

# Programming 1 - CA Workbook (Labs)

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- Insert the code from the samples you have created into the following boxes.
- Also insert screen shots of your output for each lab.

All code must be your own, not the work of a friend.

Plagiarism is taken very seriously at CCT and any student(s) plagiarizing will be reported.

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# Lab 1

```
package myfirstjavaprogram;

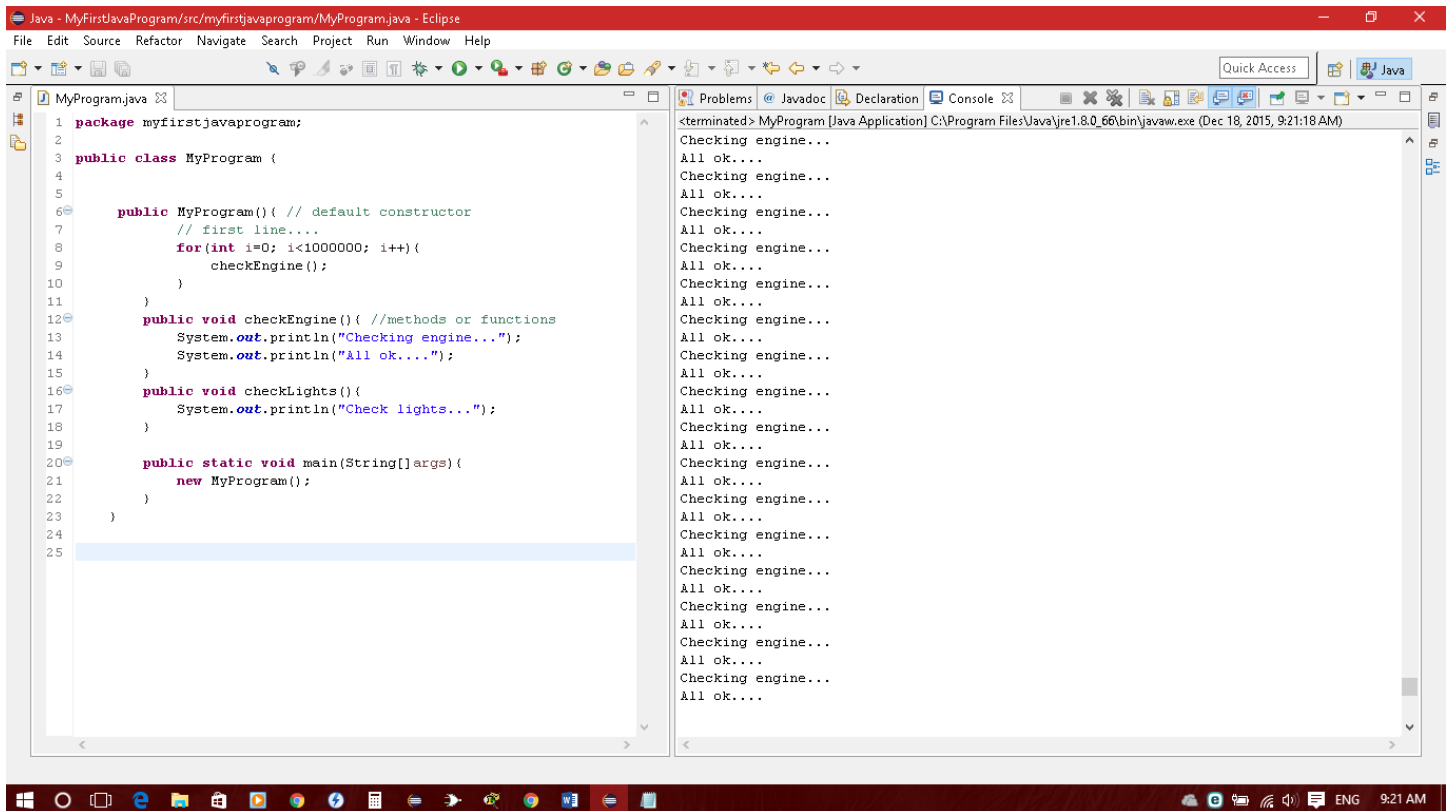
public class MyProgram {

    public MyProgram(){ // default constructor
        // first line....
        for(int i=0; i<1000000; i++){
            checkEngine();
        }
    }

    public void checkEngine(){ //methods or functions
        System.out.println("Checking engine...");
        System.out.println("All ok....");
    }

    public void checkLights(){
        System.out.println("Check lights...");
    }

    public static void main(String[] args) {
        new MyProgram();
    }
}
```



## Lab 2

```
package myfirstjavaprogram;

public class EngineFunctions {
    public EngineFunctions() { //Default constructor, will initialize the codes
        for(int i=0; i< 10; i++){
            checkEngine(); //This method to check the engine
            turnOnEngine(); //This method will turn on the engine
            turnOffEngine(); // This method will turn off the engine
            turnLeft(); // This method will turn left
            turnRight(); // This method will turn right
            checkFuel(); // This method will check the fuel
            checkOil(); // This method will check the oil
            checkBelts(); // This method will check the belts
            checkWater(); // This method will check the water
            checkTemperature(); // This method will check the temperature
            checkLocks(); // This method will check the locks
            applyBreaks(); // This method will apply the breaks
            releaseBreaks(); // This method will release the breaks
            checkLights(); // This method will check the lights
        }
    }

    public void checkEngine(){ //methods or functions
        System.out.println("Checking engine...");
        System.out.println("All ok....");
    }

    public void turnOnEngine(){ //methods or functions
        System.out.println("turnOnEngine...");
        System.out.println("All ok....");
    }

    public void turnLeft(){ //methods or functions
        System.out.println("turnLeft...");
        System.out.println("All ok....");
    }

    public void turnRight(){ //methods or functions
        System.out.println("turnRight...");
        System.out.println("All ok....");
    }

    public void checkFuel(){ //methods or functions
        System.out.println("checkFuel...");
        System.out.println("All ok....");
    }

    public void checkOil(){ //methods or functions
        System.out.println("checkOil...");
        System.out.println("All ok....");
    }

    public void checkBelts(){ //methods or functions
        System.out.println("checkBelts...");
        System.out.println("All ok....");
    }

    public void checkWater(){ //methods or functions
        System.out.println("checkWater...");
        System.out.println("All ok....");
    }

    public void checkTemperature(){ //methods
        System.out.println("checkTemperature...");
        System.out.println("All ok....");
    }
}
```

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```

    }
    public void checkLocks() { //methods
        System.out.println("checkLocks...");
        System.out.println("All ok....");
    }
    public void applyBreaks() { //methods
        System.out.println("applyBreaks...");
        System.out.println("All ok....");
    }
    public void releaseBreaks() { //methods
        System.out.println("releaseBreaks...");
        System.out.println("All ok....");
    }
    public void turnOffEngine() { //methods
        System.out.println("turnOffEngine...");
        System.out.println("All ok....");
    }
    public void checkLights() {
        System.out.println("Check lights...");
        System.out.println("All ok....");
    }
}

public static void main(String[] args) { //Main, this is the line where the code will
start to run
    new EngineFunctions();
}
}

```

The screenshot shows the Eclipse IDE with the following content:

**EngineFunctions.java**

```

1 package myfirstjavaprogram;
2
3 public class EngineFunctions {
4     public EngineFunctions() { //Default constructor, will initiate
5         for(int i=0; i< 10; i++){
6             checkEngine(); //This method to check the engine
7             turnOnEngine(); //This method will turn on the engine
8             turnOffEngine(); // This method will turn off the engine
9             turnLeft(); // This method will turn left
10            turnRight(); // This method will turn right
11            checkFuel(); // This method will check the fuel
12            checkOil(); // This method will check the oil
13            checkBelts(); // This method will check the belts
14            checkWater(); // This method will check the water
15            checkTemperature(); // This method will check the temperature
16            checkLocks(); // This method will check the locks
17            applyBreaks(); // This method will apply the breaks
18            releaseBreaks(); // This method will release the breaks
19            checkLights(); // This method will check the lights
20        }
21    }
22    public void checkEngine() { //methods or functions
23        System.out.println("Checking engine...");
24        System.out.println("All ok....");
25    }
26    public void turnOnEngine() { //methods or functions
27        System.out.println("turnOnEngine...");
28        System.out.println("All ok....");
29    }
30    public void turnLeft() { //methods or functions
31        System.out.println("turnLeft...");
32        System.out.println("All ok....");
33    }
34    public void turnRight() { //methods or functions
35        System.out.println("turnRight...");

```

**Console**

```

<terminated> EngineFunctions [Java Application] C:\Program Files\Java\jre1.8.0_66\bin\javaw.exe (Dec 18, 2015, 9:26:32 AM)
releaseBreaks...
All ok....
Check lights...
All ok....
Checking engine...
All ok....
turnOnEngine...
All ok....
turnOffEngine...
All ok....
turnLeft...
All ok....
turnRight...
All ok....
checkFuel...
All ok....
checkOil...
All ok....
checkBelts...
All ok....
checkWater...
All ok....
checkTemperature...
All ok....
checkLocks...
All ok....
applyBreaks...
All ok....
releaseBreaks...
All ok....
Check lights...
All ok....

```

**Status Bar**: ENG 9:26 AM

# Lab 3

```
package myfirstjavaprogram;

import java.io.BufferedReader;
import java.io.IOException;
import java.io.InputStreamReader;

public class Registration {

    public static void main(String[] args){
        new Registration();

        System.out.println("Type your name");
        BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

        String name= "";

        try {
            name = br.readLine();

        }

        catch(IOException e){
            System.out.println();
        }

        System.out.println("age");

        String age= "";
        try {
            age = br.readLine();

        }

        catch(IOException e){
            System.out.println();
        }

        System.out.println("Type your address");

        String address= "";
        try {
            address = br.readLine();
```

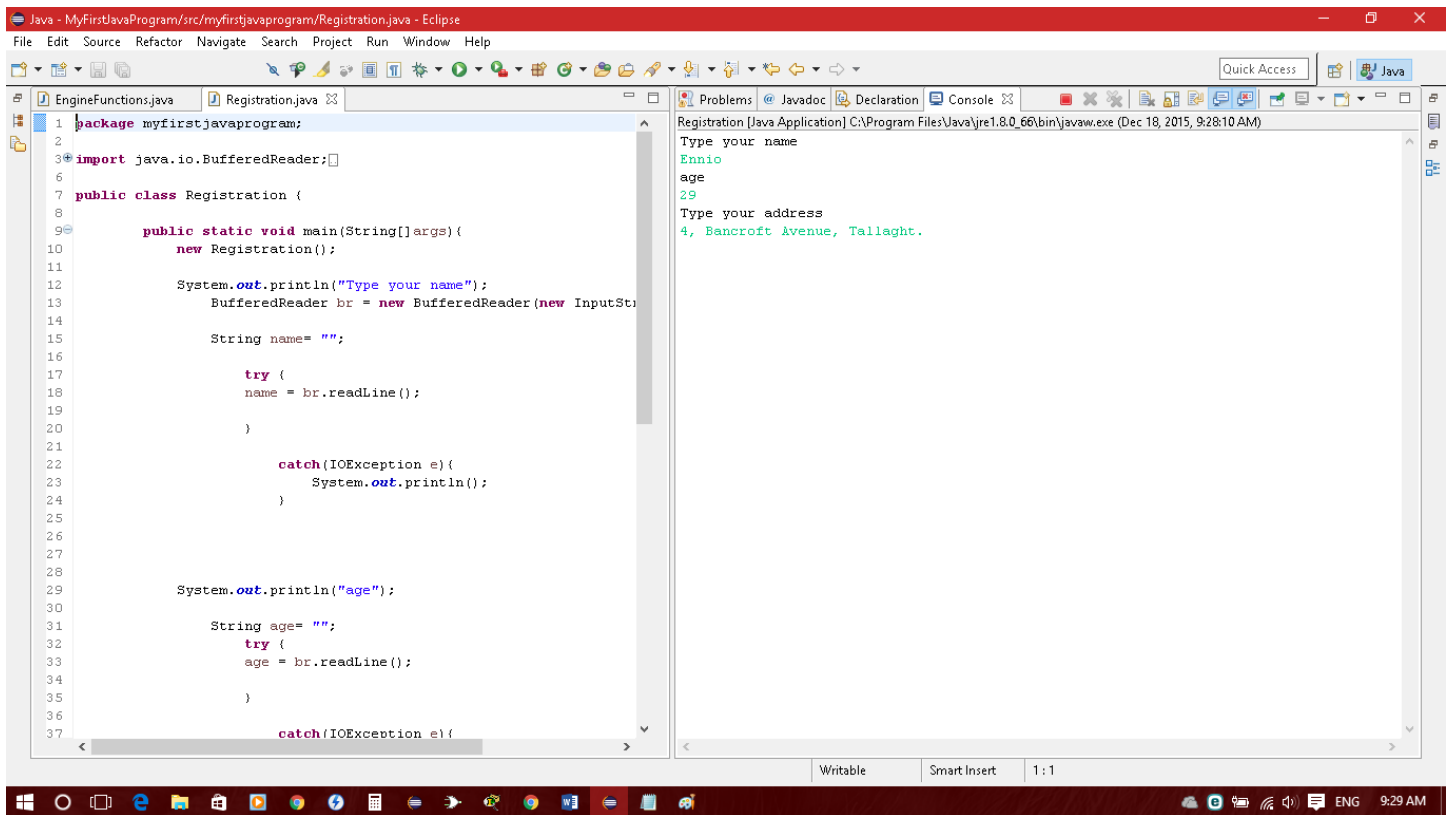
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```
}
```

```
catch(IOException e){  
    System.out.println();  
}
```

```
System.out.println("Your name is: " + name);  
System.out.println("Your age is: " + age);  
System.out.println("Your address is: " + address);  
  
System.out.println("Thank you for the informations");  
  
}
```

```
}
```



## Lab 4

```
package myfirstjavaprogram;

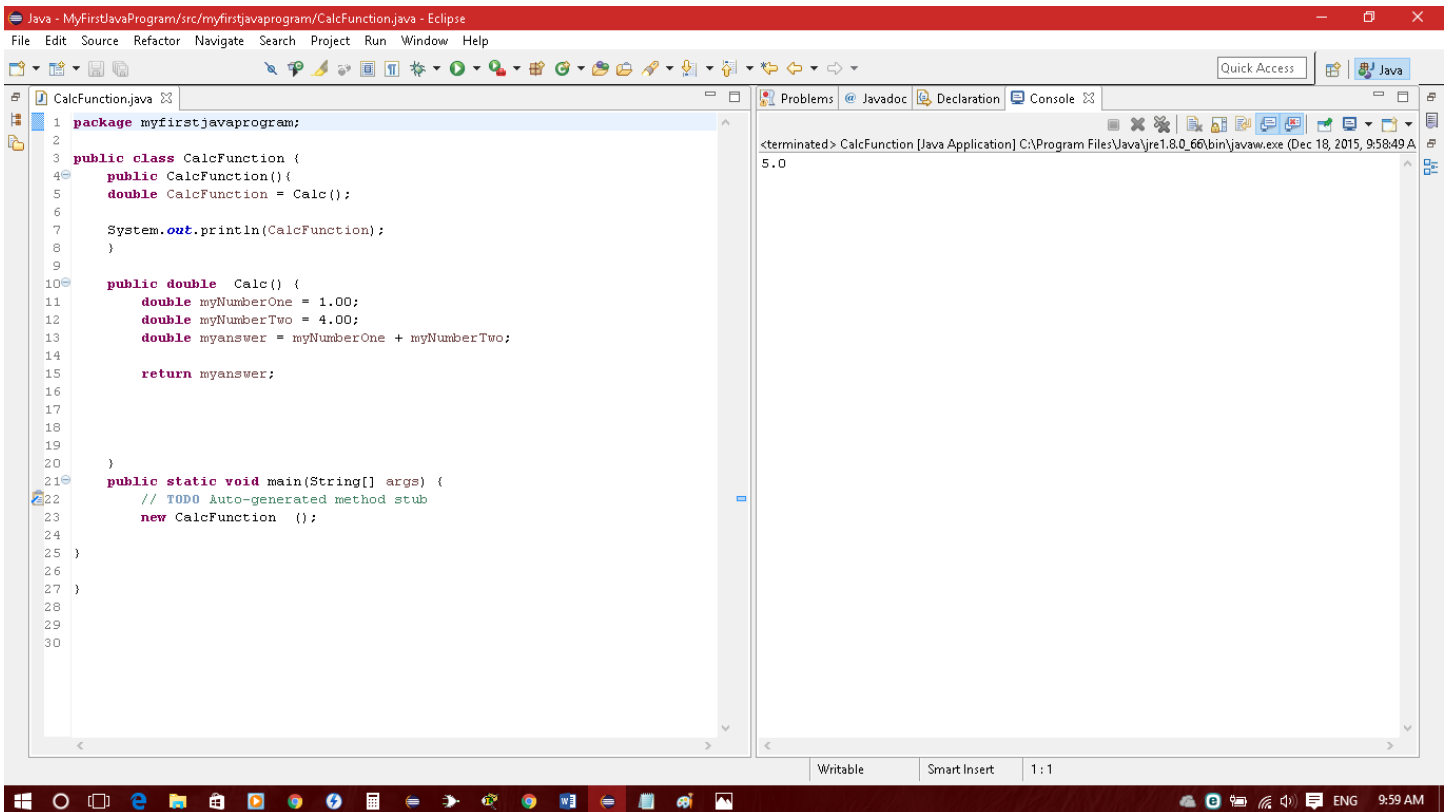
public class CalcFunction {
    public CalcFunction() {
        double CalcFunction = Calc();

        System.out.println(CalcFunction);
    }

    public double Calc() {
        double myNumberOne = 1.00;
        double myNumberTwo = 4.00;
        double myanswer = myNumberOne + myNumberTwo;

        return myanswer;
    }

    public static void main(String[] args) {
        // TODO Auto-generated method stub
        new CalcFunction ();
    }
}
```



# Lab 5.1

```
package myfirstjavaprogram;

public class ArrayTest {

    public ArrayTest(){

        String name = "kyle"; // one variable

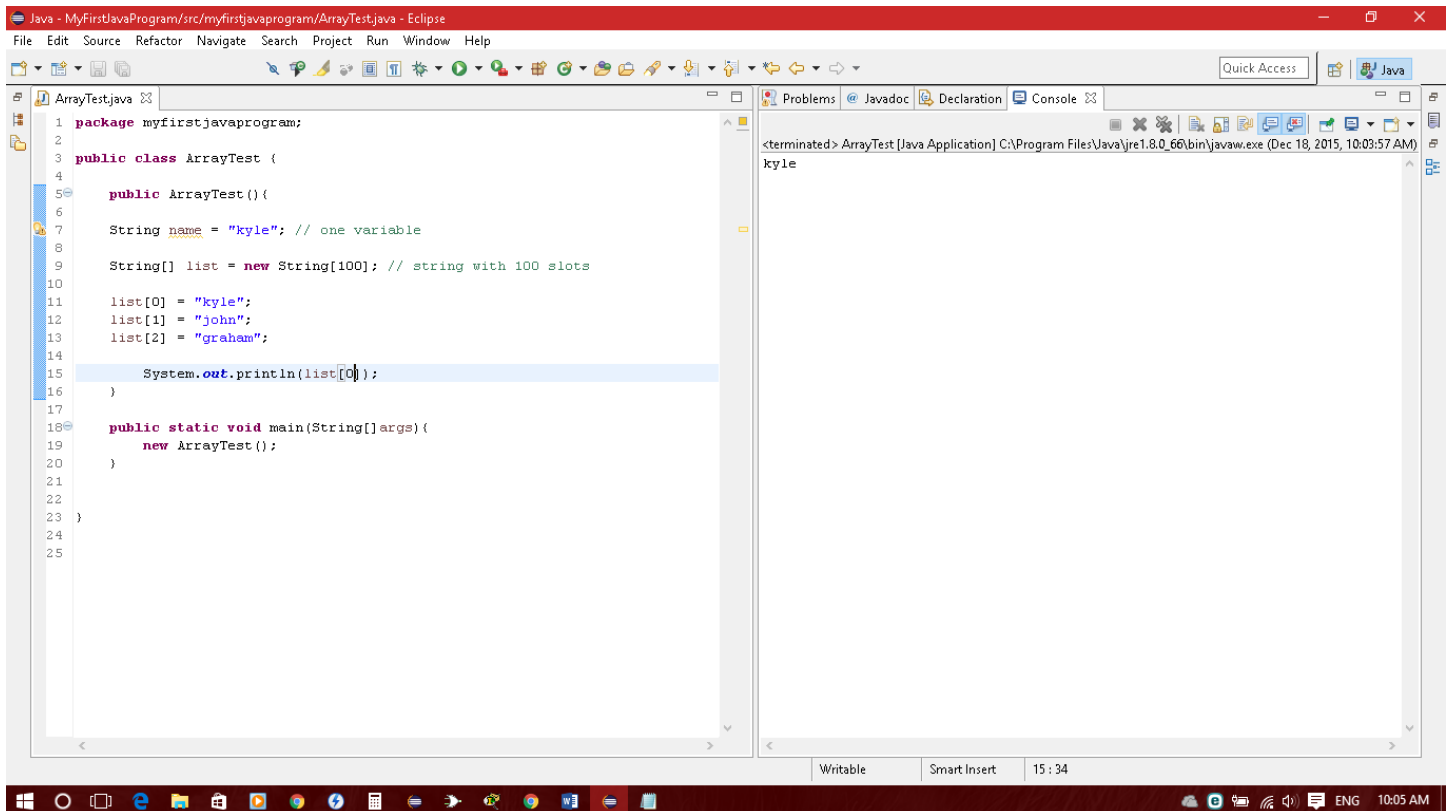
        String[] list = new String[100]; // string with 100 slots

        list[0] = "kyle";
        list[1] = "john";
        list[2] = "graham";

        System.out.println(list[0]);
    }

    public static void main(String[] args){
        new ArrayTest();
    }

}
```





## Lab 5.2

```
package myfirstjavaprogram;
import java.io.BufferedReader;
import java.io.FileReader;

public class ReadingIn {

    public ReadingIn(){
        try {
            BufferedReader br = new BufferedReader(new
FileReader("C:\\Users\\Ennio\\workspace\\MyFirstJavaProgram\\src\\myfirstjavaprogram\\NewOrder.txt"));

            String line = br.readLine();
            while(line != null) {
                System.out.println(line);
                line = br.readLine();
            }
        }catch(Exception e){}
    }

    public static void main(String[]args){

        new ReadingIn();

    }

}
```

The screenshot shows the Eclipse IDE with a Java project named 'MyFirstJavaProgram'. The editor displays the source code for 'ReadingIn.java', which is a class that reads a file 'NewOrder.txt' and prints its contents. The code is as follows:

```
1 package myfirstjavaprogram;
2 import java.io.BufferedReader;
3
4
5 public class ReadingIn {
6
7     public ReadingIn(){
8         try {
9             BufferedReader br = new BufferedReader(new
FileReader("C:\\Users\\Ennio\\workspace\\MyFirst
10
11             String line = br.readLine();
12             while(line != null) {
13                 System.out.println(line);
14                 line = br.readLine();
15             }
16         }catch(Exception e){}
17     }
18
19     public static void main(String[] args){
20
21         new ReadingIn();
22     }
23 }
24
25
```

The console on the right shows the output of the program, which is the content of 'NewOrder.txt'. The output is as follows:

```
<terminated> ReadingIn [Java Application] C:\Program Files\Java\jre1.8.0_60\
Name: Ennio
Age: 10
Number of the film: 1
Number of tickets: 1
total price: € 6.00

Name: Ennio
Age: 14
Number of the film: 2
Number of tickets: 2
total price: € 20.00

Name: Ennio
Age: 90
Number of the film: 3
Number of tickets: 3
total price: € 24.00
```

## Lab 5.3

```
package myfirstjavaprogram;
import java.io.BufferedReader;
import java.io.FileReader;

public class ReadingInArray {

    public ReadingInArray() {

        String[] list = new String[100];

        try {
            BufferedReader br = new BufferedReader(new
FileReader("C:\\Users\\Ennio\\workspace\\MyFirstJavaProgram\\src\\myfirstjavaprogram\\New
Order.txt"));

            int i = 0;
            String line = br.readLine();
            while(line != null) {
                System.out.println(line);
                line = br.readLine();
                list[i] = line;
                i++;
            }
        } catch (Exception e) {}
    }

    public static void main(String[] args) {

        new ReadingInArray();
    }

}
```

