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Lab Session 6

Lab 6.1

(3 points) Exercise 1: Retrieve and modify `proverb.cpp` so it prints the proverb listed in the comments at the beginning of the program. Attach the completed `proverb.cpp` program.

```cpp
1   #include <iostream>
2   using namespace std;
3
4   void writeProverb();
5
6   int main() {
7
8       writeProverb();
9       system(_Command:"pause>0");
10      return 0;
11  }
12  void writeProverb() {
13
14      cout << "Now is the time for all good men to come to the aid of their party";
15  }
```

```
E:\Study Materials\C++\sasageyo\x64\Debug\sasageyo.exe
Now is the time for all good men to come to the aid of their party
```

Lab 6.2

(3 points) Exercise 1: Retrieve and complete `newproverb.cpp` so it changes the ending of the proverb according to the number a user selects. Attach the completed `newproverb.cpp` program.

```cpp
1    #include <iostream>
2    using namespace std;
3
4    void writeProverb(int);
5    int main() {
6
7        int wordCode;
8        cout << "Given the phrase " << endl;
9        cout << "Now is the time for all good men to come to the aid of their ___" << endl;
10       cout << "Input a 1 if you want the sentence to finished to the party" << endl;
11       cout << "Input any other number for the word country" << endl;
12       cout << "Please input your choice now " << endl;
13       cin >> wordCode;
14       cout << endl;
15       writeProverb(wordCode);
16       system(_Command:"pause>0");
17       return 0;
18   }
19   void writeProverb(int wordCOde) {
20
21       cout << "Now is the time for all good men to come to the aid of their party";
22   }
```

```
E:\Study Materials\C++\sasageyo\x64\Debug\sasageyo.exe

Given the phrase
Now is the time for all good men to come to the aid of their __
Input a 1 if you want the sentence to finished to the party
Input any other number for the word country
Please input your choice now
1

Now is the time for all good men to come to the aid of their party
```

(3 points) Exercise 2: Modify `newproverb.cpp` so that when a user inputs a 1, the program will print "party" at the end, and given an input of 2, the program prints "country". Users must be repeatedly prompted to enter a 1 or a 2 if the user enters invalid input. Attach the modified `newproverb.cpp` program.

```cpp
#include <iostream>
using namespace std;

void writeProverb(int);
int main() {

    int wordCode;
    cout << "Given the phrase " << endl;
    cout << "Now is the time for all good men to come to the aid of their ___" << endl;
    cout << "Input a 1 if you want the sentence to finished to the party" << endl;
    cout << "Input any other number for the word country" << endl;
    cout << "Please input your choice now " << endl;
    cin >> wordCode;
    cout << endl;
    writeProverb(wordCode);
    system( Command: "pause>0");
    return 0;
}
void writeProverb(int wordCode) {

    if (wordCode == 1)
        cout << "Now is the time for all good men to come to aid of their party";
    if (wordCode == 2)
        cout << "Now is the time for all good men to come to aid of their country";
    else
        cout << "I'am sorry but that is an incorrect choice; PLease input 1 or 2";
}
```

```
Given the phrase
Now is the time for all good men to come to the aid of their __
Input a 1 if you want the sentence to finished to the party
Input any other number for the word country
Please input your choice now
2


Now is the time for all good men to come to aid of their country
```

3

Lab 6.3

(3 points) Exercise 1 & 2: Retrieve and complete `paycheck.cpp`. Notice that `computePaycheck()` determines net pay by subtracting 15% from the gross pay. Make sure you get the output shown in the lab manual. Attach the completed `paycheck.cpp`.

```cpp
#include <iostream>
#include <iomanip>
using namespace std;

void writeProverb();
void computePaycheck(float, int, float&, float&);
int main() {

    float payRate;
    float grosspay;
    float netpay;
    int hours;
    cout << setprecision(2) << fixed << showpoint;
    cout << "Welcome to the payroll program" << endl;
    writeProverb();
    cin >> payRate;
    cout << endl << "Please input the number of hours worked" << endl;
    cin >> hours;
    cout << endl << endl;
    computePaycheck(payRate, time:hours, &:grosspay, &:netpay);
    system(_Command:"pause>0");
    return 0;
}
void writeProverb() {

    cout << "This program takes two numbers (payrate and hours)" << endl;
    cout << "and multiplies them to get gross pay " << endl;
    cout << "It then calculates net pay for subtracting 15% " << endl;
}
void computePaycheck(float rate, int time, float& gross, float& net) {
    gross = rate * time;
    cout << "The gross pay is " << gross << endl;
    net = gross * 0.85;
    cout << "The net pay is " << net << endl;
    cout << "We hope you enjoyed this program" << endl;
}
```

```
E:\Study Materials\C++\sasageyo\x64\Debug\sasageyo.exe
Welcome to the payroll program
This program takes two numbers (payrate and hours)
and multiplies them to get gross pay
It then calculates net pay for subtracting 15%
6.7

Please input the number of hours worked
30


The gross pay is 201.00
The net pay is 170.85
We hope you enjoyed this program
```

Exercise 3: What happens if the `net` parameter was passed by value? Remove the `&`s after the parameter's data type in the `computePaycheck()` function prototype and header. (1 point) Write what the main function prints for `netPay`: _____ (2 points) What is the reason for this?

_____
_____
_____