*** Assignment No: 6**
*** Exception handling**
Implement a program to handle Arithmetic exception, Array Index Out of Bounds. The user enters two numbers Num1 and Num2. The division of Num1 and Num2 is displayed. If Num1 and Num2 are not integers, the program would throw a Number Format Exception. If Num2 were zero, the program would throw an Arithmetic Exception. Display the exception. */
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```
import java.util.Scanner;
class MaulidemoException_Handling
{
	public static void main(String args[])
	{
		int c;
		Scanner sc = new Scanner(System.in);
		do
		{
			System.out.println("\nEnter following choice for exception");
			System.out.println("\t1.Arithmatic Exception");
			System.out.println("\t2.Array Index out of bouds Exception");
			System.out.println("\t3.Number format Exception");
			System.out.println("\t4.Exit");
			System.out.print("Enter your choice : ");
			c = sc.nextInt();

			switch(c)
			{
				case 1 :
				try
				{
					int num1, num2, num3;
					System.out.print("Enter First number : ");
					num1 = sc.nextInt();

					System.out.print("Enter Second number : ");
					num2 = sc.nextInt();

					num3 = num1/num2;
					System.out.print("Division = "+num3);
				}

				catch(Exception e)
				{
					System.out.println("\n----------------------------------------\n");
```

```
                    System.out.println("Divide by Zero \n"+e);
                    System.out.println("\n---------------------------------------\n");
                }
                    break;

                case 2 :
                try
                {
                    int a[]=new int [8];
                    a[4] = 10;
                    System.out.println("value at index 4 : "+a[4]);
                    a[9] = 20;
                    System.out.println("value at index 9 : "+a[9]);
                }

                catch(ArrayIndexOutOfBoundsException e)
                {
                    System.out.println("\n---------------------------------------\n");
                    System.out.println("Array Index Out Of Bounds \n"+e);
                    System.out.println("\n---------------------------------------\n");
                }
                    break;

                case 3 :
                try
                {
                    int a;
                    a = Integer.parseInt("XYZ");
                    System.out.println("a = "+a);
                }

                catch(Exception e)
                {
                    System.out.println("\n---------------------------------------\n");
                    System.out.println("Number Format Exception \n"+e);
                    System.out.println("\n---------------------------------------\n");
                }
                    break;

                case 4 : break;
            }
        }while(c<4);
}
```

}

OUTPUT:

```
Enter following choice for exception
    1.Arithmatic Exception
    2.Array Index out of bouds Exception
    3.Number format Exception
    4.Exit
Enter your choice : 1
Enter First number : 100
Enter Second number : 0

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Divide by Zero
java.lang.ArithmeticException: / by zero

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Enter following choice for exception
    1.Arithmatic Exception
    2.Array Index out of bouds Exception
    3.Number format Exception
    4.Exit
Enter your choice : 2
value at index 4 : 10

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Array Index Out Of Bounds
java.lang.ArrayIndexOutOfBoundsException: 9

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Enter following choice for exception
    1.Arithmatic Exception
    2.Array Index out of bouds Exception
    3.Number format Exception
    4.Exit
Enter your choice : 3

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```

Number Format Exception
java.lang.NumberFormatException: For input string: "XYZ"

Enter following choice for exception

- **1.Arithmatic Exception**
- **2.Array Index out of bouds Exception**
- **3.Number format Exception**
- **4.Exit**

Enter your choice : 4