

Exception Handling in Java

1.Try and catch:

```
class Main {
    public static void main(String[] args) {

        try {
            int divide_zero = 5 / 0;
            System.out.println("Divisible");
        }

        catch (ArithmeticException e) {
            System.out.println("ArithmeticException not divisible" + e.getMessage());
        }
    }
}
```

```
java -cp /tmp/kPpgAzk0Zy Main
ArithmeticException not divisible/ by zero
```

2.Finally:

```
class Main {
    public static void main(String[] args) {
        try {
            int divideByZero = 1 / 0;
        }

        finally {
            System.out.println("Arithmetic not divisible");
        }
    }
}
```

```
java -cp /tmp/UC7cv7e7xs Main
Arithmetic not divisibleException in thread "main" java.lang.ArithmeticException: /
by zero
at Main.main(Main.java:4)
```

3.Throw:

```
1 // Online Java Compiler
2 // Use this editor to write, compile and run your Java code online
3
4 public class Throw1 {
5     public static void validate(int age) {
6         if(age<18) {
7             throw new ArithmeticException("Person is not eligible to vote");
8         }
9         else {
10            System.out.println("Person is eligible to vote!!");
11        }
12    }
13    public static void main(String args[]){
14        validate(22);
15    }
16 }
17 }
```

```
java -cp /tmp/vZGiNbiq7L Throw1
Person is eligible to vote!!
```

4.Nested Try:

```
class ListOfNumbers {
    public int[] arr = new int[10];
    public void writeList() {
        try {
            arr[10] = 9;
        }
        catch (NumberFormatException e1){
            System.out.println("NumberFormatException: "+e1.getMessage());
        }
        catch (IndexOutOfBoundsException e2){
            System.out.println("IndexException: "+e2.getMessage());
        }
    }
}

class Main{
    public static void main(String[] args) {
        ListOfNumbers list = new ListOfNumbers();
        list.writeList();
    }
}
```

```
java -cp /tmp/vZGiNbiq7L Main
IndexException:Index 10 out of bounds for length 10
```

5.Used-Defined:

```
class SampleException{
    public static void main(String args[]){
        try{
            throw new Exp(105);
        }
        catch(Exp e){
            System.out.println(e);
        }
    }
}

class Exp extends Exception{
    int num1;
    Exp(int num2) {
        num1=num2;
    }
    public String toString(){
        return ("Status code = "+num1);
    }
}
```

```
java -cp /tmp/vZGiNbiq7L SampleException
Status code = 105
```

Result:

Hence the code is executed successfully.