S.No: 18	Exp. Name: ***Write a Java program to illustrate Multiple catch blocks***	Date:2023-11-10

Aim:

Write a Java program to illustrate **multiple catch blocks** in exception handling.

Write a method **multiCatch(int[] arr, int index)** in the class `MultiCatchBlocks` where `arr` contains integer array values and `index` contains an integer value.

Write the code in **try** block to print the value of **arr[index]** and also print the division value of **arr[index]** by **index**.

Write the **catch** blocks for

1. ArithmeticException which will print "**Division by zero exception occurred**"
2. ArrayIndexOutOfBoundsException which will print "**Array index out of bounds exception occurred**".
3. Exception (which catches all exceptions) will print "**Exception occurred**"

Note: Please don't change the package name.

Source Code:

q11331/MultiCatchBlocks.java

```
package q11331;
public class MultiCatchBlocks {
   void multiCatch(int[] arr,int index)
   {
      try
      {
         System.out.print(arr[index]+"\n");
         int val=arr[index]/index;
         System.out.print(val+"\n");
      }
      catch(ArithmeticException e)
      {
         System.out.print("Division by zero exception occurred\n");
      }
      catch(ArrayIndexOutOfBoundsException e)
      {
         System.out.print("Array index out of bounds exception occurred\n");
      }
   }
}
```

q11331/MultiCatchBlocksMain.java

```
package q11331;
import java.util.Scanner;
public class MultiCatchBlocksMain {
      public static void main(String[] args){
      Scanner s = new Scanner(System.in);
      System.out.println("Enter no of elements in the array:");
      int n = s.nextInt();
      int[] arr = new int[n];
```

```
        System.out.println("Enter elements in the array seperated by space:");
        for(int i = 0; i < n; i++)
          {
        arr[i] = s.nextInt();
          }
        System.out.println("Enter the index element:");
        int x = s.nextInt();

        MultiCatchBlocks mb = new MultiCatchBlocks();
        mb.multiCatch(arr, x);
        }
}
```


Execution Results - All test cases have succeeded!

Test Case - 1
User Output
Enter no of elements in the array: 3
Enter elements in the array seperated by space: 1 2 3
Enter the index element: 3
Array index out of bounds exception occurred

Test Case - 2
User Output
Enter no of elements in the array: 3
Enter elements in the array seperated by space: 6 5 4
Enter the index element: 1
5
5

Test Case - 3
User Output
Enter no of elements in the array: 3
Enter elements in the array seperated by space: 6 8 4
Enter the index element: 0
6
Division by zero exception occurred

Test Case - 4
User Output
Enter no of elements in the array: 5
Enter elements in the array seperated by space: 1
2
3
4
5
Enter the index element: 2
3
1