Green University of Bangladesh

Department of Computer Science and Engineering (CSE)
Faculty of Sciences and Engineering
Fall 2022, B.Sc. in CSE (DAY)

LAB REPORT NO # 07

Course Title: Object Oriented Programming (JAVA)
Course Code: CSE 202 Section: CSE 213 - DA (PC)

Lab Experiment Name(s):

Interface

- Create an interface isEmergency with only one method - soundSiren which takes no arguments and returns no value.
- Write a class FireEmergency that implements the IsEmergency interface. The soundSiren method should print "Siren Sounded".
- Write a class SmokeAlarm that does not implement any interface. The class has an empty body.
- Create an array of Object class, myArray in the main method.
- Construct 2 SmokeAlarm object and add it to the array myArray in the main method.
- Construct 2 FireEmergency object and add it to the array myArray in the main method.
- In the main method, write a for loop, to print which array elements are instances of classes that implement the IsEmergency interface and if so, call the soundSiren method.

Student Details

Name	ID
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Lab Date: 05 December, 2022

Submission Date: 12 December, 2022

Course Teacher's Name: Dr. Muhammad Aminur Rahaman, Associate Professor

[For Teacher's use only: Don't write anything inside this box]

Lab Report Status

Marks:	**Signature:**
Comments:	**Date:**

1. TITLE OF THE LAB EXPERIMENT

Java Interface

2. OBJECTIVES

1. Using a class that implements several interfaces, we can comprehend multiple inheritance.
2. Through the use of an abstract type, an interface in java describes how a class should behave.
3. Specifying methods that a class or classes must implement.
4. Then to improve the readability and comprehension of the code.

3. ALGORITHM:

Steps	Procedures / Works
Step 1	start
Step 2	Create an interface IsEmergency with an abstract technique soundSiren.
Step 3	Create a class FireEmergency that implements IsEmergency .
Step 4	Override the soundSiren method inside the FireEmergency elegance.
Step 5	Create every other magnificence SmokeAlarm with an empty frame.
Step 6	Create a primary class and put into effect the primary technique.
Step 7	Inside the principal technique create an array of item magnificence and create 2 objects of SmokeAlarm and 2 objects of FireEmergency .
Step 8	Write a for loop, to print which array elements are instances of training that implement the IsEmergency interface and if so, name the soundSiren method.
Step 9	End

4. IMPLEMENTATION & TEST RESULT

Example of Implementing Interface

CODE

Start Page | Jframe.java | Students.java | BioData.java | Test.java | FireEmergency.java | **FireEmergency.java**

Source | History

```
/**
 * @author shahidul
 */
interface isEmergency{
void soundSiren();
}
class FireEmergency implements isEmergency{
@override
public void soundSiren(){
    System.out.println( x:"Siren Sounded");
}
        }

class SmokeAlarm{
}
public class FireEmergency {

    public static void main(String[] args) {

        SmokeAlarm p1 = new SmokeAlarm();
        SmokeAlarm p2 = new SmokeAlarm();
        FireEmergency p3 = new FireEmergency();
        FireEmergency p4 = new FireEmergency();
        FireEmergency[] myArray = {p3, p4};

        for (FireEmergency obj : myArray){
            obj.soundSiren();
        }
    }
}
```

OUTPUT

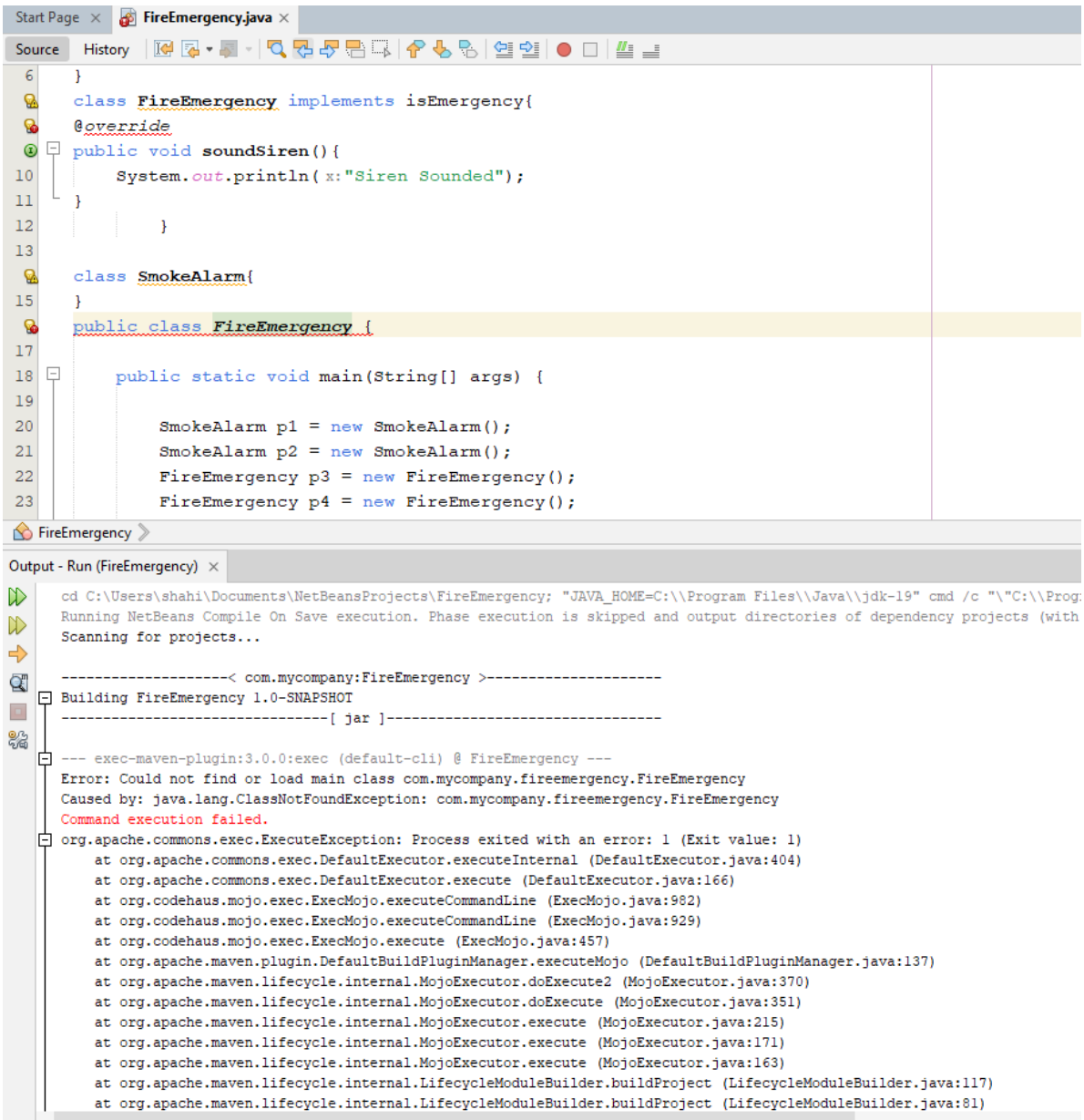
I could not successfully show expected output results in my Netbeans IDE.

4. IMPLEMENTATION & TEST RESULT

Example of Implementing Interface

OUTPUT

I could not successfully show expected output results in my Netbeans IDE.
There was error in my program.



5. ANALYSIS AND DISCUSSION

1) Using a class that implements various interfaces, the challenge illustrates multiple inheritance.
2) We learnt, how to construct an item and add it to the array while doing interface code.