

FINAL PRACTICAL WORKSHEET

STUDENT'S NAME – NEHA SHARMA

DATE- 4/12/21

STUDENT'S UID – 20BCS4576

SUBJECT CODE- 20CSP-234

CLASS AND GROUP – 20IBIT-1_A

BRANCH- CSE-IOT

SEMESTER – 3

SUBJECT NAME- JAVA LAB

1. AIM:

To a program to handle Array IndexOutof Bound Exception in JAVA.

2. TASK TO BE DONE:

Write a program in Java to display name and roll number of students. Initialize respective array variables for 2 students. Handle Array Index Out Of Bounds Exception, so that any such problem does not cause illegal termination of program.

3. Apparatus:

1. System with any Operating System.
2. Online GDB

3. PROGRAM CODE:

```
import java.util.Scanner;
class Student1
{
int uid; String name;
Student1(int Uid, String Name)
{
uid=Uid; name= Name;
}
}
public class Main
```

```

{
public static void main(String[] args)
{
Scanner scanner=new Scanner(System.in); System.out.println(" \n-----NEHA SHARMA
20BCS4576-----\n");
System.out.println("There are Two Students are there in a LIST"); Student1 students[]= new
Student1[2];
for(int i=0; i<2; i++)
{
System.out.println("Enter ID"); int id= scanner.nextInt(); System.out.println("Enter Name");
String Name= scanner.next();
students[i]=new Student1(id, Name);
}
System.out.println("List of student"); for(int i1=0; i1<2; i1++)
{
System.out.println(students[i1].uid + " " + students[i1].name);
}
char op='n';
System.out.println("Do u want to Extend the list??? yes/ no"); op= scanner.next().charAt(0);
if(op=='y')
{
try
{
System.out.println("Enter ID"); int id= scanner.nextInt(); System.out.println("Enter Name");
String Name= scanner.next();
students[3]=new Student1(id, Name);
}
catch(ArrayIndexOutOfBoundsException e)
{
System.out.println(e);
}
}
scanner.close();
}

```

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Main java

```
1 import java.util.Scanner;
2 class Student1
3 {
4     {
5     int uid; String name;
6     Student1(int Uid, String Name)
7     {
8     uid=Uid; name= Name;
9     }
10 }
11 public class Main
12 {
13     {
14     public static void main(String[] args)
15     {
16     Scanner scanner=new Scanner(System.in); System.out.println("\n-----NEHA SHARMA 20BCS4576-----\n");
17     System.out.println("There are Two Students are there in a LIST"); Student1 students[]= new Student1[2];
18     for(int i=0; i<2; i++)
19     {
20     System.out.println("Enter ID"); int id= scanner.nextInt(); System.out.println("Enter Name"); String Name= scanner.next();
21     students[i]=new Student1(id, Name);
22     }
23     System.out.println("List of student"); for(int i1=0; i1<2; i1++)
24     {
25     System.out.println(students[i1].uid + " " + students[i1].name);
26     }
27     char op='n';
28     System.out.println("Do u want to Extend the list??? yes/ no"); op= scanner.next().charAt(0);
29     if(op=='y')
30     {
31     try
32     {
33     System.out.println("Enter ID"); int id= scanner.nextInt(); System.out.println("Enter Name"); String Name= scanner.next();
34     students[3]=new Student1(id, Name);
35     }
36     catch (ArrayIndexOutOfBoundsException e)
37     {
38     System.out.println(e);
39     }
40     scanner.close();
41     }
42     }
43 }
```

input
Press ENTER to exit console.

17°C Partly cloudy 09:44 04-12-2021

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Main java

```
11 public class Main
12 {
13     {
14     public static void main(String[] args)
15     {
16     Scanner scanner=new Scanner(System.in); System.out.println("\n-----NEHA SHARMA 20BCS4576-----\n");
17     System.out.println("There are Two Students are there in a LIST"); Student1 students[]= new Student1[2];
18     for(int i=0; i<2; i++)
19     {
20     System.out.println("Enter ID"); int id= scanner.nextInt(); System.out.println("Enter Name"); String Name= scanner.next();
21     students[i]=new Student1(id, Name);
22     }
23     System.out.println("List of student"); for(int i1=0; i1<2; i1++)
24     {
25     System.out.println(students[i1].uid + " " + students[i1].name);
26     }
27     char op='n';
28     System.out.println("Do u want to Extend the list??? yes/ no"); op= scanner.next().charAt(0);
29     if(op=='y')
30     {
31     try
32     {
33     System.out.println("Enter ID"); int id= scanner.nextInt(); System.out.println("Enter Name"); String Name= scanner.next();
34     students[3]=new Student1(id, Name);
35     }
36     catch (ArrayIndexOutOfBoundsException e)
37     {
38     System.out.println(e);
39     }
40     scanner.close();
41     }
42     }
43 }
```

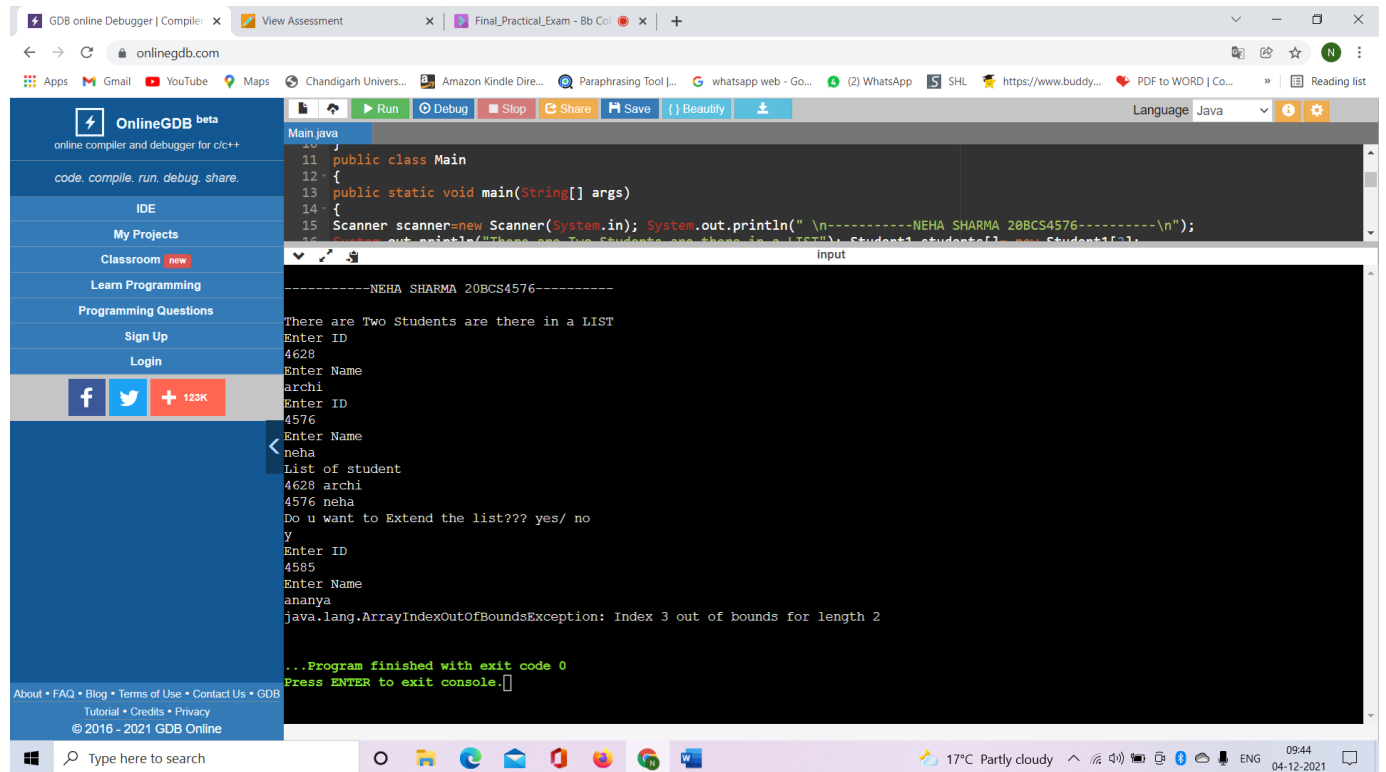
input
Press ENTER to exit console.

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4. ERRORS ENCOUNTERED DURING PROGRAM'S EXECUTION:
(Kindly jot down the compile time errors encountered):

NO ERROR EXECUTED

5. OUTPUT:



The screenshot displays the OnlineGDB beta web interface. On the left is a sidebar with navigation links: IDE, My Projects, Classroom (marked as new), Learn Programming, Programming Questions, Sign Up, and Login. Below these are social media icons for Facebook, Twitter, and a '+ 123K' button. The main area is divided into a code editor and an output console. The code editor shows a Java program named 'Main.java' with the following code:

```
11 public class Main
12 {
13     public static void main(String[] args)
14     {
15         Scanner scanner=new Scanner(System.in); System.out.println("\n-----NEHA SHARMA 20BCS4576-----\n");
16         System.out.println("There are Two Students are there in a LIST"); Student1=student1; ... Student1f11;
```

The output console shows the program's execution. It prints a separator line, then asks 'There are Two Students are there in a LIST'. It prompts for 'Enter ID' (4628) and 'Enter Name' (archi). It then prompts for 'Enter ID' (4576) and 'Enter Name' (neha). It lists the students: 'List of student' followed by '4628 archi' and '4576 neha'. It asks 'Do u want to Extend the list??? yes/ no' and receives 'Y'. It prompts for 'Enter ID' (4585) and 'Enter Name' (ananya). Finally, it throws a 'java.lang.ArrayIndexOutOfBoundsException: Index 3 out of bounds for length 2' and ends with '...Program finished with exit code 0' and 'Press ENTER to exit console.'.

The browser's address bar shows 'onlinegdb.com'. The Windows taskbar at the bottom indicates the system time is 09:44 on 04-12-2021, with a weather forecast of 17°C Partly cloudy.

6. **LEARNING OUTCOME:**

- Identify situations where computational methods would be useful.
- Approach the programming tasks using techniques learnt and write pseudocode.
- Choose the right data representation formats based on the requirements of the problem.
- Use the comparisons and limitations of the various programming constructs and choose the right one for the task.