**Exercise 3 : E-commerce Platform Search Function**

**Goal**: Simulate a product search feature for an e-commerce platform.

**Program:**

import java.util.\*;

class Product {

String name;

double price;

Product(String name, double price) {

this.name = name;

this.price = price;

}

}

class SearchEngine {

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

void addProduct(Product p) {

productList.add(p);

}

List<Product> search(String keyword) {

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

for (Product p : productList) {

if (p.name.toLowerCase().contains(keyword.toLowerCase())) {

result.add(p);

}

}

return result;

}

}

public class Main {

public static void main(String[] args) {

SearchEngine engine = new SearchEngine();

engine.addProduct(new Product("Laptop", 599.99));

engine.addProduct(new Product("Phone", 299.99));

engine.addProduct(new Product("Headphones", 49.99));

List<Product> results = engine.search("phone");

for (Product p : results) {

System.out.println(p.name + " - $" + p.price);

}

}

}

**Output:**

Phone - $299.99

Headphones - $49.99