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# Crux

## Lecture -9

Object Oriented  
Programming-2

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# Object Oriented Programming

# Encapsulation

1. Bind the data and functions together
2. Hiding the implementation details
3. Lets us change the implementation without breaking code of our users

# Inheritance

1. Extending Functionality of an existing class
2. Add new methods and fields to derived class
3. If both classes have a function with same name, which class's function will get called?

# Inheritance

1. Super
2. How constructors are called ?

# Polymorphism

1. Overriding the base class functions(Virtual Functions)
2. Ability of a variable to take different forms
3. Ability of a function to behave differently on basis of different parameters
4. Ability of a function to work with parameters of subtypes

# Final Class?

# Final Function?



# Abstract functions (Pure Virtual)

# Abstract Classes

# Data Member Modifiers

1. Public?
2. Protected?
3. Private?
4. Nothing(Friendly)
5. Final
6. Static

# Function Modifiers

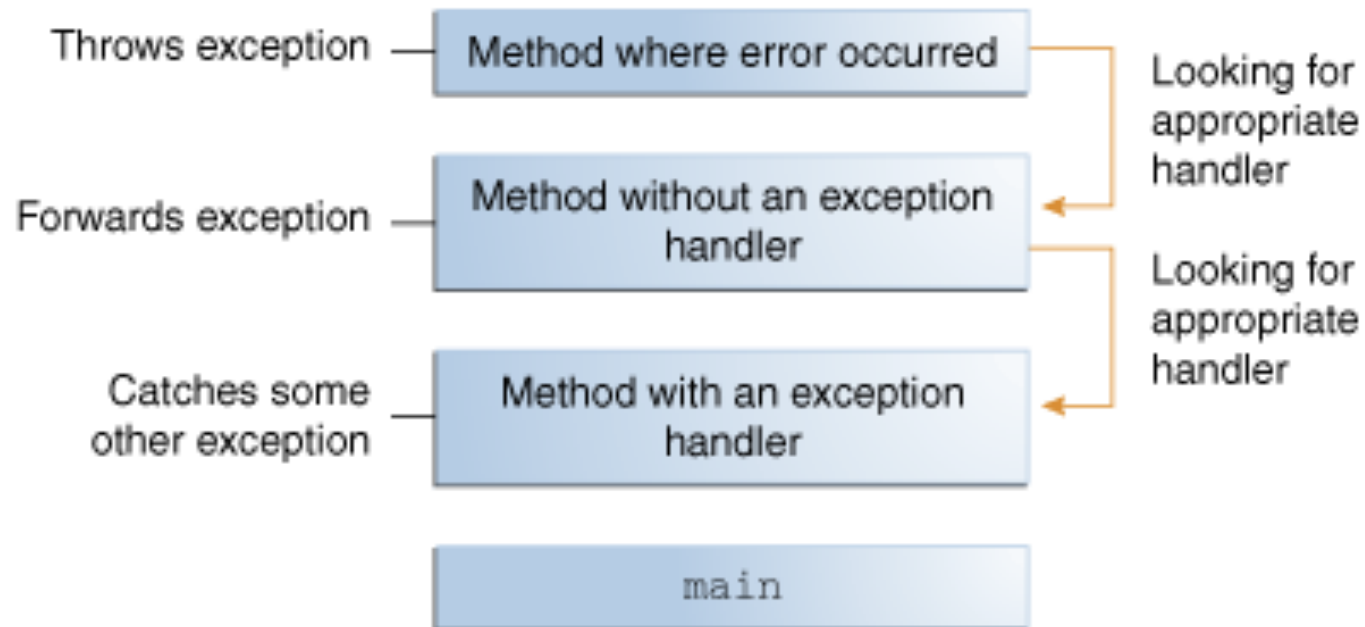
1. Public?
2. Protected?
3. Private?
4. Nothing(Friendly)
5. Abstract
6. Final
7. Static

# Classes Modifiers

1. Public?
2. Nothing(Friendly)
3. Abstract
4. Final

# Exceptions

# Exceptions & the call stack



# Type of Exceptions

1. Checked Exceptions  
(`java.lang.Exception`)
2. Errors(`java.lang.Error`)
3. Runtime Exceptions  
(`java.lang.RuntimeException`)



# How to throw Exceptions?

# Either Catch or Specify

# How to create our own Exception Class?

# Try catch and finally?

# Throwable?



# Thank You!

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