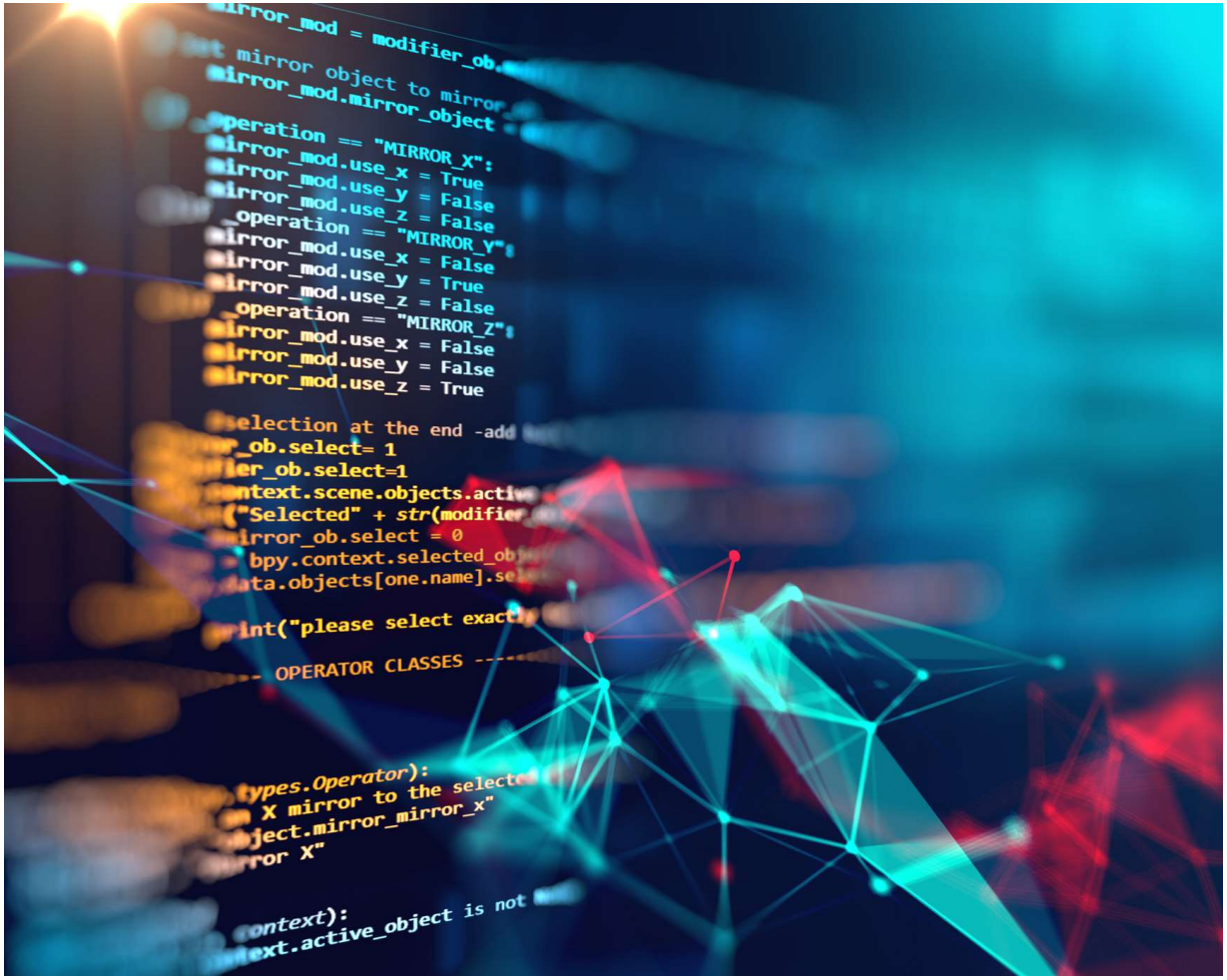

METHOD OVERLOADING

If a class has multiple methods having same name but different in parameters, it is known as Method Overloading.

Advantage of method overloading

Method overloading increases the readability of the program.

There are two ways to overload the method in java

- By changing number of arguments
- By changing the data type

Method Overloading: changing number of arguments

```
class Adder{
static int add(int a,int b){return a+b;}
static int add(int a,int b,int c){return a+b+c;}
}
class TestOverloading1{
public static void main(String[] args){
System.out.println(Adder.add(11,11));
System.out.println(Adder.add(11,11,11));
}}
```

Method Overloading: changing data type of arguments

```
class Adder{
static int add(int a, int b){return a+b;}
static double add(double a, double b){return a+b;}
}
class TestOverloading2{
public static void main(String[] args){
System.out.println(Adder.add(11,11));
System.out.println(Adder.add(12.3,12.6));
}}
```

Can we overload java main() method?

Can we overload java main() method?

Yes, by method overloading. You can have any number of main methods in a class by method overloading. But JVM calls main() method which receives string array as arguments only.

Let's see difference between method overloading and method over-riding

1)

Method overloading is used to increase the readability of the program.

Method overriding is used to provide the specific implementation of the method that is already provided by its super class.

2)

Method overloading is performed within class.

Method overriding occurs in two classes that have IS-A (inheritance) relationship.

3)

In case of method overloading, parameter must be different.

In case of method overriding, parameter must be same.

4)

Method overloading is the example of compile time polymorphism.

Method overriding is the example of run time polymorphism.

5)

In java, method overloading can't be performed by changing return type of the method only. Return type can be same or different in method overloading. But you must have to change the parameter.

Return type must be same or covariant in method overriding.

Next Session:

Static Class and Static Method