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

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

q11331/MultiCatchBlocksMain.java

```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