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

Write a class <u>SingleInheritanceDemo</u> 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