

OOPS

- Object class is java.lang package is parent (direct or indirect) of every class. Every class inherits method of Object.
- Friend function - Not a member of class or member of class but not defined in class but only declared.
 - Friend function has all access as other function of class but not directly. Always call with object as parameter.
 - There will no calling object. `cl.fun()` X
`fun()` ✓
 - Use keyword friend to declare.
 - No membership label while defining `void Complex::fun()`
`void fun()` ✓

→ Compile Time Polymorphism
Overloading
Occurs within one class

Return type can be same or different.
Method call is defined at compile time

Run Time Polymorphism
Overriding

Occurs in two class: Super class and Sub class.

Use method in child class: is already present in parent class.

Return type is always same

Method call is defined by JVM at run time

Access Modifiers

private: Accessible within the class only

default: Accessible within the package (group of classes)
2 developers working on different can have 2 class of same name. But 2 class of same name are not valid within a package. Package follows folder structure

protected: Similar to default but other classes are allowed to access protected members. They are only accessible in child class

public: Accessible everywhere.

→ Final Keyword

variable (local, instance & class): No Reinitialization

Method: No overloading

Class: No Inheritance

→ API → Application Programming Interface

