Object Oriented Programming with Java (OOPJ)

Session 13: Exception Handling

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Topics-
    -Exception Handling
    -Unchecked Exception
    -Checked Exception
```

Object

↑

Throwable

Error   Exception

Runtime Exce

checked
Exception

Unchecked
Exception
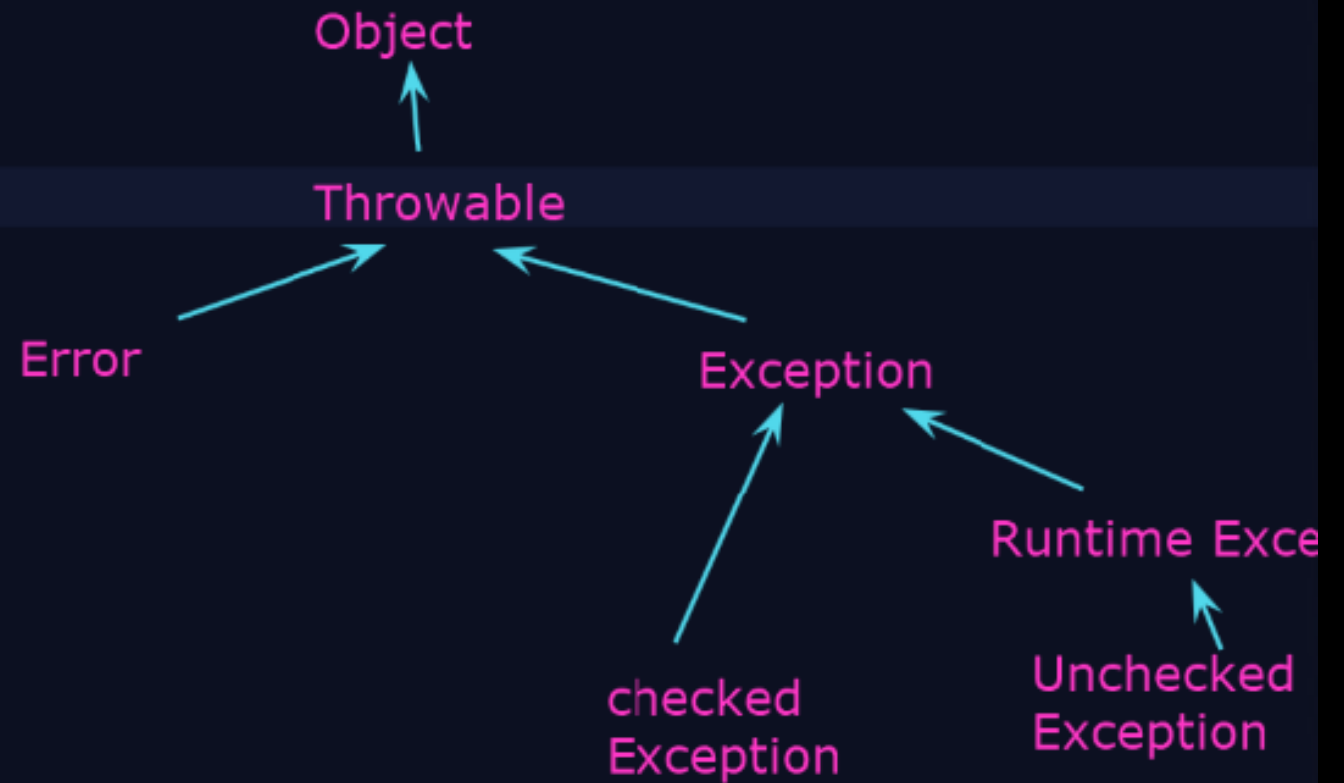
```java
class ExceptionDemo9{

    void m1(){
        System.out.println("m1() : executed");
    }
    public static void main(String[] args){

        System.out.println("start");
        ExceptionDemo9 d1 = null;
        try{
            System.out.println("aaaaaaa");
            d1.m1();
            System.out.println("bbbbbb");
        }catch(Throwable e){
            e.printStackTrace();
        }finally{
            System.out.println("Bhai Resour
        }
        System.out.println("stop");



    }

}
```

```
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C:\Test>javac ExceptionDemo9.java

C:\Test>java ExceptionDemo9
start
aaaaaaa
java.lang.NullPointerException: Cannot invoke "ExceptionDemo9.m1()" becau
e "<local1>" is null
        at ExceptionDemo9.main(ExceptionDemo9.java:13)
Bhai Resources ko release kar do!!!
stop

C:\Test>
```

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

    System.out.println("start");

    //Method 2 :throw
    try{
        System.out.println("aaaaaaa");

        throw new NullPointerException();//d1 = n

        //System.out.println("bbbbbb");

    }catch(NullPointerException e){
        e.printStackTrace();
    }finally{
        System.out.println("Bhai Resources ko release kar do!!!");

    }
    System.out.println("stop");


}

}
```

```
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1 error

C:\Test>javac ExceptionDemo10.java

C:\Test>java ExceptionDemo10
start
aaaaaaa
java.lang.NullPointerException
        at ExceptionDemo10.main(ExceptionDemo10.java:16)
Bhai Resources ko release kar do!!!
stop

C:\Test>
```

```java
class ExceptionDemo14{

    static void m3(){
        System.out.println("m3() : excutes");
        try{
            int i=1/0;
        }catch(ArithmeticException e){
            e.printStackTrace();
        }
        System.out.println("m3() : excutes : before");
    }
    static void m2(){
        System.out.println("m2() : excutes");
        m3();
        System.out.println("m2() : excutes : before");
    }
    static void m1(){
        System.out.println("m1() : excutes");
        m2();
        System.out.println("m1() : excutes : before");
    }
    static void m(){
        System.out.println("m() : excutes");
        m1();
        System.out.println("m() : excutes : before");
    }

    public static void main(String args[]){

    System.out.println("1");

    m();

    System.out.println("stop");
```

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```
C:\Test>javac ExceptionDemo14.java

C:\Test>java ExceptionDemo14
1
m() : excutes
m1() : excutes
m2() : excutes
m3() : excutes
java.lang.ArithmeticException: / by zero
        at ExceptionDemo14.m3(ExceptionDemo14.java:7)
        at ExceptionDemo14.m2(ExceptionDemo14.java:15)
        at ExceptionDemo14.m1(ExceptionDemo14.java:20)
        at ExceptionDemo14.m(ExceptionDemo14.java:25)
        at ExceptionDemo14.main(ExceptionDemo14.java:35)
m3() : excutes : before
m2() : excutes : before
m1() : excutes : before
m() : excutes : before
stop

C:\Test>
```

```java
import java.util.*;
import java.io.*;

class ChExceptionDemo1{

    public static void main(String args[]){
        System.out.println("start");
        //int i = Integer.parseInt("ab");//

        try{
            int j =System.in.read();//Chec
        }catch(IOException e){
            e.printStackTrace();
        }


    System.out.println("stop");


    }

}
```

```
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                    int j =System.in.read();
                                            ^
1 error

C:\Test>javac ChExceptionDemo1.java

C:\Test>java ChExceptionDemo1
start
a
stop

C:\Test>
```

```java
public static void main(String args[]){
    System.out.println("1");
    m1();



}

static void m1(){
    System.out.println("2");
    System.out.println("m1() : executed");
    m2();
    System.out.println("3");
}

static void m2(){
    System.out.println("4");
    System.out.println("m2() : executed");
    System.out.println("Enter any character:");
    try{
        System.out.println("5");
        int j = System.in.read();
        System.out.println("Charcter="+(char)j);
        System.out.println("6");
    }catch(IOException e){
        e.printStackTrace();
        System.out.println("7");

    }
    System.out.println("8");
```

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```
m2() : executed
Enter any character:
x
Charcter=x

C:\Test>javac ChExceptionDemo4.java

C:\Test>java ChExceptionDemo4
1
2
m1() : executed
4
m2() : executed
Enter any character:
5
c
Charcter=c
6
8
3

C:\Test>
```

```java
class ChExceptionDemo6{

    public static void main(String args[]){
        System.out.println("1");
        System.out.println("Enter any character:");

        System.out.println("2");
        try{
            int j = System.in.read();//Checked Exception I(
            System.out.println("Charcter="+(char)j);
            System.out.println("4");
            m1();
            System.out.println("5");
        }catch(IOException e){

        }
        System.out.println("8");
    }



    static void m1(){
        System.out.println("6");
        System.out.println("m1() : executed");
        //m2();
        System.out.println("7");
    }
}
```

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C:\Test>javac ChExceptionDemo6.java
ChExceptionDemo6.java:18: error: <identifier> expected
                        }catch(IOException){
                                           ^
1 error

C:\Test>javac ChExceptionDemo6.java

C:\Test>java ChExceptionDemo6
1
Enter any character:
2
d
Charcter=d
4
6
m1() : executed
7
5
8

C:\Test>
```