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Aim:

Write a Java program to illustrate the single inheritance concept.

Create a class Marks

- contains the data members id of int data type, 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

Exp. Name: Write a Java program to implement Single Inheritance

Write a class SingleInheritanceDemo with main() method it receives four arguments as id, 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 **"101"**, **"45.50"**, **"67.75"**, **"72.25"** then the program should print the output as:

```
Id : 101
Java marks : 45.5
C marks : 67.75
Cpp marks : 72.25
Total : 185.5
Avg : 61.833332
```

Note: While computing the total marks, add the marks in the following order only **javaMarks**, **cMarks** and **cppMarks**

Source Code:

q11263/SingleInheritanceDemo.java

```
package q11263;
class Marks
   int id;
   float jm,cm,cppm;
   void setMarks(String args[])
   {
      id=Integer.valueOf(args[0]);
      jm=Float.valueOf(args[1]);
      cm=Float.valueOf(args[2]);
      cppm=Float.valueOf(args[3]);
   }
   void displayMarks()
      System.out.println("Id : "+id);
      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 SingleInheritanceDemo
   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 : 102

Java marks : 35.6

C marks : 45.0

Cpp marks : 65.5

Total : 146.1

Avg : 48.7
```

```
Test Case - 2

User Output

Id : 101

Java marks : 45.5

C marks : 67.75

Cpp marks : 72.25

Total : 185.5

Avg : 61.833332
```

```
Test Case - 3
User Output
Id : 103
```

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Java marks : 50.5 C marks : 46.8 Cpp marks : 52.65 Total : 149.95001 Avg : 49.983337