2022-2026-CSE-AIML

#### Aim:

Write a Java program to illustrate the multilevel inheritance concept.

Create a class Student

- contains the data members id of int data type and name of string type
- write a method setData() to initialize the data members
- write a method displayData() which will display the given id and name

Create a class (Marks) which is derived from the class (Student

- contains the data members javaMarks, cMarks and cppMarks of float data type
- write a method setMarks() to initialize the data members
- write a method displayMarks() which will display the given data

Create another class (Result) which is derived from the class (Marks)

- · contains the data members total and avg of float data type
- write a method compute() to find total and average of the given marks
- write a method showResult() which will display the total and avg marks

Write a class MultilevelInheritanceDemo with the main() method which will receive five arguments as id, name, javaMarks, cMarks and cppMarks.

Create object only to the class Result to access the methods.

If the input is given as command line arguments to the main() as "99", "Lakshmi", "55.5", "78.5", "72" then the program should print the output as:

```
Id : 99
Name : Lakshmi
Java marks : 55.5
C marks : 78.5
Cpp marks : 72.0
Total : 206.0
Avg : 68.666664
```

Note: Please don't change the package name.

#### Source Code:

### q11264/MultilevelInheritanceDemo.java

```
package q11264;
class Student
{
   int id;
   String name;
   void setData(String args[])
   {
      id = Integer.valueOf(args[0]);
      name = args[1];
   }
   void displayData()
   {
      System.out.println("Id : "+id);
}
```

```
System.out.println("Name : "+name);
  }
}
class Marks extends Student
   float jm,cm,cppm;
   void setMarks(String args[])
   {
      super.setData(args);
      jm=Float.valueOf(args[2]);
      cm=Float.valueOf(args[3]);
      cppm=Float.valueOf(args[4]);
   }
   void displayMarks()
      super.displayData();
      System.out.println("Java marks : "+jm);
      System.out.println("C marks : "+cm);
      System.out.println("Cpp marks : "+cppm);
   }
}
class Result extends Marks
   float t,a;
   void compute(String args[])
      super.setMarks(args);
      t=jm+cm+cppm;
      a=t/3;
   }
   void showResult()
      super.displayMarks();
      System.out.println("Total : "+t);
      System.out.println("Avg : "+a);
   }
class MultilevelInheritanceDemo
   public static void main(String args[])
   {
      Result r = new Result();
      r.compute(args);
      r.showResult();
   }
}
```

## Execution Results - All test cases have succeeded!

# Test Case - 1 User Output Id : 99 Name : Geetha Java marks : 56.0

C marks : 75.5	
Cpp marks : 66.6	
Total : 198.1	
Avg : 66.03333	

Test Case - 2		
User Output		
Id : 199		
Name : Lakshmi		
Java marks : 55.5		
C marks : 78.5		
Cpp marks : 78.0		
Total : 212.0		
Avg : 70.666664		