

7) Learn and Understand Scope of Variable, Demonstrate it with an suitable example.

```
class Hospital {  
    // Instance variable  
    string patientName;  
    int patientId;  
    // Static (Class) variable  
    static string DocName = "Dr. Murthy";  
    void SetHospital (string pn, int pId);
```

```
{  
    patientName = pn;  
    patientId = pId;
```

```
    }  
    string getPatientName ()  
    {  
        return patientName;  
    }
```

```
    int getPatientId ()  
    {  
        return patientId;  
    }
```

```
public class Demo_Scope_of_Variables {  
    public static void main (string args [])
```

String hospital name = "Apollo Hospital";

Hospital patient 1 = new Hospital();
patient & hospital ("Frisk Joseph", "101");
System.out.println ("The patient" + patient 1.
get patient name() + "with the ID" + patient 1.
get patient id() + "is treated by" + patient 1.
get doctor name() + "at" + hospital name);
System.out.println ("Patient has been
discharged by Dr. " + patient 1.get doctor name());

}

day = small, tuesday
breakfast = breakfast;

OutPut

The patient Frisk Joseph, with the ID 101
treated by Dr. Hunting at Apollo
Hospital today
Patient has been discharged by Dr. Hunting

Additional features and styling
(extra credit) main function should display

Learn and understand scope of variables ,Demonstrate it with an suitable example.

```
class Hospital{  
    //Instance variable  
    String patientName;  
    int patientid;  
    //Static(class) variable  
    static String DocName="Dr. Murthy";  
    void sethospital(String pN,int pId)  
    {  
        patientName=pN;  
        patientid=pId;  
    }  
    String getpatientName()  
    {  
        return patientName;  
    }  
    int getpatientid()  
    {  
        return patientid;  
    }  
}
```

```
Public class DemoScopeofVariables{  
    public static void main(String args[])  
    {  
        //Local variable  
        String hospitalName="Apollo Hosapital";  
  
        Hospital patient1=new Hospital();  
        patient1.sethospital("Anita Joseph",101);  
        System.out.println("The patient " +patient1.getpatientName()+" With the Id "  
+patient1.getpatientid()+" is treated by " +patient1.DocName+" at " +hospitalName);  
    }  
}
```

Output

The patient Anita Joseph With the Id 101 is treated by Dr. Murthy at Apollo Hosapital

→ Learn and Understand default value of instance variables demonstrate it with a mutable

Example -
class values
{
 public static void main(String args)
 {
 Byte byte1 = new Byte("123");
 int integer1 = new Integer("123");
 long long1 = new Long("123");
 short short1 = new Short("123");
 boolean boolean1 = new Boolean("123");
 String string1 = new String("123");
 float float1 = new Float("123");
 char ch1 = new Character('1');
 double double1 = new Double("123");
 void getValues()
 {
 System.out.println("The Default value of
 primitive datatype Byte : " + byte1);
 System.out.println("The Default value of
 primitive datatype Integer : " + integer1);
 System.out.println("The Default value of
 primitive datatype Long : " + long1);
 System.out.println("The Default value of
 primitive datatype Short : " + short1);
 }
 }
}

```
System.out.println("The Default value of  
primitive data type Boolean : " + Boolean);  
System.out.println("The Default value of  
String : " + String);  
System.out.println("The Default value of  
primitive data type float : " + Float);  
System.out.println("The Default value of  
primitive data type char : " + );  
System.out.println("The Default value of  
primitive data type double : " + Double);
```

```
y  
public class Default values  
{  
    public static void main (String [] args)  
    {  
        values var = new values();  
        var.get values();  
    }  
}
```

Output - The Default value of primitive datatype Byte - 0
The Default value of primitive datatype Integer - 0
The Default value of primitive datatype Long - 0
The Default value of primitive datatype Float - 0
The Default value of primitive datatype Double - 0.0
The Default value of primitive datatype char :
The Default value of primitive datatype double : 0.0
The Default value of primitive datatype Boolean:
False
The Default value of String : null.

Learn and understand default values of instance variables, demonstrate it with a suitable example.

```
class values
{
    byte Byte;
    int integer;
    long Long;
    short Short;
    boolean Boolean;
    String string;
    float Float;
    char ch;
    double Double;
    void getvalues()
    {
        System.out.println("The Default value of primitive datatype Byte : "+ Byte);
        System.out.println("The Default value of primitive datatype Integer : "+ integer);
        System.out.println("The Default value of primitive datatype long : "+ Long);
        System.out.println("The Default value of primitive datatype Short : "+ Short);
        System.out.println("The Default value of primitive datatype Boolean : "+
Boolean);
        System.out.println("The Default value of string : "+ string);
        System.out.println("The Default value of primitive datatype Float : "+ Float);
        System.out.println("The Default value of primitive datatype char : "+ ch);
        System.out.println("The Default value of primitive datatype double : "+ Double);
    }
}
public class defaultvalues
{
    public static void main(String[] args)
    {
        values var=new values();
        var.getvalues();
    }
}
```

Output:

The Default value of primitive datatypeByte : 0
The Default value of primitive datatypeInteger : 0
The Default value of primitive datatypeLong : 0
The Default value of primitive datatypeShort : 0
The Default value of primitive datatypeBoolean : false
The Default value of string : null
The Default value of primitive datatypeFloat : 0.0
The Default value of primitive datatypeChar :
The Default value of primitive datatypeDouble : 0.0

Q) Learn and Understand How to Instantiating and Demonstrate it with by Creating Student class.

class Student

{ string studName, dept;

int Rollno;

static string clg = "CPT";

int percentage;

void setStudent (string name, int rollno, string

dept, int per)

studName = name;

RollNo = rollno;

dept = dept;

percentage = per;

}

void getStudent()

{

System.out.println(studName + " " + RollNo +

" " + clg + " " + dept + " " + percentage);

}

}

class Stud

{ public static void main (String args [])

{

System.out.println(" Name \t Rollno \t

college \t Department \t percentage");

Student Stud1 = new Student();

Student Stud2 = new Student();

stud 1. get student ("Sindhu", 155, "CS", 88);
stud 2. get student ("Madhu", 100, "EC", 90);

stud 1. get student ();

stud 2. get student ();

3

3

Output -

Sindhu 155 CPT CS 88

Madhu 100 CPT EC 90

Name RollNo collage Department Percentage

Sindhu 155 CPT CS 88

Madhu 100 CPT EC 90

Name RollNo collage Department Percentage

Sindhu 155 CPT CS 88

Madhu 100 CPT EC 90

Name RollNo collage Department Percentage

Sindhu 155 CPT CS 88

Madhu 100 CPT EC 90

Name RollNo collage Department Percentage

Sindhu 155 CPT CS 88

Madhu 100 CPT EC 90

Name RollNo collage Department Percentage

Sindhu 155 CPT CS 88

Madhu 100 CPT EC 90

Name RollNo collage Department Percentage

Sindhu 155 CPT CS 88

Madhu 100 CPT EC 90

Name RollNo collage Department Percentage

Sindhu 155 CPT CS 88

Madhu 100 CPT EC 90

Learn and Understand how to Instantiating and ,Demonstrate it with by creatingStudent Class.

```
class Student
{
    String StudName,dept;
    int Rollno;
    static String clg = "GPT";
    int percentage;
    void setStudent(String Name, int rollno, String dept, int per)
    {
        StudName = Name;
        Rollno = rollno;
        dept = dept;
        percentage = per;
    }
    void getStudent()
    {
        System.out.println(StudName + "\t" + Rollno + "\t" + clg + "\t" + dept + "\t" + percentage)
    }
}
class Stud
{
    public static void main(String args[])
    {
        System.out.println("Name\tRollno\tCollege\tDepartment\t"
        Percentage");
        Student Stud1 = new Student();
        Student Stud2 = new Student();
        Stud1.setStudent("Sindhu", 155, "CS", 88);
        Stud2.setStudent("Madhu", 100, "EC", 90);
        Stud1.getStudent();
        Stud2.getStudent();
    }
}
```

Output:

Name	Rollno	College	Department	Percentage
Sindhu	155	GPT	CS	88
Madhu	100	GPT	EC	90

10) Learn and Understand what are Command Line argument write a program to implement the same.

```
public class CommandLine {
    public static void main (String [] args) {
        if (args.length > 0) {
            System.out.println ("Java Buzzwords....");
            for (byte i = 0; i < args.length; i++) {
                System.out.println ((i + 1) + ". " + args[i]);
            }
        } else {
            System.out.println ("No Command Line Argument Found");
        }
    }
}
```

Output

Java Buzzwords....

1. Compiled & Interpreted
2. Dynamic & Extensible
3. Robust & Secure.

Learn and understand what are command line arguments? Write a program to implement the same.

```
public class commandLine {  
    public static void main(String[] args) {  
        if (args.length>0) {  
            System.out.println("Java Buzzwords....");  
            for(byte i=0;i<args.length;i++) {  
                System.out.println((i+1)+". "+ args[i]);  
            }  
        }  
        else {  
            System.out.println("NO COMMANDLINE ARGUMENT FOUND  
");  
        }  
    }  
}
```

OUTPUT

Java Buzzwords....

1. Compiled&Interpreted
 2. Dynamic&Extensible
 3. Robust&Secure
 4. PlatformIndependent
 5. Highperformance
-

ii) Learn & Understand How to create a class Instantiate it object map to implement employee class display basic detail Employee

class Employee

{

```
    string empName;  
    int empNo;  
    float salary;  
    string empDesig;  
    byte expYrs;
```

void setEmployee(string Name, int no,
float sal, string des, byte ex)

{

```
    EmpName = Name;  
    empNo = No;  
    Salary = sal;  
    empDesig = des;  
    expYrs = ex;
```

}

void getEmployee()

{

```
System.out.println(empName + "\t" +
empNo + "\t" + empDesign + "\t" + salary + "\t" +
expYrs + "\n");
```

{

{

```
class demoEmployee
```

{

```
public static void main (String args[])
```

{

```
Employee rahul = new Employee();
```

```
rahul.setEmployee("Rahul", 128966,
99999.0f, "PM" (byte) 20);
```

```
EmpDesig = des;
```

```
ExpYrs = ex;
```

{

```
void getEmployee()
```

{

```
System.out.println (empName + "\t" +
empNo + "\t" + empDesign + "\t" + salary +
"\t" + expYrs + "\t");
```

{

{

```
class demoEmployee  
{  
    public static void main (String args[])  
    {  
        Employee mrahul = new Employee ();  
        mrahul . set Employee ("mrahul", 128966,  
        9999.0F, "PM", (byte) 20);  
        System.out.println ("Emp Name Is  
        Emp No At Emp Design \t Salary \t  
        Express \n");  
        mrahul . get Employee ();  
        Employee rakesh = new Employee ();  
        rakesh . empName = "Rakesh Batra";  
        rakesh . empNo = 786H12;  
        rakesh . salary = 994536.0F;  
        rakesh . empDesign = "Project Leader";  
        rakesh . expYrs = 10;  
        rakesh . get Employee ();  
    }  
}
```

1) Learn and understand how to create a class, initializing its objects. WAP to implement employee class to display basic details of the employees.

```
class Employee
{
    String empName;
    int empNo;
    float salary;
    String designation;
```

Output →

EmpName	Emp no	Salary	Exp Yrs
Rahul	128966	99999.0	20
Rakesh	128960	98765.4	10.

You are assigned a task of issuing 10% bonus for all female employees of an organization on account of International Women's Day. Design and implement a java program for the same

```
class Employee
{
    String cmpName;
    int empNo;
    byte expYrs;
    String gender;
    double basicSalary;
    double bonus;
    double netSalary;
    void setEmployee(String Name,int no,String sex,byte ex,double basicsalary)
    {
        empName=Name;
        empNo=no;
        gender=sex;
        expYrs=ex;
        basicSalary=basicsalary;
    }
    void getEmployeeDetails()
    {
        if(gender == "female")
        {
            bonus=basicSalary*10/100;
            netSalary=basicSalary+bonus;
        }
        else
            netSalary=basicSalary;
        System.out.println(cmpName+"\t"+empNo+"\t"+gender+"\t"+expYrs+"\t"
        +basicSalary+"\t"+bonus+"\t"+netSalary+"\n");
    }
}
```

```
public class EmployeeDetails
{
    public static void main (String args[])
    {
        Employee Rahul=new Employee();
        Rahul.setEmployee("Rashmi",128966,"female",(byte)20,100000.0d);
        System.out.println("empName\ttempNo\tgender\texpYrs\tbasicSalary\tbonus
                           \tnetSalary\n");
        Rahul.getEmployeeDetails();
        Employee Rakesh=new Employee();
        Rakesh.setEmployee("Rakesh",7851161,"male",(byte)25,200000.0d);
        Rakesh.getEmployeeDetails();
        Employee madhu=new Employee();
        madhu.setEmployee("madhu",7851161,"female",(byte)25,150000.0d);
        madhu.getEmployeeDetails();
    }
}
```

Output:

empName	empNo	gender	expYrs	basicSalary	bonus	netSalary
Rashmi	128966	female	20	100000.0	10000.0	110000.0
Rakesh	7851161	male	25	200000.0	0.0	200000.0
madhu	7851161	female	25	150000.0	15000.0	165000.0

12) You are assigned a task of issuing 10% bonus for all female employee of an organization on account of International women's Day. Design and implement a java program for the same.

```
class Employee {  
    String empName;  
    int empNo;  
    byte expYrs;  
    String gender;  
    double basicSalary;  
    double bonus;  
    double netSalary;  
    void setEmployee(String Name, int no, String Sex,  
                      byte ex, double basicSalary)  
    {  
        empName = Name;  
        empNo = no;  
        gender = Sex;  
        ExpYrs = ex;  
        basicSalary = basicSalary;  
    }  
    void getEmployeeDetails()  
    {  
        if (gender == "female")  
            bonus = basicSalary * 10 / 100;  
    }  
}
```

```
netSalary = basicSalary + bonus;  
}  
else  
netSalary = basicSalary;  
System.out.println(empName + " " + empNo + " "  
+ gender + " " + expYrs + " " + basicSalary +  
" " + bonus + " " + netSalary + "\n");  
}  
}  
}  
public class EmployeeDetails  
{  
public static void main (String args[])  
{  
Employee Rahul = new Employee();  
Rahul.setEmployee ("Rashmi", 128966,  
"Female", (byte) 20, 1000000.0f);  
System.out.println ("EmpName \t emp.No \t  
gender \t expYrs \t basic salary \t bonus  
\t net salary \n");  
Rahul.getEmployeeDetails ();  
Employee Rakesh = new Employee ();  
Rakesh.setEmployee ("Rakesh", 7851161,  
"male", (byte) 25, 2000000.0f);  
Rakesh.getEmployeeDetails ();  
Employee madhu = new Employee();
```

Madhu TATA TELCO TATASoft 100000.0 15000.0 -----

madhu.set Employee ("madhu", 7851161,

"Female", (byte) 25, 1500000.0d);

madhu.get Employee Details();

3

3

Output

EmpName	EmpNo	gender	ExpYear	basic	Salary	net Salary
					bonus	
Rashmi	128966	female	20		100000.0	100000.0
Rakesh	7851161	male	25		2000000.00.0	200000
Madhu	7851161	female	25		1500000.0	165000.0

Madhu	7851161	female	25	150000.0	15000.0	165000.0
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Untitled.java demoEmployee.java DemoEmployee.java Student.java demoEmployee.java

```
15         empDesig = des;
16         expYrs = ex;
17     }
18     void getEmployee()
19     {
20         System.out.println(empName+"\t"+empNo+"\t"+empDesig+"\t"+salary+"\t"+expYrs+"\n");
21     }
22 }
23 class demoEmployee
24 {
25     public static void main(String args[])
26     {
27         Employee rahul = new Employee();
28         /* Accessing instance variable using set Method */
29         rahul.setEmployee("Rahul",128966,99999.0f,"PM",(byte)20);
30         System.out.println("empName\tempNo\tempDesig\tsalary\texpYrs\n");
31         rahul.getEmployee();
32
33         /* Accessing instance variable using dot operator */
34         Employee rakesh = new Employee();
35         rakesh.empName = "Rakesh Batra";
36         rakesh.empNo = 785412;
37         rakesh.salary = 894576.0f;
38         rakesh.empDesig = "Project Lead";
39         rakesh.expYrs = (byte)10;
40         rakesh.getEmployee();
41
42     }
43 }
```

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File Edit Search View Encoding Language Settings Tools Macro Run Debug Window 1  
New Open Recent File Project Properties Task List Recent Files Help  
F:\Java Sample Prgms\Even_2023\ demoEmployee.java demoEmployee.java  
1 class Employee  
2 {  
3     /* These are instance variables*/  
4     String empName;  
5     int empNo;  
6     float salary;  
7     String empDesig;  
8     byte expYrs;  
9  
10    void setEmployee(String Name, int no, float sal, String des, byte ex)  
11    {  
12        empName = Name;  
13        empNo = no;  
14        salary = sal;  
15        empDesig = des;  
16        expYrs = ex;  
17    }  
18    void getEmployee()  
19    {  
20        System.out.println(empName+"\t"+empNo+"\t"+empDesig+"\t"+salary+"\t"+expYrs+"\n");  
21    }  
22}  
23 class demoEmployee  
24 {  
25     public static void main(String args[])  
26     {  
27         Employee rahul = new Employee();  
28         /* Accessing instance variable using set Method */  
29         rahul.setEmployee("Rahul", 128966, 99999.0f, "PM", (byte)20);
```

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```
c:\java>java DemoEmployee
empName  empNo      salary          empDesig        expYrs
Rahul    128966  99999.0  PM          20
Rakesh   128969  98765.4  Project lead  10
```