# E-commerce Platform Search Function

Code :

import java.util.Arrays;

import java.util.Scanner;

public class ECommerceSearch {

public static int linearSearch(int[] products, int target) {

for (int i = 0; i < products.length; i++) {

if (products[i] == target) {

return i;

}

}

return -1;

}

public static int binarySearch(int[] products, int target) {

int left = 0, right = products.length - 1;

while (left <= right) {

int mid = left + (right - left) / 2;

if (products[mid] == target) {

return mid;

} else if (products[mid] < target) {

left = mid + 1;

} else {

right = mid - 1;

}

}

return -1;

}

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

int[] productIds = {101, 203, 145, 876, 432, 678, 999};

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

int target = scanner.nextInt();

long startTime = System.nanoTime();

int linearResult = linearSearch(productIds, target);

long endTime = System.nanoTime();

System.out.println("Linear Search: Index = " + linearResult + ", Time = " + (endTime - startTime) + " ns");

Arrays.sort(productIds);

}

}

Output :

