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POLITEKNIK MALAYSIA
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PULAU PINANG

DFP30243
OBJECT ORIENTED PROGRAMMING

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REGISTRATION NO:	32DDT20F2029
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NAME OF TASK:	LAB ACTIVITY 5

LAB ACTIVITY 5:

Method and Constructor Overloading

Learning Outcomes

This Lab sheet encompasses 6 activities (Activity 5A until 5C).

By the end of this lab, students should be able to:

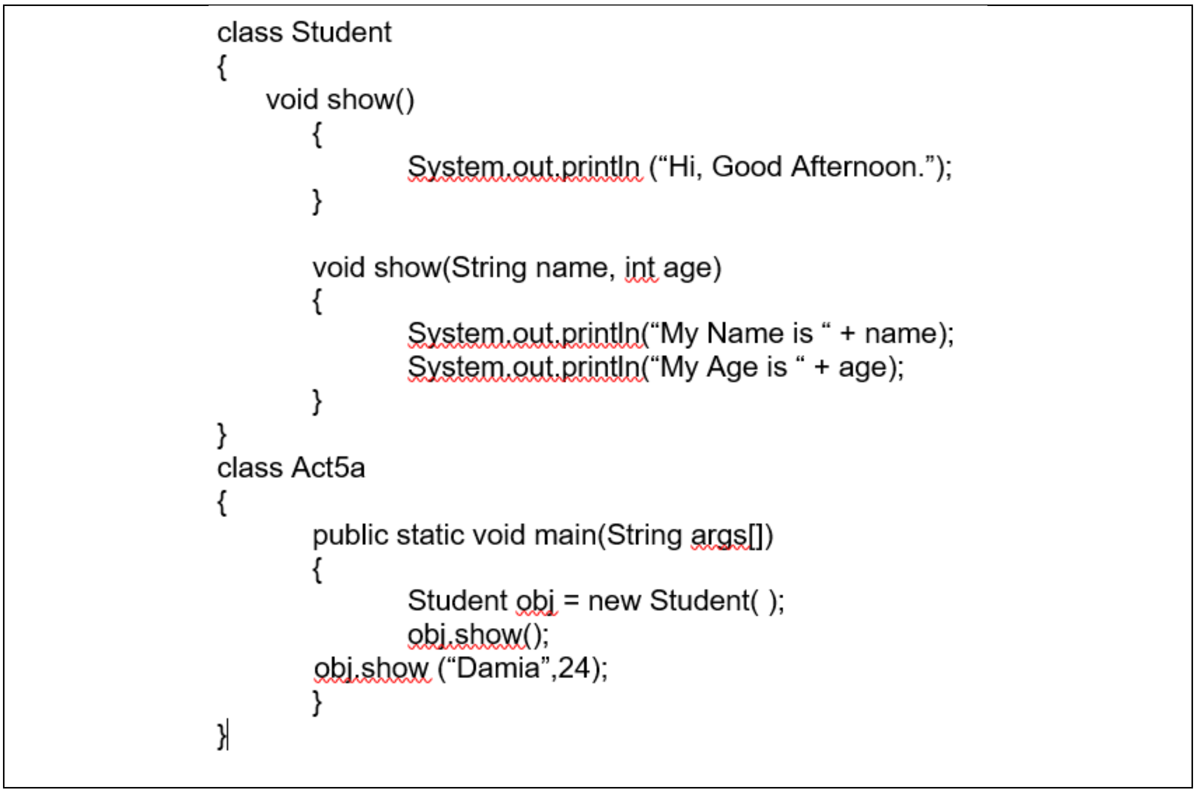
- **Perform constructor and constructor overloading in Java programs.**

Activity 5A

Activity Outcome: Understand and implement Method Overloading

Procedure:

Step 1: Type the programs given below

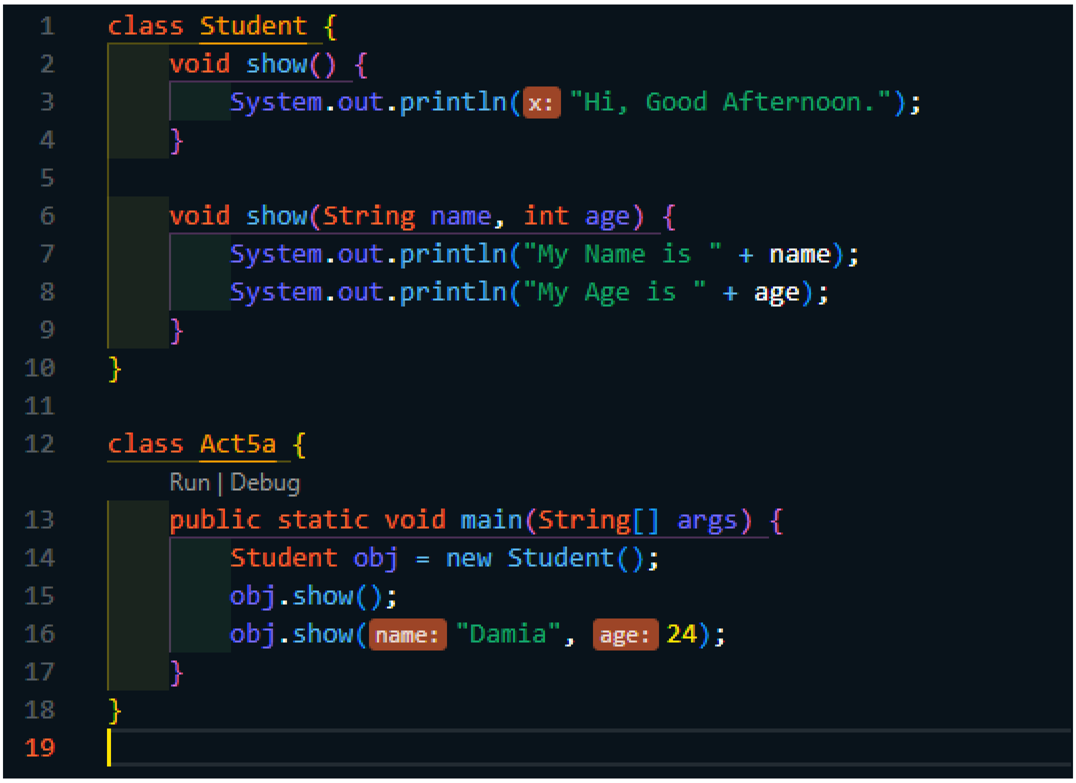


```
class Student
{
    void show()
        {
                System.out.println (“Hi, Good Afternoon.”);
        }

        void show(String name, int age)
        {
                System.out.println(“My Name is “ + name);
                System.out.println(“My Age is “ + age);
        }
}
class Act5a
{
        public static void main(String args[])
        {
                Student obj = new Student( );
                obj.show();
        obj.show (“Damia”,24);
        }
}
```

Step 2: Save the program as `Act5a.java`

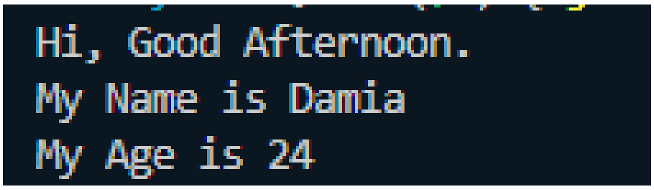
Step 3: Compile and run the program. Observe the output.

Code



```java
class Student {
    void show() {
        System.out.println(x: "Hi, Good Afternoon.");
    }

    void show(String name, int age) {
        System.out.println("My Name is " + name);
        System.out.println("My Age is " + age);
    }
}

class Act5a {
    Run | Debug
    public static void main(String[] args) {
        Student obj = new Student();
        obj.show();
        obj.show(name: "Damia", age: 24);
    }
}

```

Output



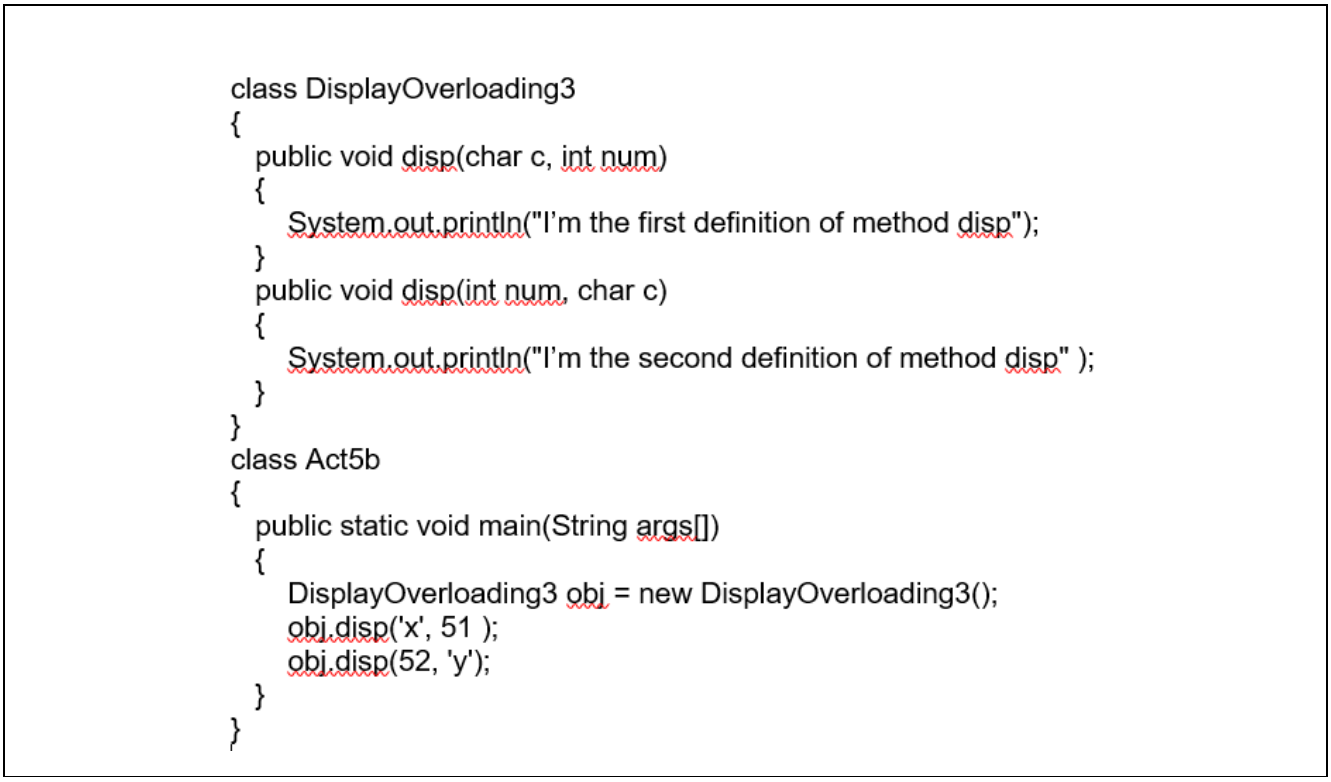
```
Hi, Good Afternoon.
My Name is Damia
My Age is 24
```

Activity 5B

Activity Outcome: Understand and create Method Overloading.

Procedure:

Step 1: Type the programs given below

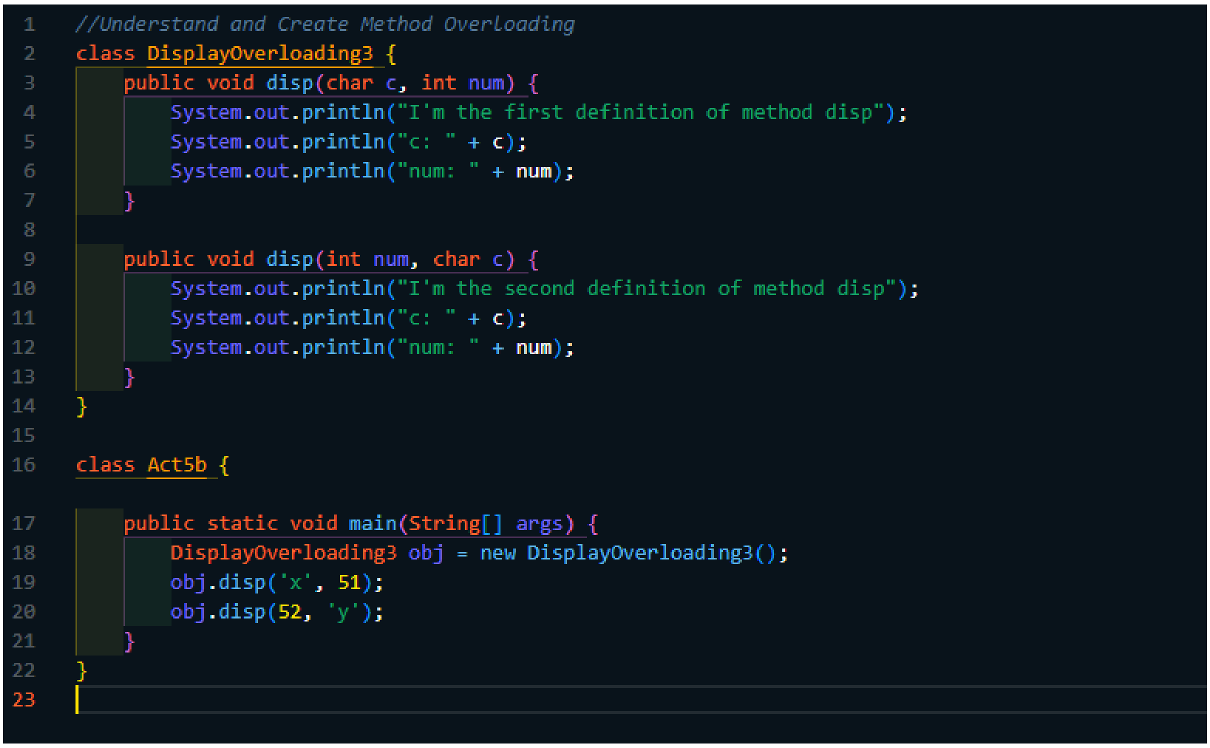


```
class DisplayOverloading3
{
  public void disp(char c, int num)
  {
    System.out.println("I'm the first definition of method disp");
  }
  public void disp(int num, char c)
  {
    System.out.println("I'm the second definition of method disp" );
  }
}
class Act5b
{
  public static void main(String args[])
  {
    DisplayOverloading3 obj = new DisplayOverloading3();
    obj.disp('x', 51 );
    obj.disp(52, 'y');
  }
}
```

Step 2: Save the program as `Act5b.java`

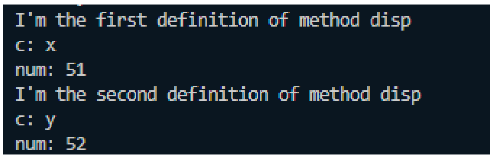
Step 3: Compile and run the program. Observe the output.

Code



```java
//Understand and Create Method Overloading
class DisplayOverloading3 {
    public void disp(char c, int num) {
        System.out.println("I'm the first definition of method disp");
        System.out.println("c:  " + c);
        System.out.println("num:  " + num);
    }

    public void disp(int num, char c) {
        System.out.println("I'm the second definition of method disp");
        System.out.println("c:  " + c);
        System.out.println("num:  " + num);
    }
}

class Act5b {
    public static void main(String[] args) {
        DisplayOverloading3 obj = new DisplayOverloading3();
        obj.disp('x', 51);
        obj.disp(52, 'y');
    }
}

```

Output



```
I'm the first definition of method disp
c: x
num: 51
I'm the second definition of method disp
c: y
num: 52
```

Activity 5C

Activity Outcome: Understand and create constructor.

Procedure:

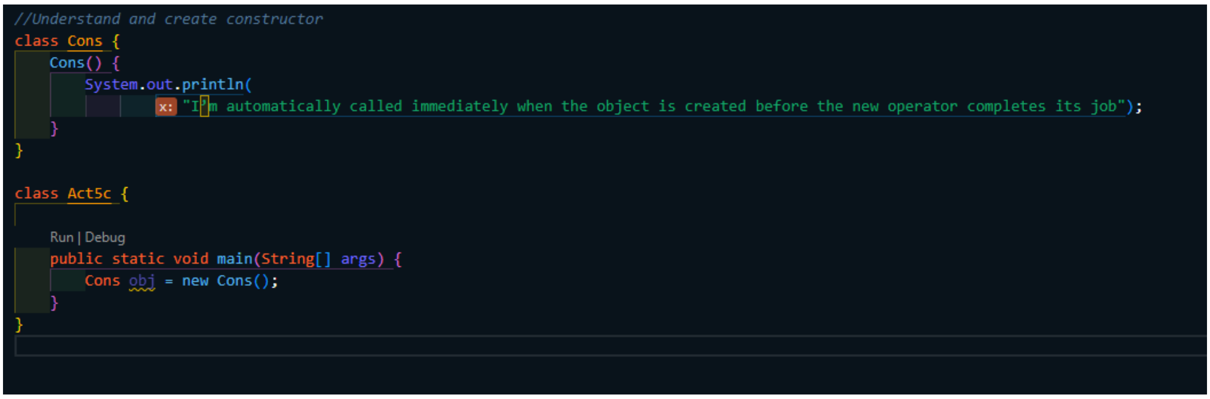
Step 1: Type the programs given below

```
class Cons

{

      Cons()
      {

            System.out.println ("I'm automatically called immediately when the

            object is created before the new operator completes its job");

      }

}


class Act5c

{

      public static void main(String args[])

      {

            Cons obj = new Cons();

      }

}
```

Step 2: Save the program as `Act5c.java`

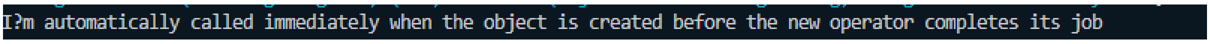
Step 3: Compile and run the program. Observe the output.

Code



```
//Understand and create constructor
class Cons {
    Cons() {
        System.out.println(
                x: "I’m automatically called immediately when the object is created before the new operator completes its job");
    }
}

class Act5c {

    Run | Debug
    public static void main(String[] args) {
        Cons obj = new Cons();
    }
}
```

Output



```
I?m automatically called immediately when the object is created before the new operator completes its job
```

Activity 5D

Activity Outcome: Understand and create constructor overloading.

Procedure:

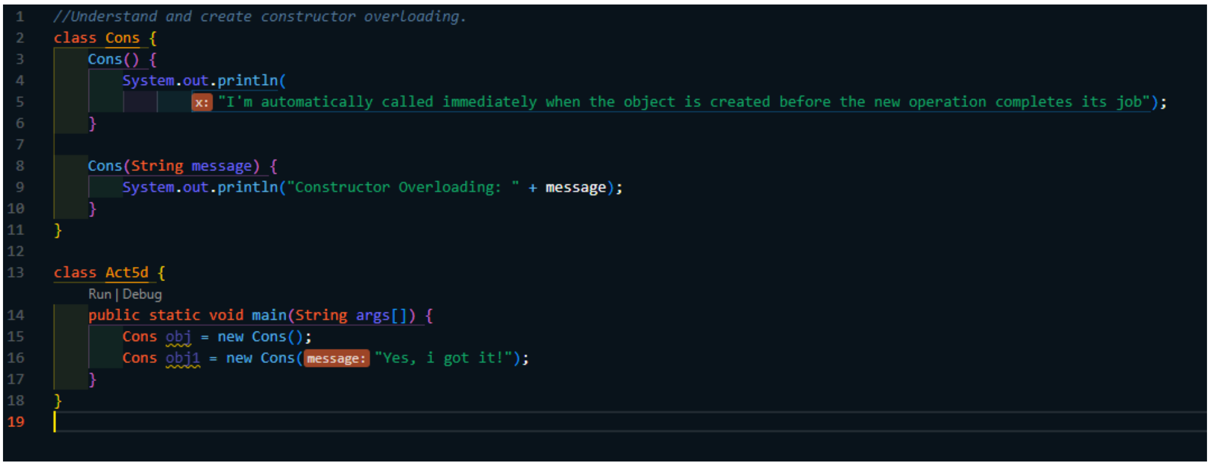
Step 1: Type the programs given below

```
class Cons

{

       Cons()
       {

              System.out.println (“I’m automatically called immediately when

              the object is created before the new operator completes its

              job”);

       }


       Cons(String message)

       {

              System.out.println(“Constructor Overloading” + message);

       }

}


class Act5d

{

       public static void main(String args[])

       {

              Cons obj = new Cons();

              Cons obj = new Cons(“Yes, I got it!”);

       }

}
```

Step 2: Save the program as `Act5d.java`

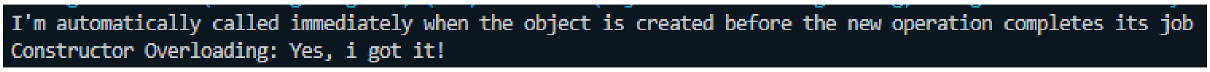
Step 3: Compile and run the program. Observe the output.

Code



```java
//Understand and create constructor overloading.
class Cons {
    Cons() {
        System.out.println(
                "I'm automatically called immediately when the object is created before the new operation completes its job");
    }

    Cons(String message) {
        System.out.println("Constructor Overloading: " + message);
    }
}

class Act5d {
    public static void main(String args[]) {
        Cons obj = new Cons();
        Cons obj1 = new Cons("Yes, i got it!");
    }
}
```

Output



```
I'm automatically called immediately when the object is created before the new operation completes its job
Constructor Overloading: Yes, i got it!
```