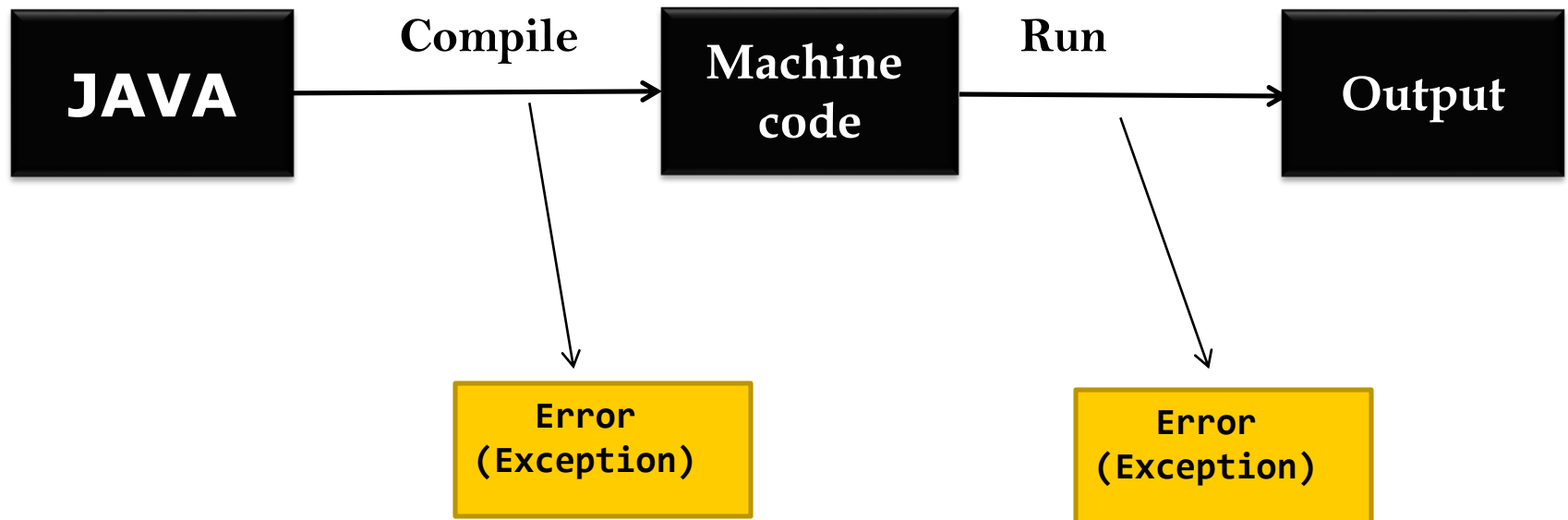

Exception Handling

Programming Execution



```
class EDemo1
```

```
    public static void main(String args[])  
    {  
        int a = 100/2;  
        System.out.println("    A    : "+a);  
    }  
}
```

```
D:\Java Files\Java Programs\Exception Handling>javac EDemo1.java
```

```
EDemo1.java:3: error: '{' expected
```

```
class EDemo1
```

```
      ^
```

```
1 error
```

```
class EDemo1
{
    public static void main(String args[])
    {
        int a = 100/0;
        System.out.println("    A    : "+a);
    }
}
```

```
D:\Java Files\Java Programs\Exception Handling>javac EDemo1.java
```

```
D:\Java Files\Java Programs\Exception Handling>java EDemo1
```

```
Exception in thread "main" java.lang.ArithmeticException: / by zero  
    at EDemo1.main(EDemo1.java:8)
```

```
class EDemo2
{
    public static void main(String args[])
    {
        try{
            int a=10/0;
            System.out.println(" A : "+a);
        }
        catch(ArithmeticException s1)
        {
            System.out.println(" Can't Divide by zero ");
        }
    }
}
```

```
D:\Java Files\Java Programs\Exception Handling>javac EDemo1.java
```

```
D:\Java Files\Java Programs\Exception Handling>java EDemo1  
Exception in thread "main" java.lang.ArithmeticException: / by zero  
    at EDemo1.main(EDemo1.java:8)
```

```
D:\Java Files\Java Programs\Exception Handling>javac EDemo2.java
```

```
D:\Java Files\Java Programs\Exception Handling>java EDemo2  
Can't Divide by zero
```

```
D:\Java Files\Java Programs\Exception Handling>
```



```
class EDemo3{
    public static void main(String args[]){

        try{
            int b[] = {10,20,30,40};
            System.out.println(" B : "+b[4]);

        }
        catch(ArrayIndexOutOfBoundsException ee){

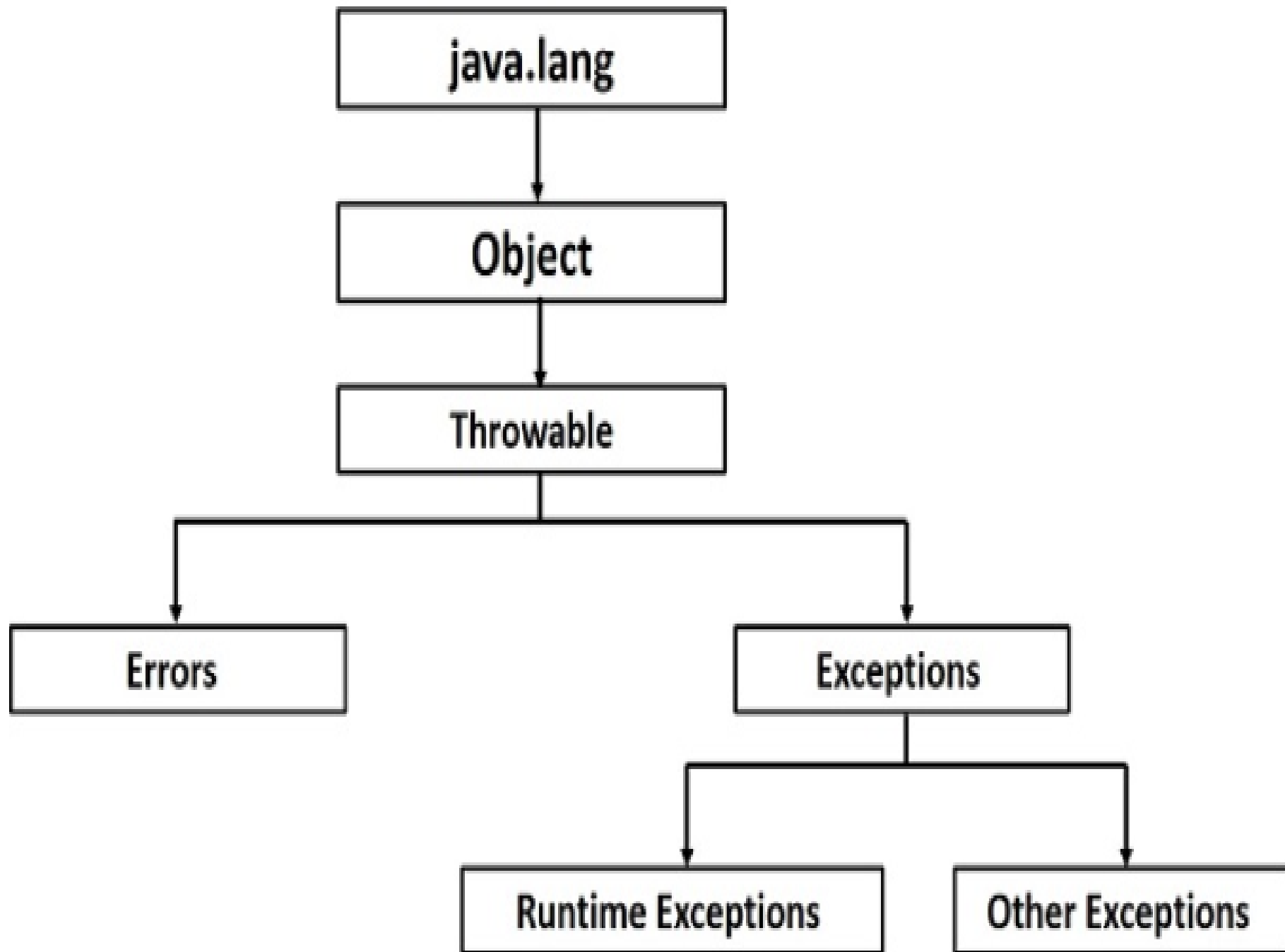
            System.out.println(" Array Index Out Of Range ");

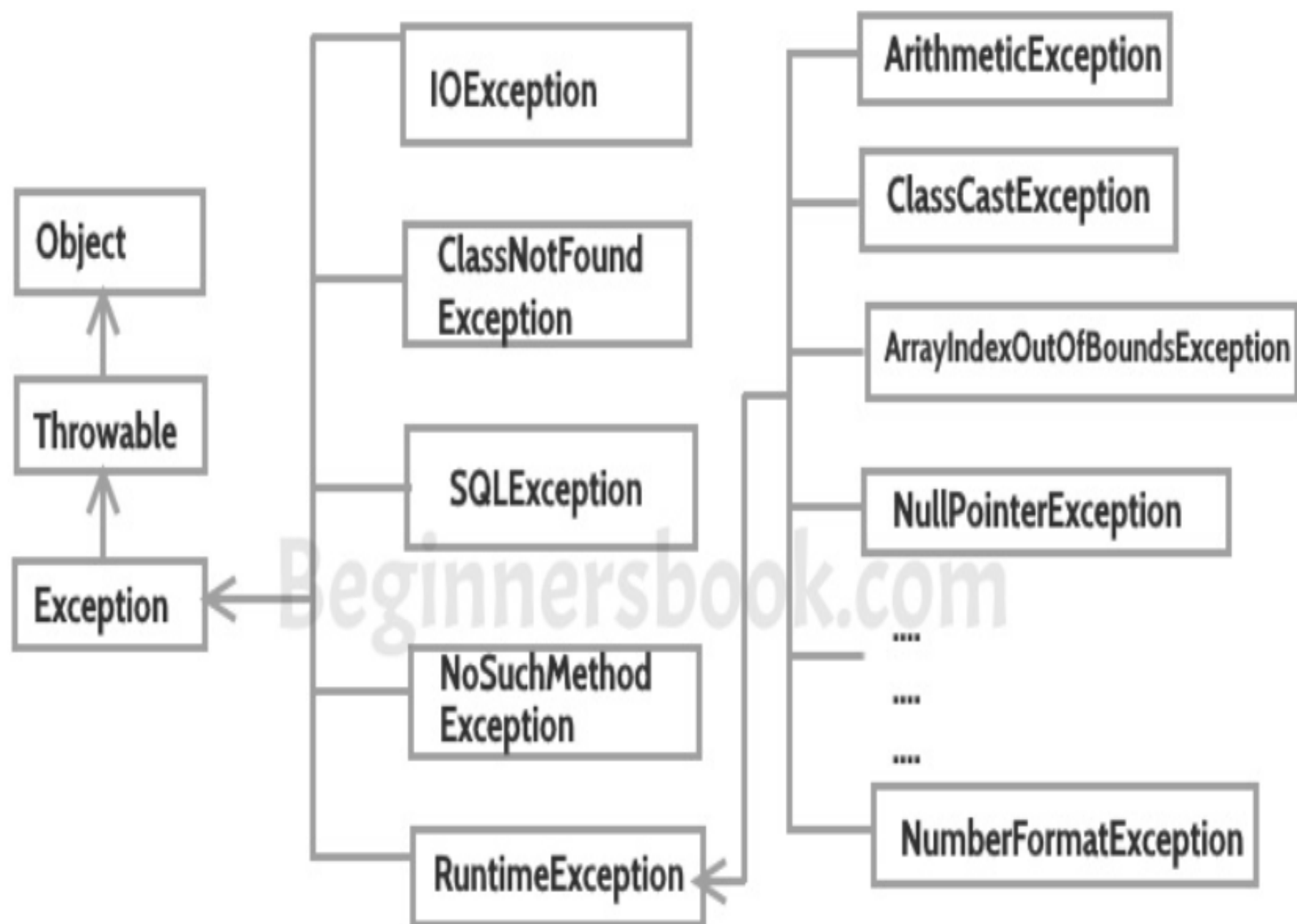
        }

    }
}
```

Exception Types

- Checked Exception
- Unchecked Exception





Exception Classes

Exception



```
graph TD; Exception[Exception] --> ArithmeticException[ArithmeticException]; Exception --> ArrayIndexOutOfBoundsException[ArrayIndexOutOfBoundsException]; Exception --> FileNotFoundException[FileNotFoundException]; Exception --> IOException[IOException];
```

- ✓ **ArithmeticException**
- ✓ **ArrayIndexOutOfBoundsException**
- ✓ **FileNotFoundException**
- ✓ **IOException**

Keywords

- try
- catch
- throw
- throws
- finally
- assert

```
class Registration
{
    Registration()
    {

    }

    void validation()
    {

    }
}
```

Try Block

```
void test()
{
    int a=100/0;
    System.out.println("    A    : "+a);

    int b[]={10,20,30,40};
    System.out.println("    B    : "+b[4]);
}
```


Try Block

```
void test()
{
    try
    {
        int a=100/0;
        System.out.println("  A    : "+a);

        int b[]={10,20,30,40};
        System.out.println("  B    : "+b[4]);
    }
    catch(..)
    {
    }
}
```

```
class Demo
```

```
{
```

```
    void add(Object ob)
```

```
    {
```

```
    }
```

```
}
```

```
class Demo
```

```
{
```

```
    catch(Object ob)
```

```
    {
```

```
    }
```

```
}
```

Catch Block

```
catch(ArithmeticException ee)
{
    System.out.println(" Can't Divide by zero");
}

catch(ArrayIndexOutOfBoundsException ee)
{
    System.out.println(" Array Index Out Of Range");
}
```

```
class Demo1
```

```
{
```

```
}
```

```
class Demo1 extends Exception
{

}
```

```
class AgeException  
{  
  
}
```

```
class AgeException extends Exception
{

}
```

```
class AgeException extends Exception
{
    String getException()
    {
        return "Age Should not > 25";
    }
}
```

```
class Registration
```

```
{
```

```
    void validation(int x)
```

```
    {
```

```
        if(x>25)
```

```
        {
```

```
        }
```

```
    else
```

```
    {
```

```
        System.out.println(" Validation Success!");
```

```
    }
```

```
    }
```

```
}
```

```
class Registration
{
    void validation(int x)
    {
        if(x>25)
        {
            AgeException ob=new AgeException();

            throw ob;
        }
        else
        {
            System.out.println(" Validation Success!");
        }
    }
}
```

```
class Registration
{
    void validation(int x)throws AgeException
    {
        if(x>25)
        {
            AgeException ob=new AgeException();
            throw ob;
        }
        else
        {
            System.out.println(" Validation Success!");
        }
    }
}
```

```
class Registration
{
    void validation(int x) throws AgeException, RemoteException
    {
        if(x>25)
        {
            AgeException ob=new AgeException();
            throw ob1;
        }
        else
        {
            RemoteException ob=new RemoteException();
            throw ob2;
        }
    }
}
```

```
public static void main(String args[])
{
    Registration s1=new Registration();

    s1.validation(24);
}
```

```
public static void main(String args[])
{
    Registration s1=new Registration();

    try
    {
        s1.validation(24);
    }
    catch(AgeException ee)
    {
        String error=ee.getException();

        System.out.println(error);
    }
}
```