

Experiment 4

Q1) Demonstrate the method and constructor overloading in JAVA

Diagram

- i) Signature of method component and method overloading
- ii) Signature of different constructors and constructor overloading

Questions

- i) What is the signature for methods in Java programming?
- ii) What are the different access specifiers for methods?
- iii) How to invoke any class method in Java program?
- iv) What is method overloading?
- v) What are the ways to perform the method overloading in Java?
- vi) What is constructor?
- vii) What are the different types of constructors in Java programming?
- viii) How constructors are different from method in Java?
- ix) What are the rules to define the constructors?
- x) What is constructor overloading and

explain the constructor overloading using default and parameterised constructor.

- x) Can we give access-modifiers to constructor
- x) Can we make constructor as abstract, final, static → Compile time polymorphism

Method overloading in Java can be done in 3 ways by changing

- i) number of parameters
- ii) diff type of parameter
- iii) order of parameter

i) number of parameters

class Addition {

```
class Variable int result → Instance Variable
static int result; int add (int x, int y) {
    result = x + y;
    return result;
```

compile time polymorphism
decide hoga
which function
to invoke hence
compile time polymorphism

```
int add (int x, int y, int z) {
    result = x + y + z;
    return result;
```

ii) diff type of parameter

```

class Addition {
    int result;
    int add(int x, int y) {
        result = x + y;
        return result;
    }
    double add(double x, double y) {
        result = x + y;
        return result;
    }
}

```

iii) order of parameters

class Record

```

String name,
int rollno;
void seg(String s, int n) {
    sout(s + " " + n);
}
void seg(int n, String s) {
    sout(n + " " + s);
}

```

Addition a, = new Addition()

Object
reference
variable

This creates obj
of the class and
variable a, is then referenced
^ to this obj.

Constructor Overloading

Definition of Constructor:

It is invoked automatically when the object of the class is created. It has no return type and has the same name as of class name.

Types of Constructors:

- i) Default
- ii) Parameterized

class Record

```
String name; int roll-no;
Record()
```

```
{ name = "ABC";
  roll-no = 22308;
}
```

Record (String s, int x){

name = s;

roll-no = x;

}

public class Abhi {

public static void main (String [] args)

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Record r₁ = new Record();
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$\sigma_1.name;$

$\sigma_1.roll-no;$

Record $\sigma_2 = \text{new Record}$

("ABC", 22308);

$\sigma_2.name;$

$\sigma_2.roll-no;$

} }

Default value of string is
NULL

Try this

String name, int rollno;

Record (String name, int rollno)

{ }

name = name;

rollno = rollno;

} }

In the same package
class names should not
be same