**Problem 7:**

Can you overload a method with same return type? Explain your answer with proper logic.

**Solution:**

Yes, we can overload the method with same return type but with different number of arguments. Refer Example: 1 where we have two add methods with same return type **int** but one with 2 and another with 3 arguments.

There are two ways to overload the method in java

1)By changing number of arguments

2)By changing the data type

**1) By changing number of arguments - but same return type int :**

Example: 1

class Acad3{

static int sum(int a,int b){

return a+b;

}

static int sum(int a,int b,int c){

return a+b+c;

}

}

class Test3{

public static void main(String[] args){

System.out.println(Acad3.sum(10,10));

System.out.println(Acad3.sum(10,10,10));

}

}

**Output:**

20

30

**2)By changing the data type**

Example: 2

class Acad3{

static int sum(int a, int b){

return a+b;

}

static double sum(double a, double b){

return a+b;

}

}

class Test3{

public static void main(String[] args){

System.out.println(Acad3.sum(10,10));

System.out.println(Acad3.sum(10.5,10.3));

}

}

**output:**

20

20.8

* **In java, method overloading is not possible by changing the return type of the method only because of ambiguity.**

Problem Example:

class Acad3{

static int sum(int a,int b){

return a+b;

}

static double sum(int a,int b){

return a+b;

}

}

class Test3{

public static void main(String[] args){

System.out.println(Acad3.add(10,10)); //ambiguity

}

}

**Output:**

**Compile Time Error: method sum(int,int) is already defined in class Acad3.**