Super Keyword :-

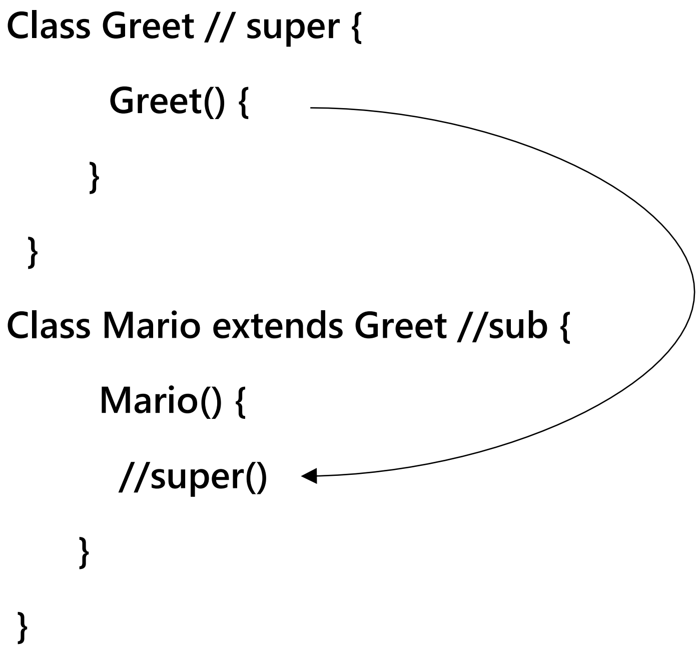
What is super keyword?

It refers to the object of super class, it is used when we call the super class variables, methods and constructors through sub class's object.

- Whenever the super class & sub class variables and methods name both are same then it can be used.
- To avoid the confusion between super class and sub class methods and variables that have same name we should use super keyword.

Super Keyword

1. Variable
2. Method
3. Constructor



```
Class Greet // super {
        Greet() {
      }
 }
Class Mario extends Greet //sub {
        Mario() {
          //super()
      }
 }
```

This Keyword :-

What is this keyword?

1. It refers to the current object inside a method or constructor.

```
Class Greet {

 }                              Greet A = new Greet()
                                       ↓
                             Unique reference number
```

2. Whenever the name of instance and local variables both are same then our run time environment JVM gets confused that which one is local variable and which one is instance variable, to avoid this problem we should use this keyword.

```
Class Greet {

    int a;      //   Instance variable

    Greet(int a) {      //local variable

        a=a;

        s.o.p(a);

    }

}
```

3. It is also used when we want to call the default constructor of it’s own class.

```
Class Greet {

      Greet() {

      }

      Greet(int a) {

          int a;

      }

}
```

4. It also called parameterized constructor of it's own class

```
Class Greet {
    Greet() {
        this(10);
    }
    Greet(int a) {
    }
}
```

Polymorphism :-

1. Poly = Many   2. Morphism=Form

Polymorphism = Many From

It means same object having different behavior.

Eg. Person = Teacher = Friend = Student

- Void person(teacher)
- Void person(student)
- Void person(friend)

Types :-

1. Compile time polymorphism
2. Run time polymorphism

Compile time polymorphism :-

What is Compile time polymorphism?

A polymorphism which is exist at the time of compilation is called compile time or early binding or static polymorphism.

Ex. Method Overloading

Whenever a class contain more than one method with same name and different types of parameters called method overloading.

```
Return-type method name (Parameter1);

Return-type method name (Parameter1, Parameter2);
```

Run time polymorphism :-

What is Run time polymorphism?

A polymorphism which exists at the time of execution of program is called runtime polymorphism.

Ex. Method Overriding

Whenever we writing method in super and sub classes in such a way that method name and parameter must be same, called method overriding.

```
Class Greet {

        Void show()

}

Class Mario extends Greet {

        Void show()

}
```