

WT Lab09

Author: Dipankar Das

Date: 8-4-2022

Roll: 20051554

Question 1

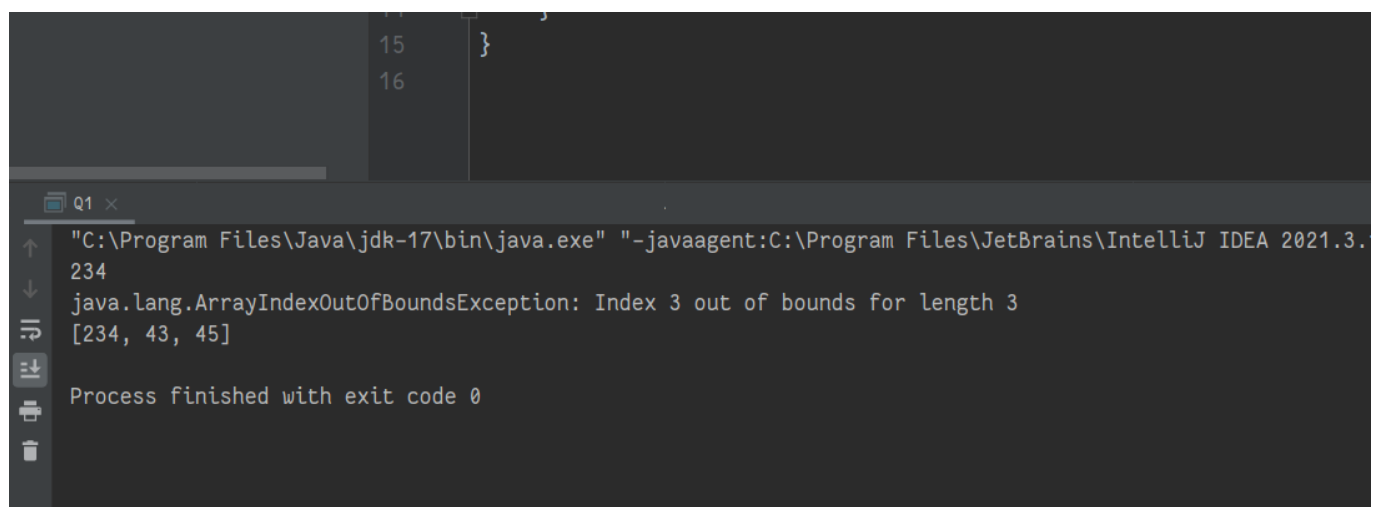
Write a Java program to generate an `ArrayIndexOutOfBoundsException` and handle it using catch statement

Solution

```
import java.util.Arrays;

public class Q1 {
    public static void main(String[] args) {
        int[] arr = new int[]{234,43,45};
        try {
            System.out.println(arr[0]);
            System.out.println(arr[arr.length]);
        } catch (ArrayIndexOutOfBoundsException e) {
            System.out.println(e);
        } finally {
            System.out.println(Arrays.toString(arr));
        }
    }
}
```

Output



```
15 }
16
Q1 x
"C:\Program Files\Java\jdk-17\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\IntelliJ IDEA 2021.3.
234
java.lang.ArrayIndexOutOfBoundsException: Index 3 out of bounds for length 3
[234, 43, 45]
Process finished with exit code 0
```

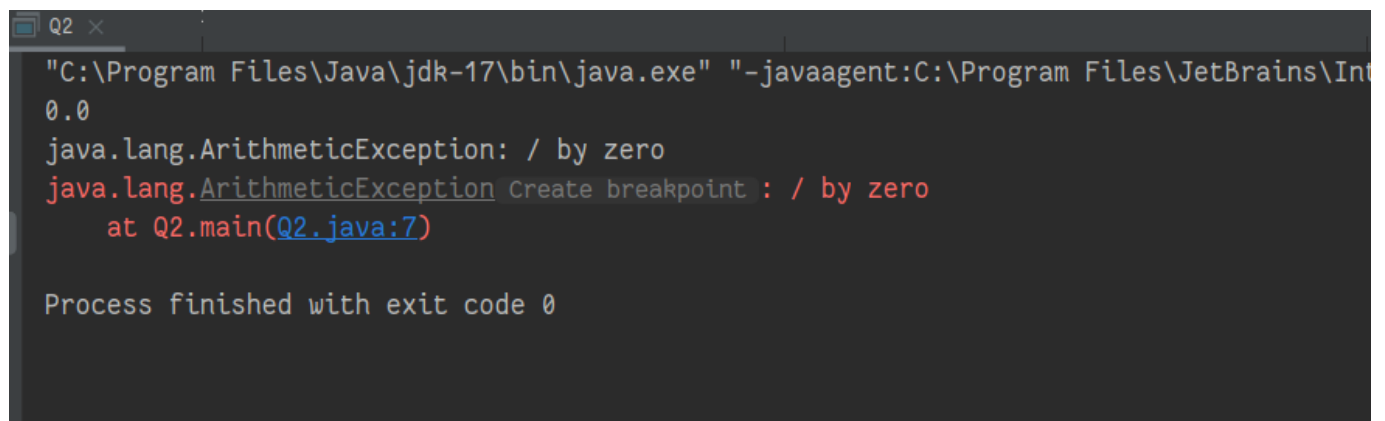
Question 2

A subclass exception must appear before super-class exception. Justify this with suitable Java programs

Solution

```
public class Q2 {  
    public static void main(String[] args) {  
        int a = 5;  
        int b = 0;  
        try {  
            System.out.println(b / (float)a);  
            System.out.println(a / b);  
        } catch (Exception e) {  
            System.out.println(e);  
        } catch (ArithmeticException e) { //placing it here will cause compile  
time error  
            e.printStackTrace();  
            System.out.println(e);  
        }  
    }  
}
```

Output



```
Q2 x  
"C:\Program Files\Java\jdk-17\bin\java.exe" "-javaagent:C:\Program Files\JetBrains\Int  
0.0  
java.lang.ArithmeticException: / by zero  
java.lang.ArithmeticException Create breakpoint : / by zero  
    at Q2.main(Q2.java:7)  
  
Process finished with exit code 0
```

Question 3

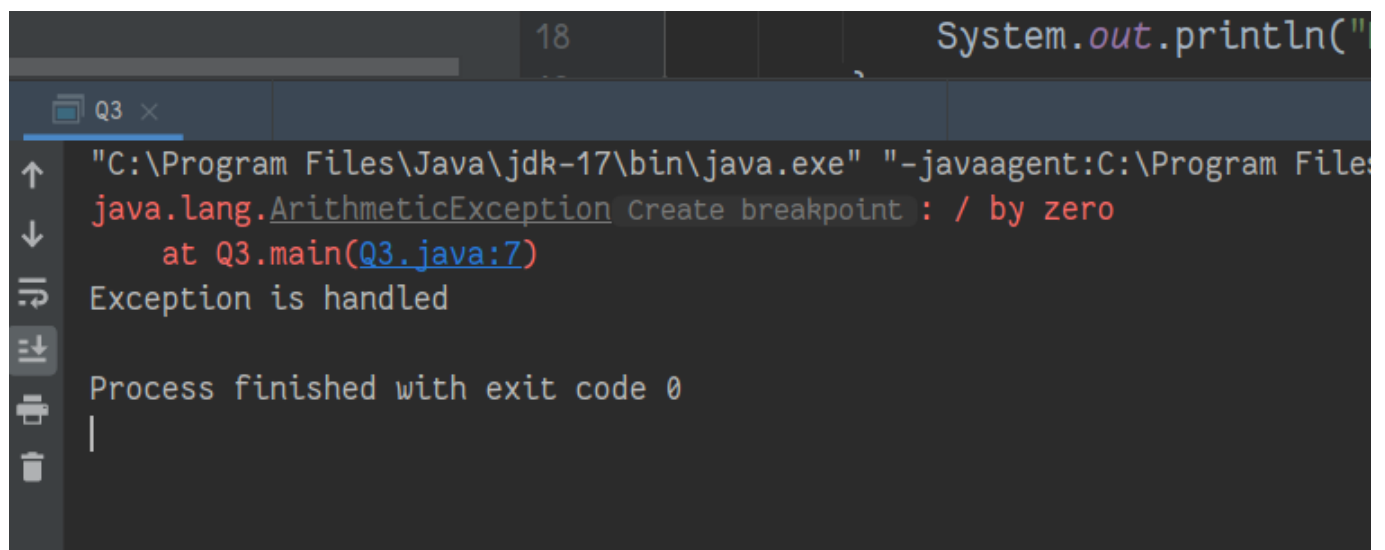
Write a Java program to illustrate try..catch..finally block

Solution

```
public class Q3 {  
    public int a;  
  
    public static void main(String[] args) {  
        Q3 obj = null;  
        try {  
            System.out.println(3/0);  
            if (obj.a == 5) {  
                System.out.println(obj.a);  
            }  
        }  
    }  
}
```

```
    }  
    } catch (ArithmeticException e) {  
        e.printStackTrace();  
    } catch (NullPointerException e) {  
        e.printStackTrace();  
    } catch (Exception e) {  
        e.printStackTrace();  
    } finally {  
        System.out.println("Exception is handled");  
    }  
}
```

Output



```
"C:\Program Files\Java\jdk-17\bin\java.exe" "-javaagent:C:\Program File:  
java.lang.ArithmeticException Create breakpoint : / by zero  
    at Q3.main(Q3.java:7)  
Exception is handled  
Process finished with exit code 0  
|
```