# Java Training

Installation: download java-17

[Java Downloads | Oracle](https://www.oracle.com/java/technologies/downloads/#java17-windows)

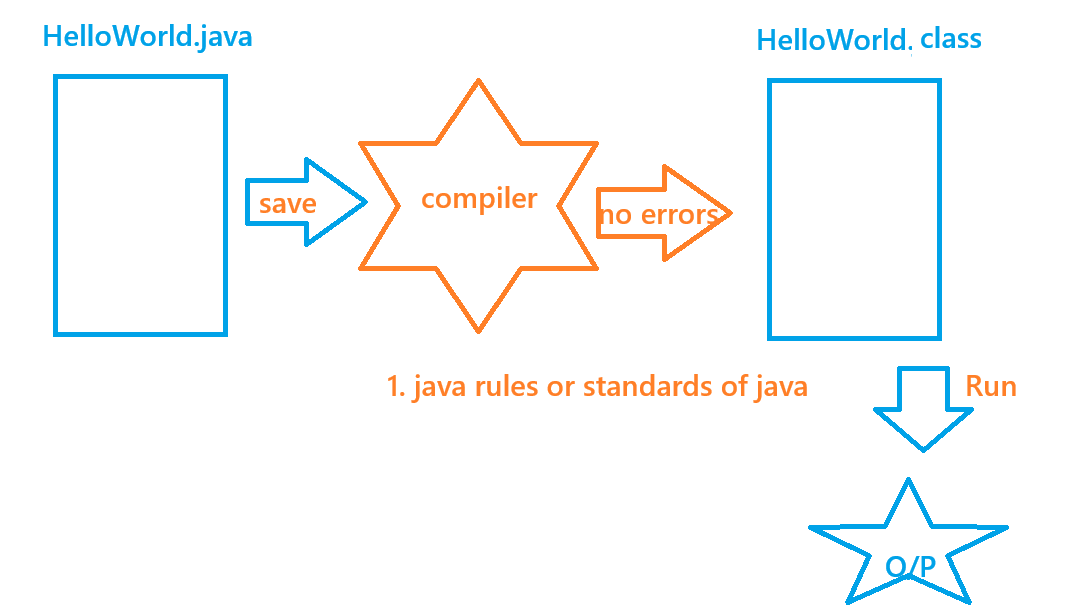
Eclipse Software :

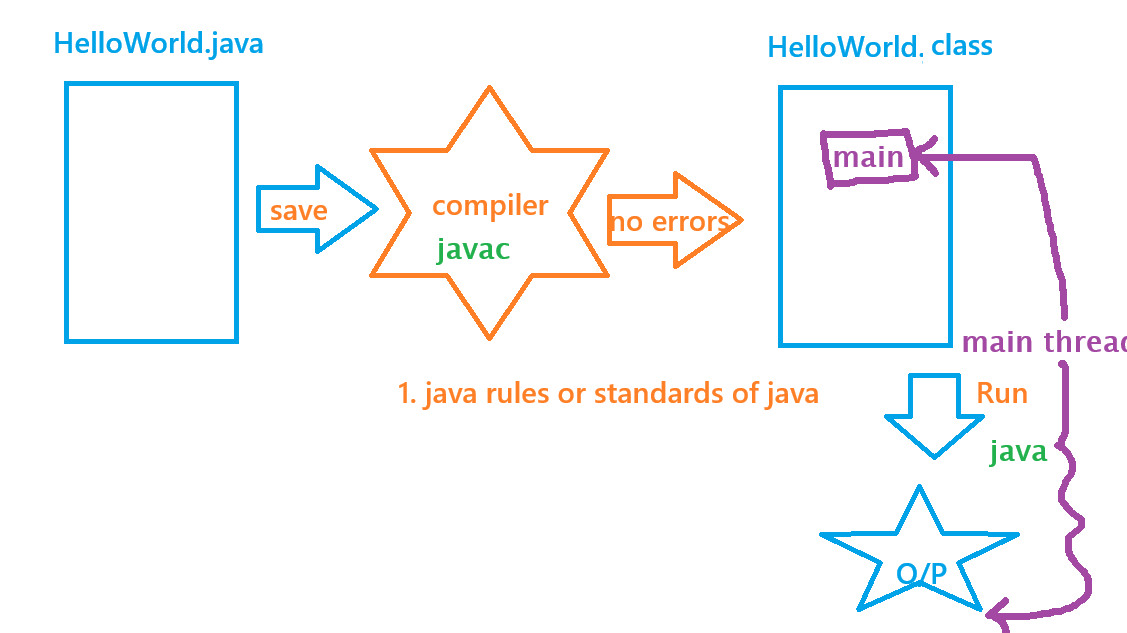
[Eclipse IDE for Java Developers | Eclipse Packages](https://www.eclipse.org/downloads/packages/release/2025-06/r/eclipse-ide-java-developers)

# Package

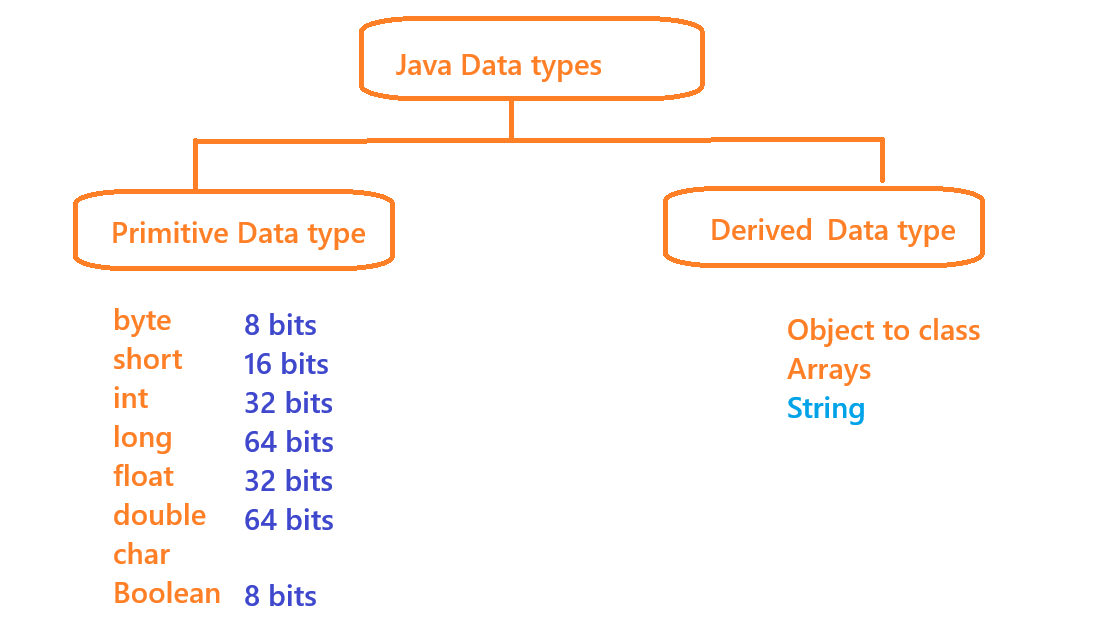
Is a name space used to store the program in an organized way.

Java process :



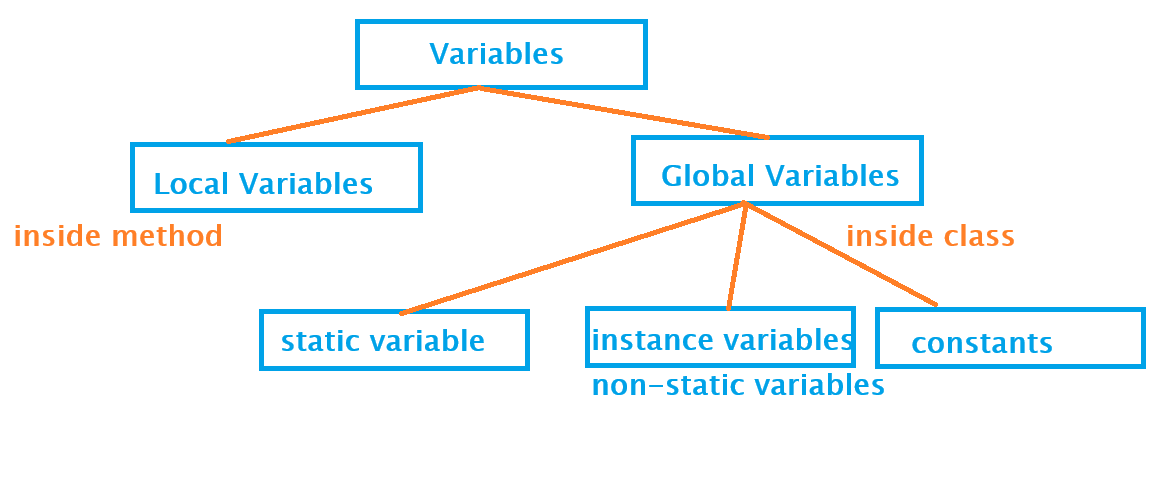


Data types in java

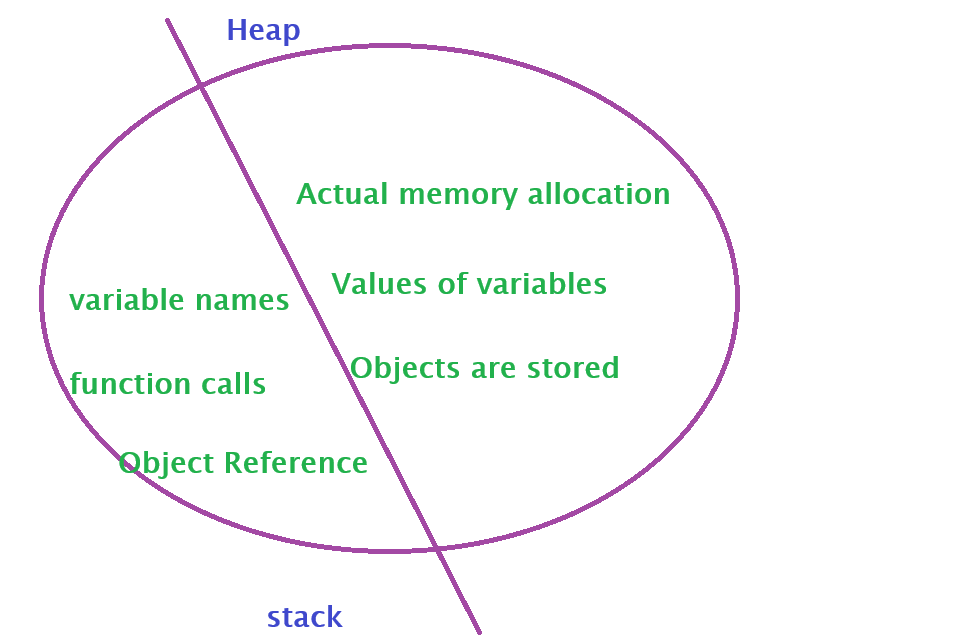


Variables in java

Variables are the names which hold the values



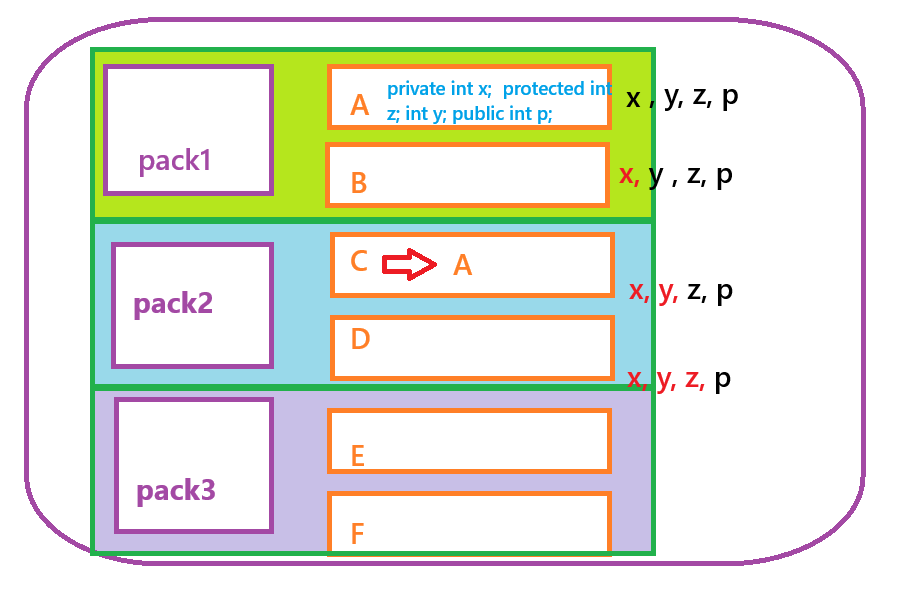
Memory allocation in Java



Access SPECIFIERS or functional access specifiers:

Are given only to global variables or methods/ functions. These specify the accessibility of a member.

1. **private –** only inside class
2. **default –** only inside package, except private member
3. **protected –** inside and outside package only on inherited classes, no private
4. **public -** anywhere

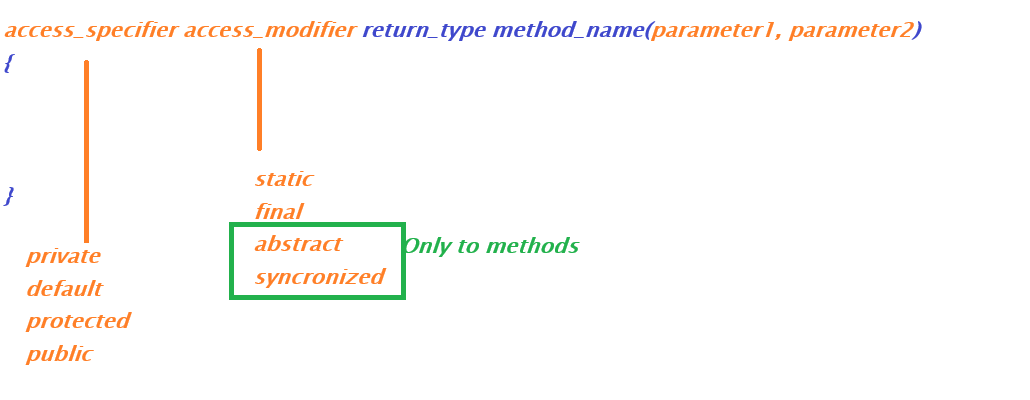


access modifiers or non- functional access specifiers

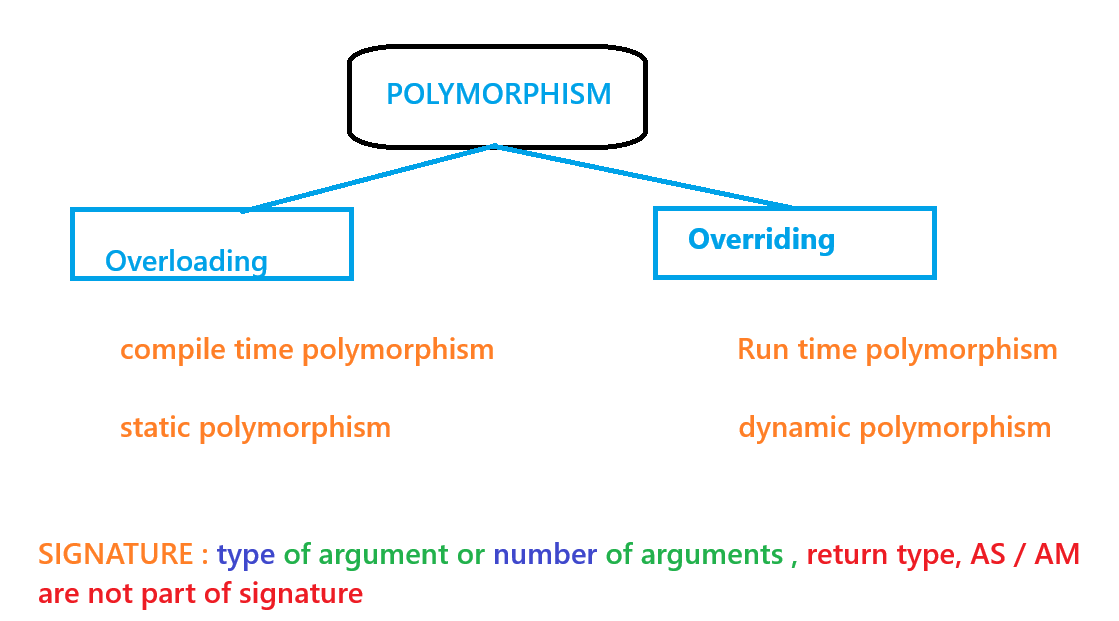
1. **static** – no need of an object
2. **final** – we cannot override the method
3. **abstract** – when the implementation changes from object to object instead of defining a method we can just keep the declaration of the method using abstract keyword.
4. **Synchronized** – is used to restrict multiple thread entering the method at a same time.

Methods in Java

Methods describes the behaviour of an object

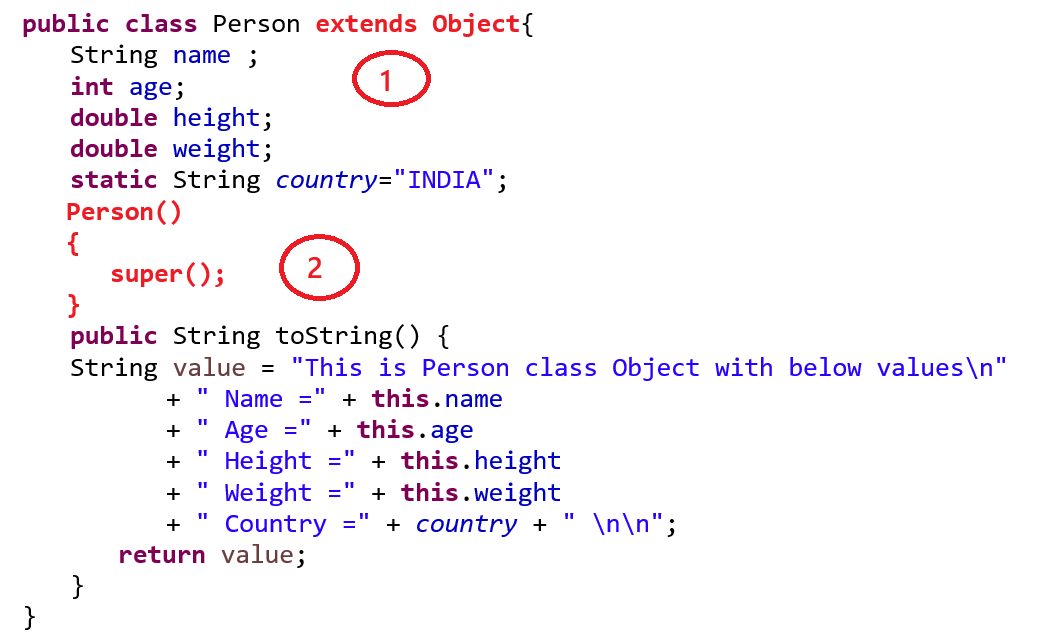


polymorphism :



constructor

Constructors are used to assign default values to all the instance members of the class during object creation



inheritance