3. Problem Statement

1. Write a program in Java to show the use of super and this keyword with a constructor, methods, variables.

2. Create a class Student which has some private data like name, phone number, roll number, class, use getter and setters to access this private data.

Solution

```
import java.util.Scanner;
class Employee
{
String name;
int age;
//Constructor same name as of class
Employee()
{
Scanner sc=new Scanner(System.in);
System.out.println("Enter the name ");
name=sc.next();
System.out.println("Enter age ");
age=sc.nextInt();
}
//function overloading
void input(String name, int age)// now the names of the parameters and data member names are same
{
//using this keyword to show that which name belongs to where
this.name=name;
```

```
this.age=age;
}
void output()
{
System.out.println("Name   :-" + name);
System.out.println("Age  :-" + age);
}
}


//main class
class  XYZ
{
public static void main(String a[])
{
//object reference for employee class
Employee e1=new Employee();
e1.output();
//passing parameter
e1.input("Seema",12);
e1.output();
}
}
```

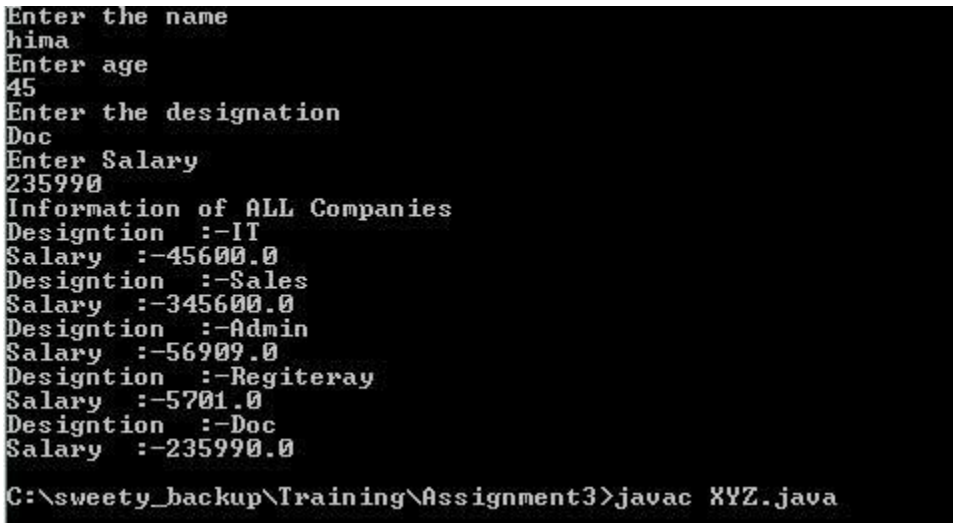
```
C:\sweety_backup\Training\Assignment3>javac ABC.java

C:\sweety_backup\Training\Assignment3>java ABC
Enter the name
Sweety
Enter age
29
Designtion  :-HR
Salary  :-1009100.2046
Enter the name
```

```
import java.util.Scanner;
//company extends all the properties of class employee
class Company extends Employee
{
String  designation;
double salary;
//constructor
Company()
{
super();//this will call the constructor of parent class
designation="HR";
salary=1009100.2046;
}
void input()
{
Scanner sc=new Scanner(System.in);
System.out.println("Enter the designation ");
designation=sc.next();
System.out.println("Enter Salary ");
salary=sc.nextDouble();
}
void output()
{
System.out.println("Designtion  :-" + designation);
System.out.println("Salary  :-" + salary);
}
}
//main class
class  ABC
{
```

```
public static void main(String a[])
{
Company f1=new Company();
f1.output();
Company Comp[]=new Company[5];
for( int i=0;i<5;i++)
{
Comp[i]=new Company();
Comp[i].input();
}
System.out.println("Information of ALL Companies");
for( int i=0;i<5;i++)
{
Comp[i].output();
}
}
}
```

Result



2. Create a class Student which has some private data like name, phone number, roll number, class, use getter and setters to access this private data.

Solution

```
import java.util.Scanner;
class Student
{
//private datatype initializing
 private String name;
 private long phone;
 private int roll_no;
 private int class1;


//Constructor
Student()
{
Scanner st=new Scanner(System.in);
System.out.println("Enter the name of student");
name=st.next();
System.out.println("Enter phone number of student ");
phone=st.nextLong();
System.out.println("Enter Roll number of student ");
roll_no=st.nextInt();
System.out.println("Enter Class of student ");
class1=st.nextInt();
}
//functions-- setter
```

```
void input(String name, long phone, int roll_no, int class1)
{
   this.name = name;
   this.phone = phone;
   this.roll_no = roll_no;
   this.class1 = class1;
}
// Function--getter
void output()
{
System.out.println("Name   :-" + name);
System.out.println("number  :-" + phone);
System.out.println("roll_no   :-" + roll_no);
System.out.println("class1   :-" + class1);
}
}
class MainStudent
{
public static void main(String a[])
{
Student s1=new Student();
s1.output();
}
}
```

Screen Shot of the output