**Que.1-Method overloading : defining multiple methods with the same name but different parameters.**

**Ans.** Method Overloading is a powerful feature in java that allows you to define multiple methods with the same name with the same class , as long as their parameter lists are different. This flexibility enhances code readability, reusability , and maintainability.

Ex.,

Class Calculator:

Def add(a,b):

Return a+b

Def add(a,b,c):

Return a+b+c

Def add(a,b,c,d):

Return a+b+c+d

Class calculator:

Def add(a,b,c=0,d=0):

Return a+b+c+d

Calc=Calculator()

Print(Calc.add(2,3))

Print(Calc.add(2,3,4))

Print(Calc.add(2,3,4,5))

**Que.2- Method Overriding : redefining a parent class method in the child class.**

**Ans.**

Method overriding occurs when a subclass provides a specific implementation for a method that is already defined in its parent class. this allows the subclass to modify or extend the behavior of the inherited method.

Ex.,

Class Animal:

Def make\_sound():

Print(“generic animal sound”)

Class Dog:

Def make\_sound():

Print(“Woof!”)

Class Cat(Animal):

Def make\_sound():

Print(“Meow!”)

dog=Dog()

cat=Cat()

dog.make\_sound()

cat.make\_sound()