**Polymorphism** means more than one form, same object performing different operations according to the requirement.

Polymorphism can be achieved by using two ways, those are

1.    Method overriding

2.    Method overloading

You could have a method in a class that is **overridden** in one or more subclasses. The method does different things depending on which class was used to instantiate an object.

You could also have a method that it **overloaded** with two or more sets of arguments. The method does different things based on the type(s) of argument(s) passed.

**Synchronized** keyword involve locking and unlocking. before entering into synchronized method or block thread needs to acquire the lock at this point it reads data from main memory than cache and when it release the lock it flushes write operation into main memory which eliminates memory inconsistency errors.

Method Overloading in Java is a concept related to Object Oriented Programming (OOP). Java supports overloading of methods and can distinguish between different methods with method signatures. A situation, wherein, in the same class there are two or more methods with same name, having different functions or different parameters, it is called Method Overloading.

Method Overloading can be done in two ways:

1. By changing Arguments’ data types
2. By changing number of Arguments

Why Method Overloading?

Using Method Overloading in Java is very common among Java programmers, because it:

* Provides flexibility to call similar method for different data types
* Saves memory
* Saves time
* Increases consistency
* Improves code readability.