exercise, I developed a **basic search function** for an e-commerce platform using **Linear Search**. It helps customers search for product names within an online store’s inventory.

**Key Notes:**

* Used a **String array** to represent products.
* Used a **simple linear search** to check if the product exists.
* Displays appropriate messages based on whether the product is found.

**Code:**

**EcommerceSearch .java**

import java.util.Scanner;

public class EcommerceSearch {

public static void main(String[] args) {

String[] products = {"Laptop", "Smartphone", "Headphones", "Camera", "Tablet"};

Scanner scanner = new Scanner(System.in);

System.out.print("Enter product to search: ");

String searchProduct = scanner.nextLine();

boolean found = false;

for (String product : products) {

if (product.equalsIgnoreCase(searchProduct)) {

found = true;

break;

}

}

if (found) {

System.out.println("Product found: " + searchProduct);

} else {

System.out.println("Product not available.");

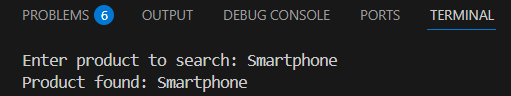
}

scanner.close();

}

}

**Output :**



**Exercise 7: Financial Forecasting**

**Title:**

Financial Forecasting Using Arrays – Profit Projection

**Description:**

In this exercise, I built a **simple forecasting model** to project monthly profits over a year based on an initial revenue and estimated growth. Arrays store the data for easy display and analysis.

**Key Notes:**

* Stores 12 months of data in an array.
* Uses a **growth rate** to project future profits.
* Displays the forecasted profit for each month.

**Code:**

**FinancialForecast,java**

import java.util.Scanner;

public class FinancialForecast {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.print("Enter initial monthly revenue: ");

double revenue = scanner.nextDouble();

System.out.print("Enter expected monthly growth rate (in %): ");

double growthRate = scanner.nextDouble() / 100;

double[] forecast = new double[12];

for (int i = 0; i < 12; i++) {

forecast[i] = revenue \* Math.pow(1 + growthRate, i);

}

System.out.println("Projected Revenue for Next 12 Months:");

for (int i = 0; i < 12; i++) {

System.out.printf("Month %d: %.2f%n", i + 1, forecast[i]);

}

scanner.close();

}

}

**Output :**

