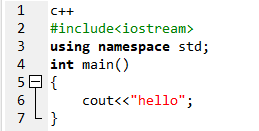
# **Software Engineering Assignment**

**MODULE: 4 SE – OOP Concept**

**WAP to print “Hello World” using C++**

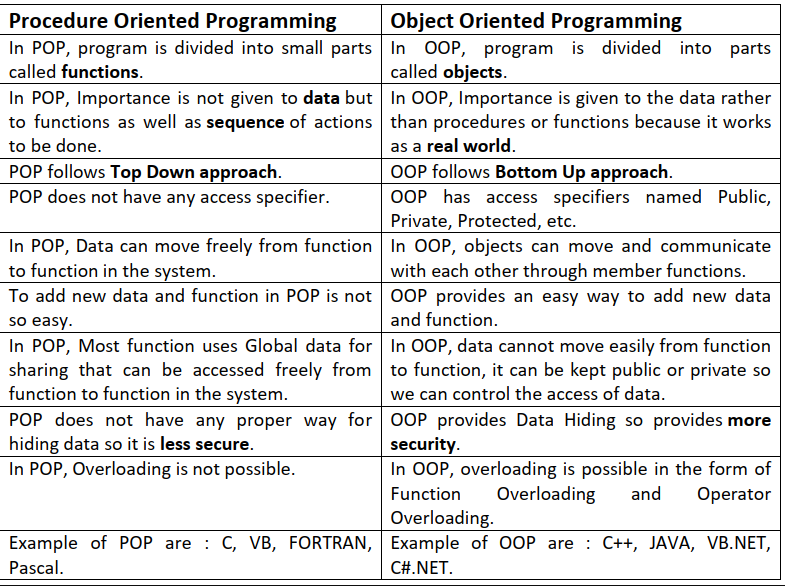
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**What is OOP? List OOP concepts**

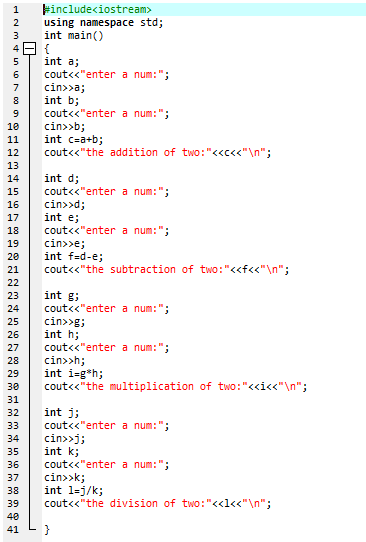
OOP stands for Object oriented programming. The 4 concepts of OOP are:

1. Encapsulation
2. Abstraction
3. Inheritance
4. Polymorphism

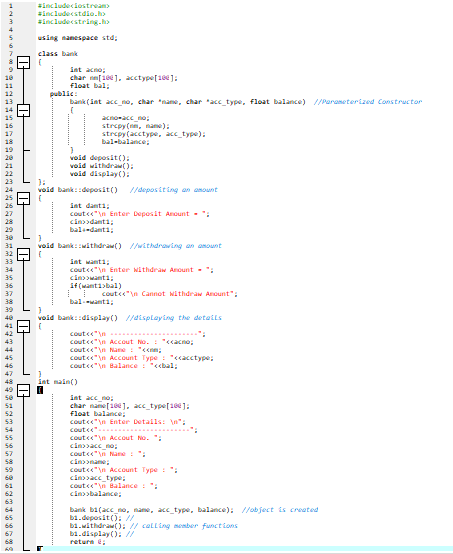
**What is the difference between OOP and POP?**

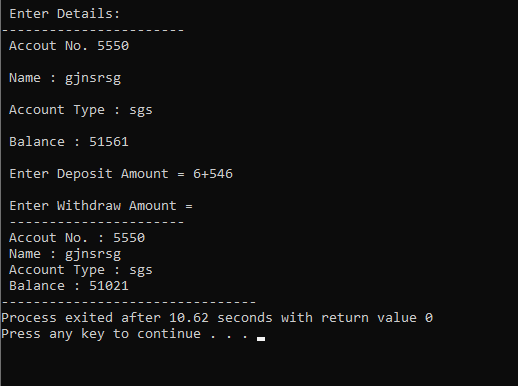


**WAP to create simple calculator using class**

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**Define a class to represent a bank account. Include the following members: 1. Data Member: -Name of the depositor -Account Number -Type of Account -Balance amount in the account 2. Member Functions -To assign values -To deposited an amount -To withdraw an amount after checking balance -To display name and balance**

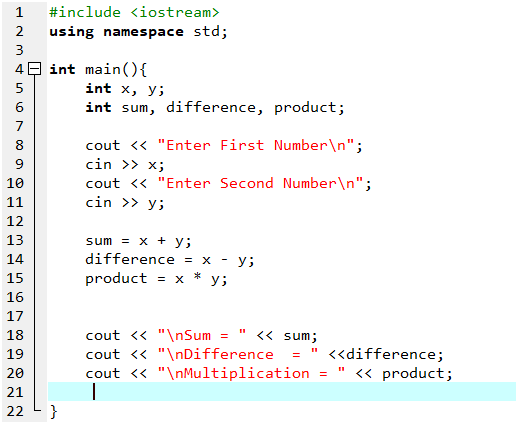
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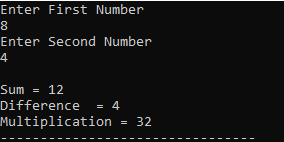
**OUTPUT:  
**

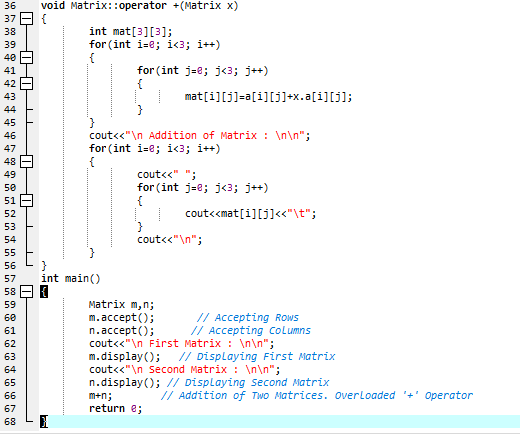
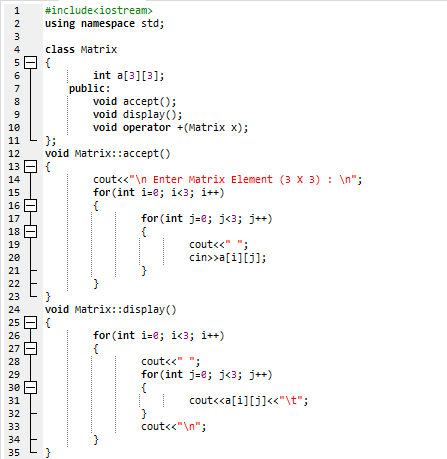
**Write a program of Addition, Subtraction, Division, Multiplication using constructor.**

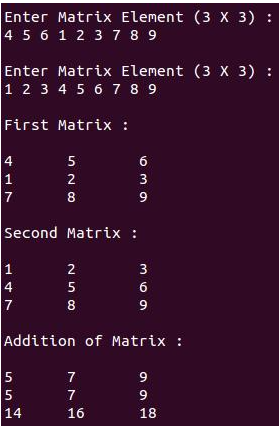
**OR**

**Write a program to Mathematic operation like Addition, Subtraction, Multiplication, Division Of two number using different parameters and Function Overloading**

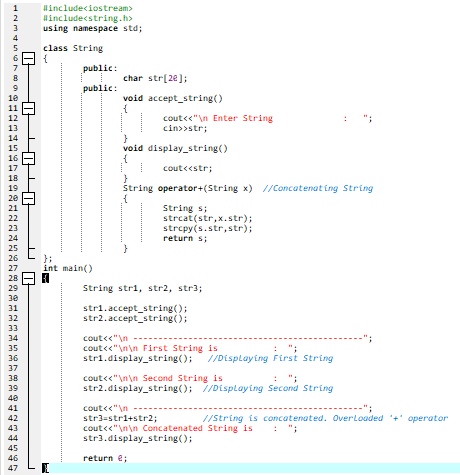
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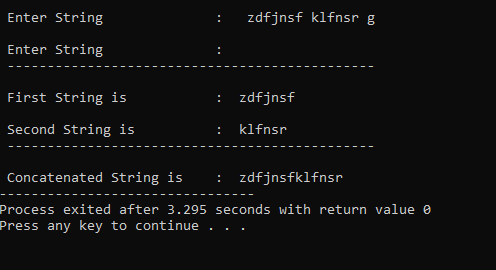
**OUTPUT:  
**

**Write a Program of Two 1D Matrix Addition using Operator Overloading**

**OUTPUT:  
**

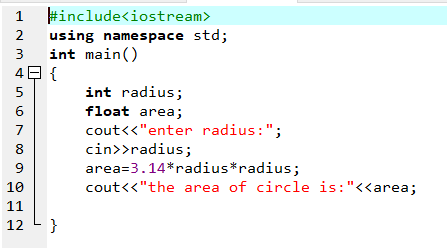
**Write a program to concatenate the two strings using Operator Overloading**

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**OUTPUT:  
**

**Write a program to calculate the area of circle, rectangle and triangle using Function Overloading**

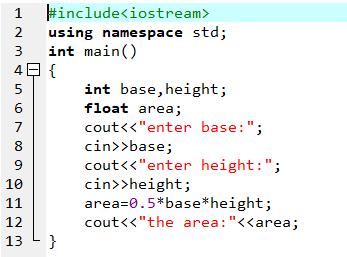
**Circle: Pi \* Area \*Area**

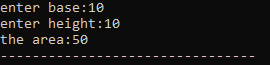
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**OUTPUT:**

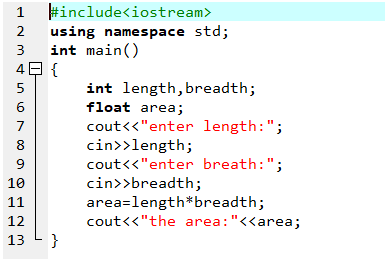
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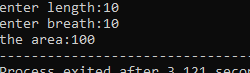
**Triangle: ½ \*Area\* breadth**

****

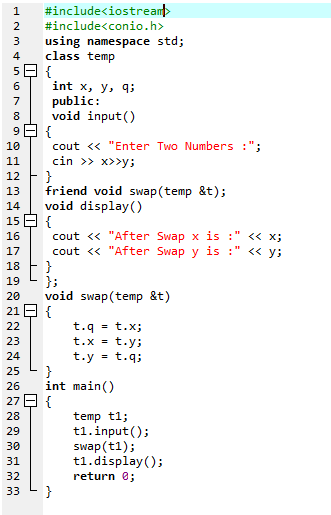
**OUTPUT:  
**

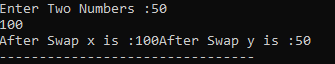
**Rectangle: Area \* breadth**

****

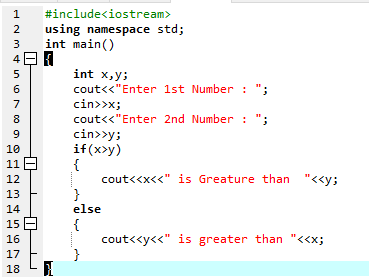
**OUTPUT:  
**

**Write a program to swap the two numbers using friend function without using third variable**

****

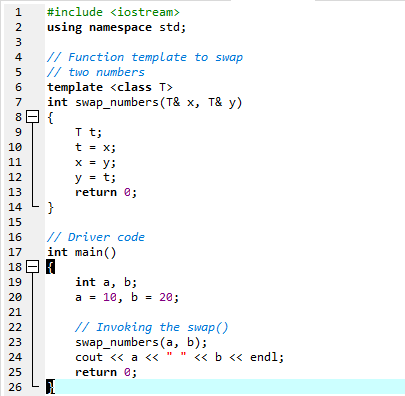
**Output:  
**

**Write a program to find the max number from given two numbers using friend function**

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**OUTPUT:  
**

**Write a program of to swap the two values using templates**

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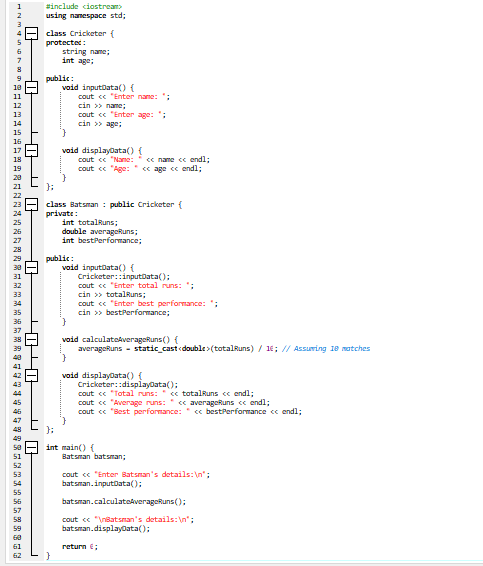
**OUTPUT:  
**

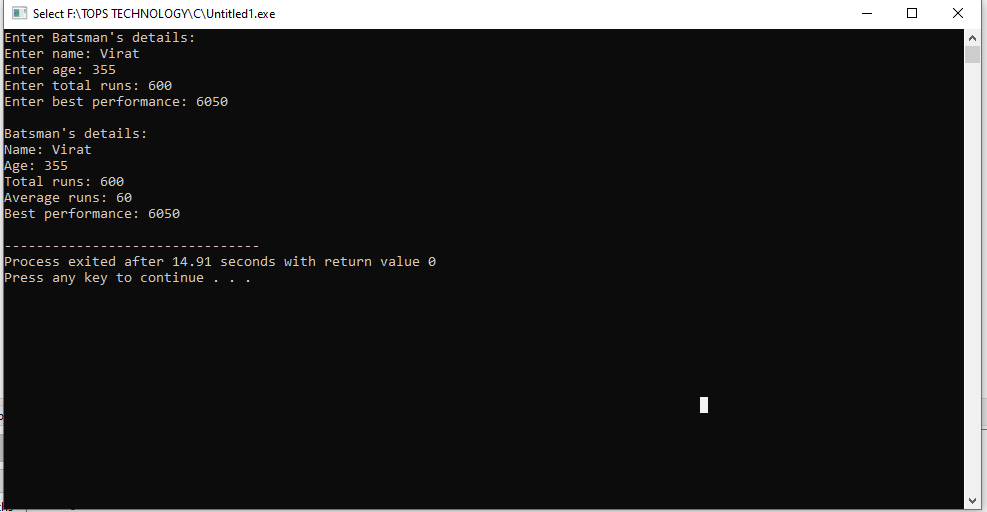
**Assume a class cricketer is declared. Declare a derived class batsman from**

**cricketer. Data member of batsman. Total runs, Average runs and best**

**performance. Member functions input data, calculate average runs, Display**

**data. (Single Inheritance)**

****

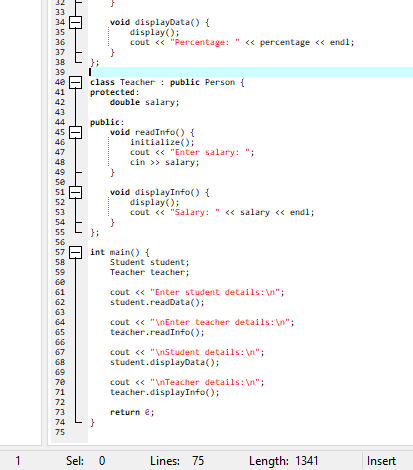
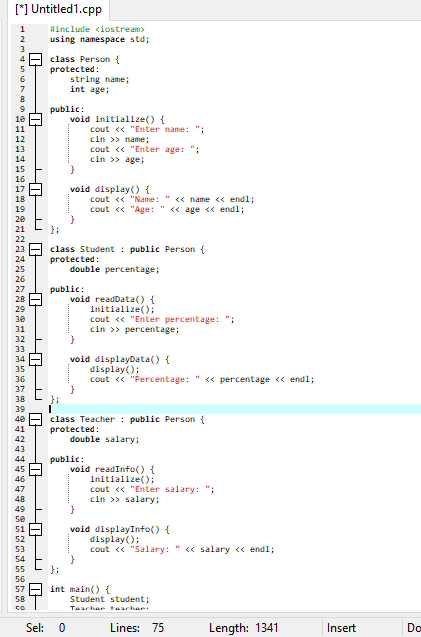
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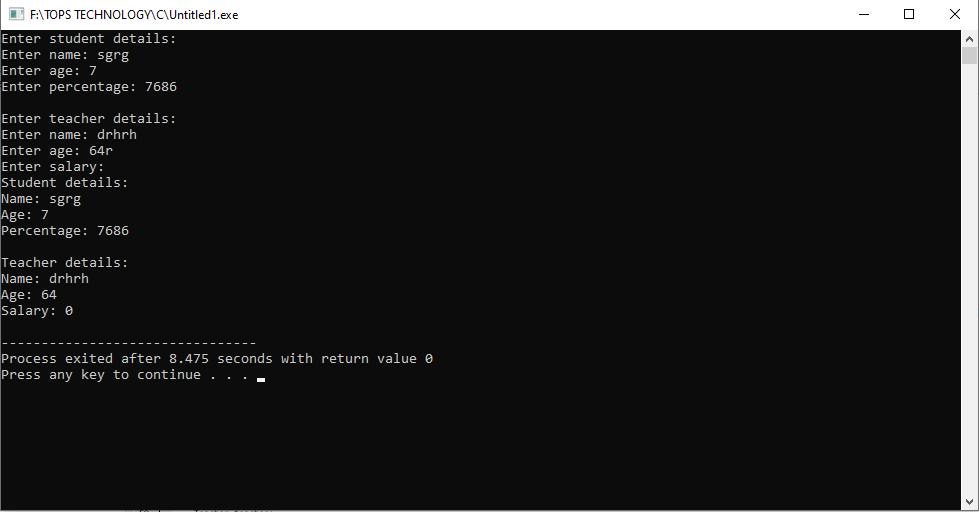
**Create a class person having members name and age. Derive a class student**

**having member percentage. Derive another class teacher having member**

**salary. Write necessary member function to initialize, read and write data.**

**Write also Main function (Multiple Inheritance)**

****

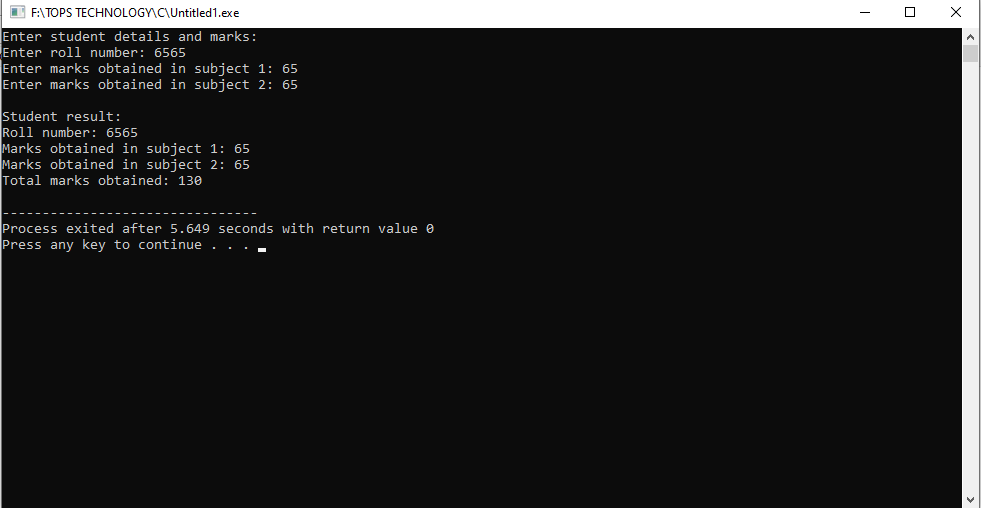
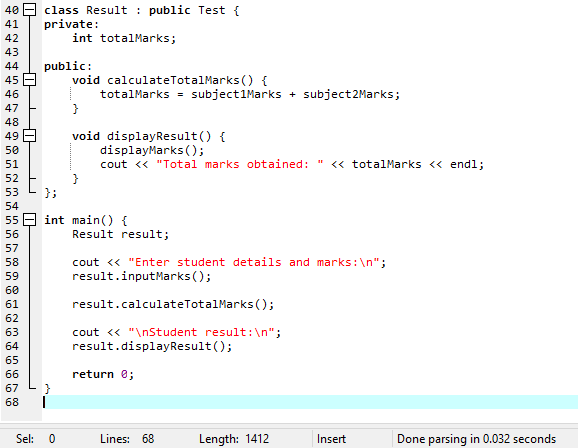
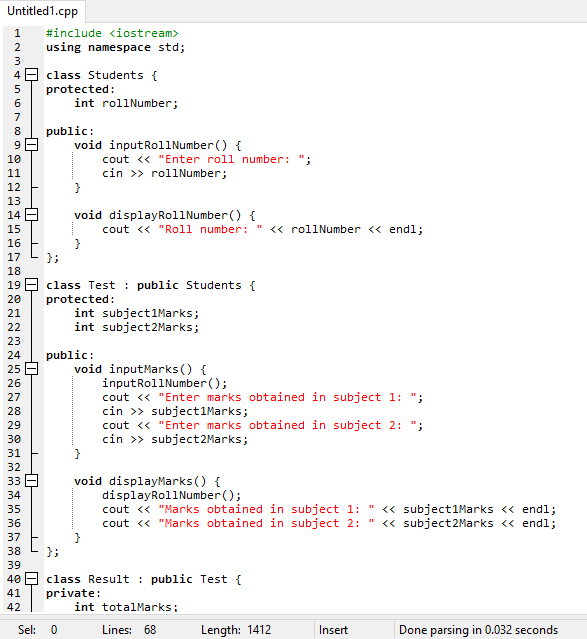
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**Assume that the test results of a batch ofstudents are stored in three different**

**classes. Class Students are storing the roll number. Class Test stores the**

**marksobtained in two subjects and class result contains the total marks**

**obtained in the test. The class result can inherit the details of the marks**

**obtained in the test and roll number of students. (Multilevel Inheritance)**

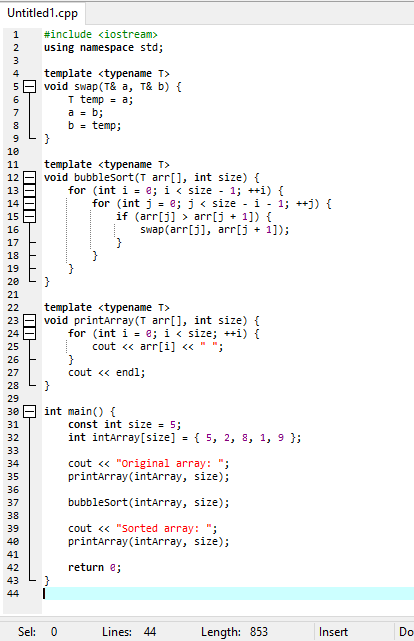
**Assume that the test results of a batch of students are stored in three different**

**classes. Class Students are storing the roll number. Class Test stores the**

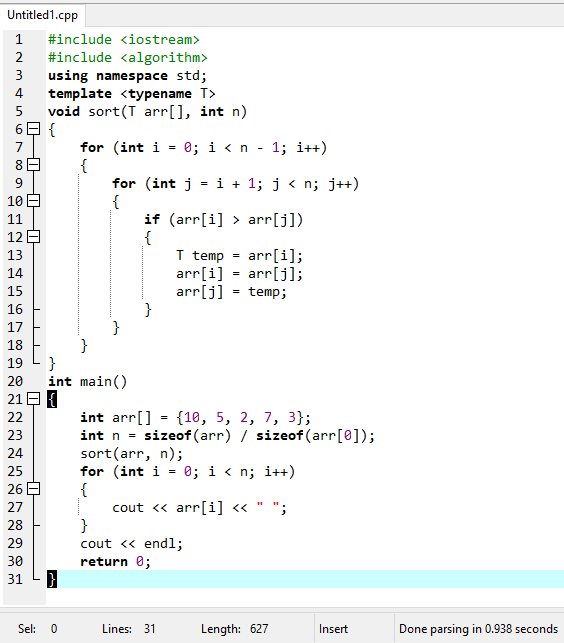
**marks obtained in two subjects and class result contains the total marks**

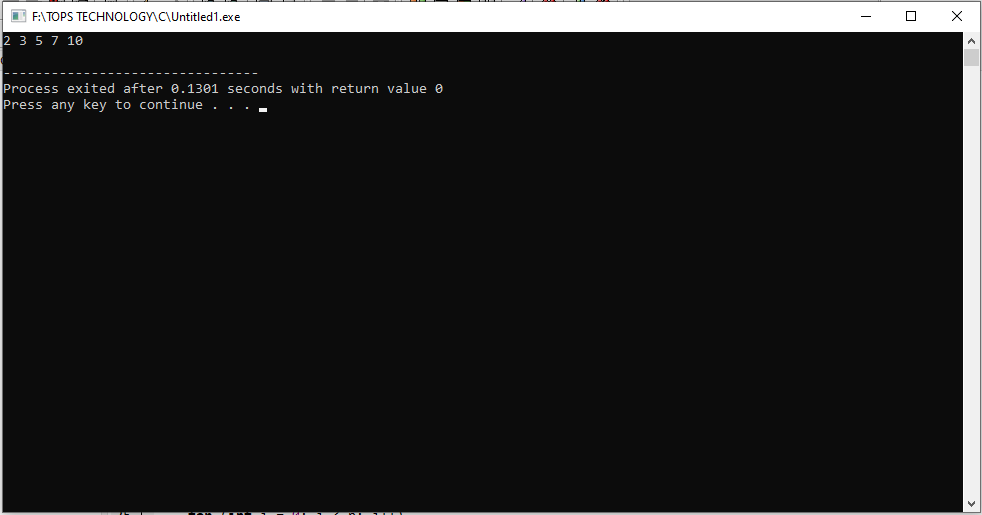
**obtained in the test. The class result can inherit the details of the marks**

**obtained in the test and roll number of students. (Multilevel Inheritance)**

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**Write a program of to sort the array using templates**

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