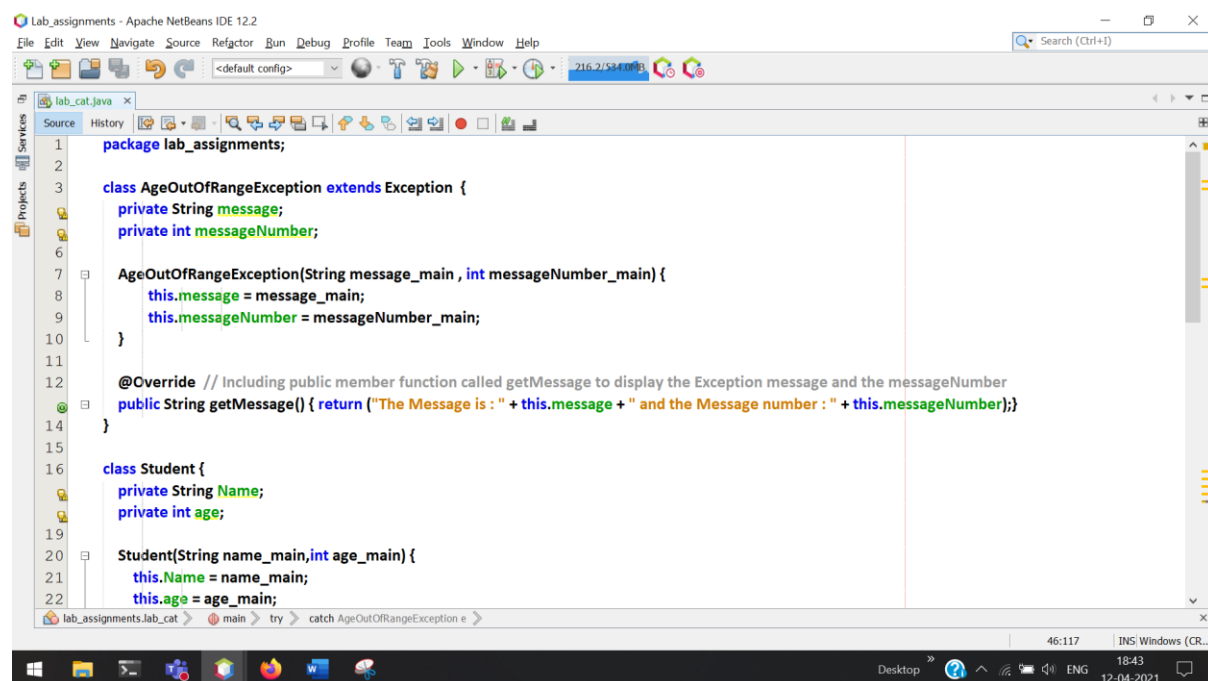


## Question

Create an Exception class called `AgeOutOfRangeException` containing message (a string) and messageNumber as private data members. Include parameterized constructors to initialize the private data members. Also include a public member function called `getMessage` to display the Exception message and the messageNumber. Use the above exception class to raise an exception in the Student class if the Student's age is not between 16 and 20. Consider an example Student class of your own.

Write a JAVA program to test the functionality of the above classes.

## Code



```
Lab_assignments - Apache NetBeans IDE 12.2
File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help
<default config> 216.2/584.0MB
lab_cat.java
Source History
1 package lab_assignments;
2
3 class AgeOutOfRangeException extends Exception {
4     private String message;
5     private int messageNumber;
6
7     AgeOutOfRangeException(String message_main , int messageNumber_main) {
8         this.message = message_main;
9         this.messageNumber = messageNumber_main;
10    }
11
12    @Override // Including public member function called getMessage to display the Exception message and the messageNumber
13    public String getMessage() { return ("The Message is : " + this.message + " and the Message number : " + this.messageNumber);}
14 }
15
16 class Student {
17     private String Name;
18     private int age;
19
20     Student(String name_main,int age_main) {
21         this.Name = name_main;
22         this.age = age_main;
23     }
24 }
```

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Search (Ctrl+I)

lab\_cat.java

```
22     this.age = age_main;
23 }
24
25 public void age_check(String message_main , int messageNumber_main) throws AgeOutOfRangeException{
26     System.out.println("Student name : " + this.Name + " Student age : " + this.age);
27
28     // Raise an exception in the Student class if the Student's age is not between 16 and 20.
29     if(this.age>=16 && this.age<=20) { throw new AgeOutOfRangeException(message_main,messageNumber_main); }
30     else { System.out.println("Your age is not inbetween 16 and 20"); }
31 }
32
33
34 public class lab_cat {
35     public static void main(String args[]) {
36         Student obj1 = new Student("Prashanth",17);
37         Student obj2 = new Student("Sam Curran",22);
38         Student obj3 = new Student("Michael",18);
39         Student obj4 = new Student("Chris Gayle",25);
40         Student obj5 = new Student("Jaden Smith",19);
41
42         try { obj1.age_check("Prashanth here",1); } catch (AgeOutOfRangeException e) { System.out.println(e); };
43         try { obj2.age_check("Sam here",2); } catch (AgeOutOfRangeException e) { e.getMessage(); };
44     }
45 }
```

lab\_assignments.lab\_cat > main > try > catch AgeOutOfRangeException e >

46:117 INS Windows (CR...)

Desktop 18:44 12-04-2021

Lab\_assignments - Apache NetBeans IDE 12.2

File Edit View Navigate Source Refactor Run Debug Profile Team Tools Window Help

Search (Ctrl+I)

lab\_cat.java

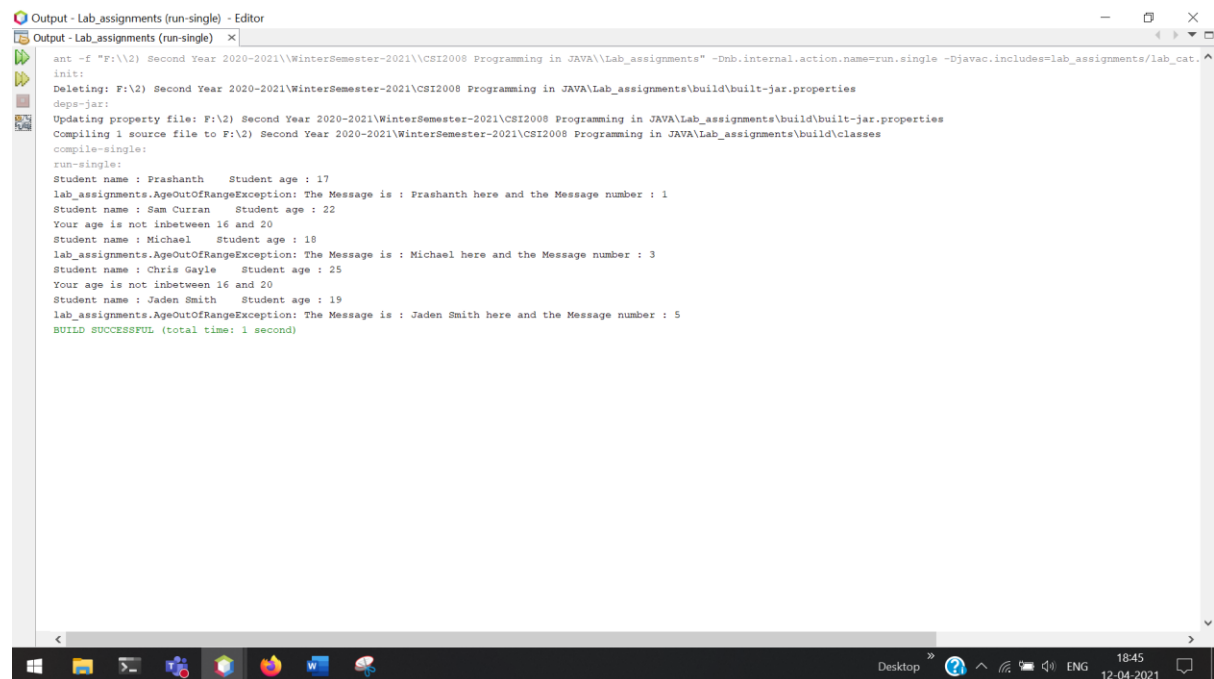
```
36     Student obj1 = new Student("Prashanth",17);
37     Student obj2 = new Student("Sam Curran",22);
38     Student obj3 = new Student("Michael",18);
39     Student obj4 = new Student("Chris Gayle",25);
40     Student obj5 = new Student("Jaden Smith",19);
41
42     try { obj1.age_check("Prashanth here",1); } catch (AgeOutOfRangeException e) { System.out.println(e); };
43     try { obj2.age_check("Sam here",2); } catch (AgeOutOfRangeException e) { e.getMessage(); };
44     try { obj3.age_check("Michael here",3); } catch (AgeOutOfRangeException e) { System.out.println(e); };
45     try { obj4.age_check("Chris Gayle here",4); } catch (AgeOutOfRangeException e) { System.out.println(e); };
46     try { obj5.age_check("Jaden Smith here",5); } catch (AgeOutOfRangeException e) { System.out.println(e); };
47 }
48
49 }
```

lab\_assignments.lab\_cat > main > try > catch AgeOutOfRangeException e >

46:117 INS Windows (CR...)

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# Output



```
Output - Lab_assignments (run-single) - Editor
Output - Lab_assignments (run-single) x
ant -f "F:\2) Second Year 2020-2021\WinterSemester-2021\CSI2008 Programming in JAVA\Lab_assignments" -Dnb.internal.action.name=run.single -Djavac.includes=lab_assignments/lab_cat.
init:
Deleting: F:\2) Second Year 2020-2021\WinterSemester-2021\CSI2008 Programming in JAVA\Lab_assignments\build\build-jar.properties
deps-jar:
Updating property file: F:\2) Second Year 2020-2021\WinterSemester-2021\CSI2008 Programming in JAVA\Lab_assignments\build\build-jar.properties
Compiling 1 source file to F:\2) Second Year 2020-2021\WinterSemester-2021\CSI2008 Programming in JAVA\Lab_assignments\build\classes
compile-single:
run-single:
Student name : Prashanth      Student age : 17
lab_assignments.AgeOutOfRangeException: The Message is : Prashanth here and the Message number : 1
Student name : Sam Curran      Student age : 22
Your age is not inbetween 16 and 20
Student name : Michael      Student age : 18
lab_assignments.AgeOutOfRangeException: The Message is : Michael here and the Message number : 3
Student name : Chris Gayle      Student age : 25
Your age is not inbetween 16 and 20
Student name : Jaden Smith      Student age : 19
lab_assignments.AgeOutOfRangeException: The Message is : Jaden Smith here and the Message number : 5
BUILD SUCCESSFUL (total time: 1 second)
```