

In class Practice 9/6/2019

Group three or four people team.

For Part I multiple choice questions, do solo first then discuss as a group.

For Part II and part III work as a team

Part I

1. The escape sequence `\n` represents the _____ character, which causes the cursor to position to the beginning of the next line on the screen.
2. All C++ variables must be declared before they're used.
3. C++ remainder operator (%) can be used only with integer operands.
4. A C++ program that prints three lines of output must contain three statements using `cout` and the stream insertion operator.
5. Declare the variables `cPlusPlus`, `mqf2019` and `month_9` to be of type `int` (in one statement) and initialize each to value 0.
6. Function _____ from the `<string>` library reads characters until a newline character is encountered, then copies those characters into the specified string.
7. Any file that uses a class can include the class's header via a(n) _____ preprocessing directive.
8. By convention, function names begin with a capital letter and all subsequent words in the name begin with a capital letter.
9. Data members or member functions declared with access specifier `private` are accessible to member functions of the class in which they're declared.
10. Every function's body is delimited by left and right braces (`{` and `}`).
11. (Using a Class Without a using Directive) Explain how a program could use class `string` without inserting a using directive.

Part II

1. Correct the errors of the following statements

- a) `if (n < 8); { cout << "n is less than 8\n"; }`
- b) `if (n == 8) { cout << "n is equal to or greater than 8\n"; }`

```
if (n < 8){  
    cout << "n is less than 8\n";  
}
```

2. Correct the errors of the following program

// average.cpp

// This program finds the average of three numbers.

// It contains errors that must be fixed to run the program.

#include <iostream>

using namespace std;

int main ()

{

int size = 0; // The number of values to be averaged

int size = 3

double num1,

num2,

num3 num3,

average; // Average of num1 and num2

// Get the three numbers

cout << "Enter three numbers separated by one or more spaces: ";

cin >> num1 >> num2 >> num3;

// Calculate the average

average = num1 + num2 + num3 / size;

average = (num1+num2+num3)/size;

// Display the average

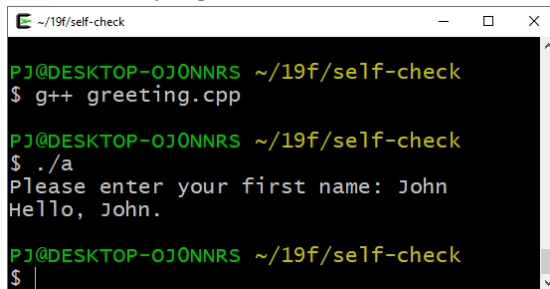
cout << "The average of these three numbers is: " << average << endl;

return 0;

}

Part III

1. Write a C++ program that ask user's first name then output greeting message like the following

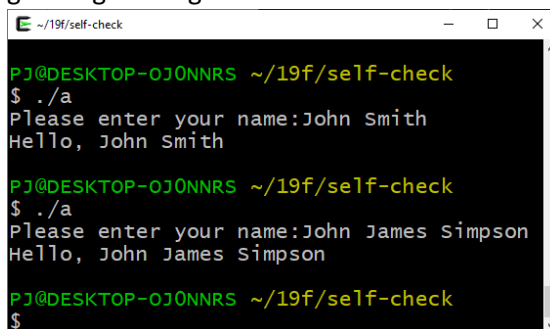


```
PJ@DESKTOP-OJ0NNRS ~/19f/self-check
$ g++ greeting.cpp

PJ@DESKTOP-OJ0NNRS ~/19f/self-check
$ ./a
Please enter your first name: John
Hello, John.

PJ@DESKTOP-OJ0NNRS ~/19f/self-check
$
```

2. Can you write a C++ program that will take not just the first name but full name and then output greeting message?



```
PJ@DESKTOP-OJ0NNRS ~/19f/self-check
$ ./a
Please enter your name: John Smith
Hello, John Smith

PJ@DESKTOP-OJ0NNRS ~/19f/self-check
$ ./a
Please enter your name: John James Simpson
Hello, John James Simpson

PJ@DESKTOP-OJ0NNRS ~/19f/self-check
$
```

3. Write an Invoice class. Invoice constructor initializes the class's four data members

partNumber // the number of the part being sold
partDescription // description of the part being sold
quantity // how many of the items are being sold
pricePerItem // price per item

There is a constructor which takes four parameters which are corresponding to the four data members defined above.

There are four getters and four setters

```
setPartNumber(std::string number),
getPartNumber(),
setPartDescription(std::string description),
getPartDescription(),
setQuantity(int count), if count less than zero then quantity will be set to zero.
getQuantity(),
setPricePerItem(int price), if price < 0 then PricePerItem sell be set to zero
getPricePerItem(),
```

There is another function `getInvoiceAmount()` which will calculates invoice amount by multiplying quantity x price per item