

Experiment: 1

Aim: Write a Java Program to implement all types of Inheritance.

Software: VS Code

Code:-

```
// Write a Java Program to implement all types of Inheritance.

import java.util.*;

class Parent_Class
{
    int num1;
    int num2;

    public void Add(int num1,int num2)
    {
        this.num1 = num1 ;
        this.num2 = num2 ;

        System.out.println("This Is A Method Of Patent Class");
        System.out.println("The Addition Of " + this.num1 + " and " + this.num2 +
" Is " + (this.num1 + this.num2));
    }
}

class Child_Class_1 extends Parent_Class
{
    int num3;

    public void Add(int num1,int num2,int num3)
    {
        this.num1 = num1;
        this.num2 = num2 ;
        this.num3 = num3 ;

        System.out.println("This Is A Method Of Child Class-1");
    }
}
```

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```
        System.out.println("The Addition Of " + this.num1 + " , " + this.num2 +  
"and " + this.num3 + " Is " + (this.num1 + this.num2 + this.num3));  
    }  
}  
  
class Child_Class_2 extends Parent_Class  
{  
    int num4;  
  
    public void Add(int num1,int num2,int num4)  
    {  
        this.num1 = num1 ;  
        this.num2 = num2 ;  
        this.num4 = num4 ;  
  
        System.out.println("This Is A Method Of Child Class-2");  
        System.out.println("The Addition Of " + this.num1 + " , " + this.num2 +  
"and " + this.num4 + " Is " + (this.num1 + this.num2 + this.num4));  
    }  
}  
  
class Grand_Child extends Child_Class_1  
{  
    int num5;  
  
    public void Add (int num1 , int num2 , int num3 , int num5)  
    {  
        System.out.println("This Is A Method Of Grand Child Class:-");  
        System.out.println("The Addition Of " + this.num1 + " , " + this.num2 +  
"and " + this.num3 + " , "+ this.num5 + "" + " Is " + (this.num1 + this.num2 +  
this.num3 + this.num5));  
    }  
}  
  
public class Programm_1  
{  
    public static void main(String[] args)
```



```
{  
    Scanner sc = new Scanner(System.in) ;  
  
    Parent_Class P = new Parent_Class();  
    Child_Class_1 C1 = new Child_Class_1();  
    Child_Class_2 C2 = new Child_Class_2() ;  
    Grand_Child G = new Grand_Child();  
  
    System.out.print("Enter The Number-1:-");  
    P.num1 = sc.nextInt();  
  
    System.out.print("Enter The Number-2:-");  
    P.num2 = sc.nextInt() ;  
  
    System.out.print("Enter The Number-3:-");  
    C1.num3 = sc.nextInt() ;  
    C1.num1 = P.num1 ;  
    C1.num2 = P.num2 ;  
  
    System.out.print("Enter The Number-4:-");  
    C2.num4 = sc.nextInt() ;  
    C2.num1 = P.num1 ;  
    C2.num2 = P.num2 ;  
  
    System.out.print("Enter The Number-5:-");  
    G.num5 = sc.nextInt() ;  
    G.num3 = C1.num3 ;  
    G.num1 = P.num1 ;  
    G.num2 = P.num2 ;  
  
    P.Add(P.num1, P.num2);  
    C1.Add(C1.num1, C1.num2, C1.num3);  
    C1.Add(C1.num1, C1.num2);  
    C2.Add(C2.num1, C2.num2, C2.num4);  
    C2.Add(C2.num1, C2.num2);  
    G.Add(G.num1, G.num2);  
    G.Add(G.num1, G.num2, G.num3);  
    G.Add(G.num1, G.num2, G.num3, G.num5);  
  
    sc.close();  
}
```



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```
}  
}
```

Output:

```
C:\Windows\System32\cmd.exe  
Microsoft Windows [Version 10.0.19045.2728]  
(c) Microsoft Corporation. All rights reserved.  
  
D:\Aryan\Semester - 2\Object Orianted Programming\Assigment\07-04-2023 Practicle> javac Programm_1.java  
  
D:\Aryan\Semester - 2\Object Orianted Programming\Assigment\07-04-2023 Practicle> java Programm_1  
Enter The Number-1:-1  
Enter The Number-2:-2  
Enter The Number-3:-3  
Enter The Number-4:-4  
Enter The Number-5:-5  
This Is A Method Of Patent Class  
The Addition Of 1 and 2 Is 3  
This Is A Method Of Child Class-1  
The Addition Of 1 , 2and 3 Is 6  
This Is A Method Of Patent Class  
The Addition Of 1 and 2 Is 3  
This Is A Method Of Child Class-2  
The Addition Of 1 , 2and 4 Is 7  
This Is A Method Of Patent Class  
The Addition Of 1 and 2 Is 3  
This Is A Method Of Patent Class  
The Addition Of 1 and 2 Is 3  
This Is A Method Of Child Class-1  
The Addition Of 1 , 2and 3 Is 6  
This Is A Method Of Grand Child Class:-  
The Addition Of 1 , 2and 3 , 5 Is 11  
  
D:\Aryan\Semester - 2\Object Orianted Programming\Assigment\07-04-2023 Practicle>_
```

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Experiment: 2

Aim: Write a Java Program to Implement Static method.

Software: VS Code

Code:

```
// Write a Java Program to Implement Static method.

import java.util.*;

class LCM
{
    public static int cal(int num1,int num2)
    {
        if(num2 == 0)
        {
            return num1 ;
        }

        else
        {
            return cal(num2,num1%num2) ;
        }
    }
}

public class Programm_2
{
    public static void main(String[] args)
    {
        Scanner sc = new Scanner(System.in) ;

        int num1 ,num2 ;

        System.out.print("Enter The First Number:-");
        num1 = sc.nextInt();

        System.out.print("Enter The Second Number:-");
```

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```
num2 = sc.nextInt() ;

int Add = (num1 * num2) / (LCM.cal(num1,num2) ) ;

System.out.println("The LCM Of " + num1 + " and " + num2 + " Is " + Add);

sc.close();
}
}
```

Output:

```
C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.19045.2728]
(c) Microsoft Corporation. All rights reserved.

D:\Aryan\Semester - 2\Object Orianted Programming\Assigment\07-04-2023 Practicle> javac Programm_2.java

D:\Aryan\Semester - 2\Object Orianted Programming\Assigment\07-04-2023 Practicle> java Programm_2
Enter The First Number:-4
Enter The Second Number:-8
The LCM Of 4 and 8 Is 8

D:\Aryan\Semester - 2\Object Orianted Programming\Assigment\07-04-2023 Practicle> _
```

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