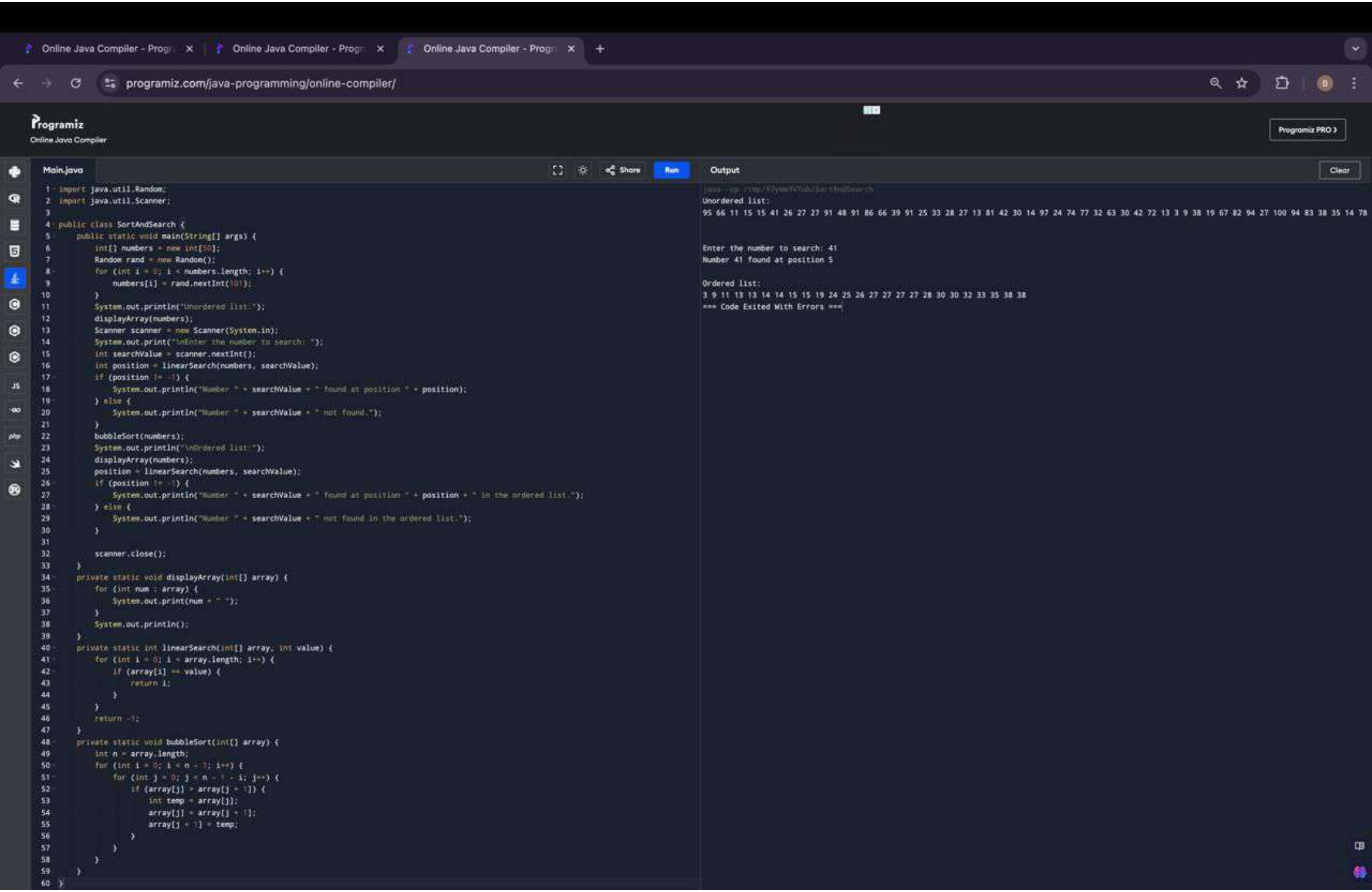
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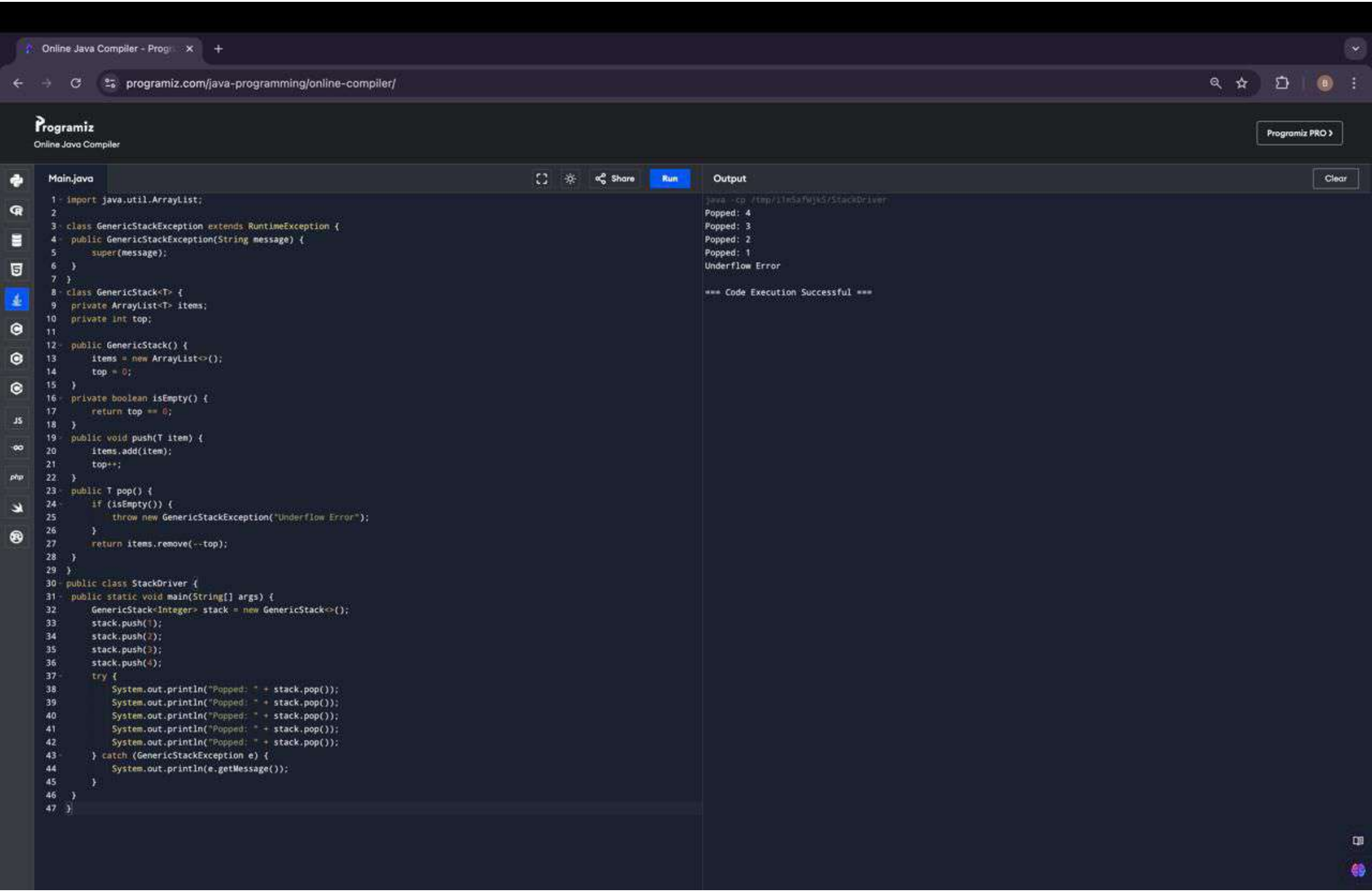
Main.java
Share
Run
Output
Clear
import java.util.Random;
import java.util.Scanner;
public class SortAndSearch {
public static void main(String[] args) {
int[] numbers = new int[50];
Random rand = new Random();
for (int i = 0; i < numbers.length; i++) {
numbers[i] = rand.nextInt(101);
}
System.out.println("Unordered list:");
displayArray(numbers);
Scanner scanner = new Scanner(System.in);
System.out.print("\nEnter the number to search: ");
int searchValue = scanner.nextInt();
int position = linearSearch(numbers, searchValue);
if (position != -1) {
System.out.println("Number " + searchValue + " found at position " + position);
} else {
System.out.println("Number " + searchValue + " not found.");
}
bubbleSort(numbers);
System.out.println("\nOrdered list:");
displayArray(numbers);
position = linearSearch(numbers, searchValue);
if (position != -1) {
System.out.println("Number " + searchValue + " found at position " + position + " in the ordered list.");
} else {
System.out.println("Number " + searchValue + " not found in the ordered list.");
}
scanner.close();
}
private static void displayArray(int[] array) {
for (int num : array) {
System.out.print(num + " ");
}
System.out.println();
}
private static int linearSearch(int[] array, int value) {
for (int i = 0; i < array.length; i++) {
if (array[i] == value) {
return i;
}
}
return -1;
}
private static void bubbleSort(int[] array) {
int n = array.length;
for (int i = 0; i < n - 1; i++) {
for (int j = 0; j < n - 1 - i; j++) {
if (array[j] > array[j + 1]) {
int temp = array[j];
array[j] = array[j + 1];
array[j + 1] = temp;
}
}
}
}
}
Unordered list:
95 66 11 15 15 41 26 27 27 91 48 91 86 66 39 91 25 33 28 27 13 81 42 30 14 97 24 74 77 32 63 30 42 72 13 3 9 38 19 67 82 94 27 100 94 83 38 35 14 78
Enter the number to search: 41
Number 41 found at position 5
Ordered list:
3 9 11 13 13 14 14 15 15 19 24 25 26 27 27 27 27 28 30 30 32 33 35 38 38
=== Code Exited With Errors ===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Main.java
Share
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Output
Clear
import java.util.ArrayList;
class GenericStackException extends RuntimeException {
public GenericStackException(String message) {
super(message);
}
}
class GenericStack<T> {
private ArrayList<T> items;
private int top;
public GenericStack() {
items = new ArrayList<>();
top = 0;
}
private boolean isEmpty() {
return top == 0;
}
public void push(T item) {
items.add(item);
top++;
}
public T pop() {
if (isEmpty()) {
throw new GenericStackException("Underflow Error");
}
return items.remove(--top);
}
}
public class StackDriver {
public static void main(String[] args) {
GenericStack<Integer> stack = new GenericStack<>();
stack.push(1);
stack.push(2);
stack.push(3);
stack.push(4);
try {
System.out.println("Popped: " + stack.pop());
System.out.println("Popped: " + stack.pop());
System.out.println("Popped: " + stack.pop());
System.out.println("Popped: " + stack.pop());
System.out.println("Popped: " + stack.pop());
} catch (GenericStackException e) {
System.out.println(e.getMessage());
}
}
}
java -cp /tmp/iTm5afWjkS/StackDriver
Popped: 4
Popped: 3
Popped: 2
Popped: 1
Underflow Error
=== Code Execution Successful ===

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Main.java

Share

Run

```java
import java.util.HashMap;
import java.util.Map;

public class CourseCollection {
    public static void main(String[] args) {
        Map<String, String> courses = new HashMap<>();

        courses.put("CIT", "Computing and Information Technology");
        courses.put("CHI", "Childcare and Early Education");
        courses.put("MVS", "Motor Vehicle Systems");
        courses.put("BTH", "Beauty Therapy");
        courses.put("GDE", "Graphic Design");
        System.out.println("List of Courses:");
        for (Map.Entry<String, String> entry : courses.entrySet()) {
            System.out.println(entry.getKey() + ": " + entry.getValue());
        }
        String courseCode = "CIT";
        String courseName = courses.get(courseCode);
        System.out.println("\nCourse name for code " + courseCode + ": " + courseName);
    }
}
```

Output

Clear

```
java -cp /tmp/dYppKbud4R/CourseCollection
List of Courses:
CHI: Childcare and Early Education
BTH: Beauty Therapy
GDE: Graphic Design
MVS: Motor Vehicle Systems
CIT: Computing and Information Technology

Course name for code CIT: Computing and Information Technology

=== Code Execution Successful ===
```