CSCI110 – Fundamentals of Computer Science
MT SAC College
CSCI110
Lab #: _____1B_____
Description: _____Problem 1.6 pg 26_____
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_____
Due Date: _____6-23-2022_____
Name: _____Brandon Wu_____
Grade: _____Freshman_____
Notes: _____Used mac terminal_____

```
/*
Prolog
   a.    Program Description: Elapsed time in military format
   b.    Author: Brandon Wu
   c.    Date: 6-23-22
   d.    Input variables: first_time, second_time
   e.    Process Flow: Operations, string concatenation
   f.    Output variables: elapsed_hours, elapsed_mins
*/

#include <iostream>
#include <cmath>

using namespace std;

int main()
{
    float first_time = 0;
    float second_time = 0;
    int first_hours = 0;
    int second_hours = 0;
    float first_mins = 0;
    float second_mins = 0;
    float formatted_diff_mins = 0;
    int diff_hours = 0;
    float elapsed_time = 0;
    int elapsed_hours = 0;
    float elapsed_mins = 0;
    cout <<"Please input your first time: ";
    cin >> first_time;
    cout <<"Please input your second time: ";
    cin >> second_time;
    if (first_time < second_time) {
        first_hours = first_time / 100;
        second_hours = second_time / 100;
        first_mins = (((first_time / 100) - first_hours) * 100);
        second_mins = (((second_time / 100) - second_hours) * 100);
        formatted_diff_mins = ((second_mins / 60) - (first_mins / 60));
        diff_hours = second_hours - first_hours;
        elapsed_time = (second_hours - first_hours + formatted_diff_mins);
        elapsed_hours = elapsed_time;
        elapsed_mins = round((abs(formatted_diff_mins)) * 60);
        cout << "Elapsed time is " << elapsed_hours << " hours and " << elapsed_mins << "
minutes"<< endl;
```

```
    }
    else {
        first_hours = first_time / 100;
        second_hours = (second_time + 2400) / 100;
        first_mins = (((first_time / 100) - first_hours) * 100);
        second_mins = ((((second_time + 2400) / 100) - second_hours) * 100);
        formatted_diff_mins = ((second_mins / 60)) - (first_mins / 60);
        elapsed_time = (second_hours - first_hours + formatted_diff_mins);
        elapsed_hours = elapsed_time;
        elapsed_mins = round(abs(formatted_diff_mins) * 60);
        cout << "Elapsed time is " << elapsed_hours << " hours and " << elapsed_mins << "
minutes"<< endl;
    }
    system("pause");
    return 0;
}
```

```
Brandons-Air-2:Project1 brandonwu$ cd "/Users/brandonwu/Project1/Lab1/" && g++ Lab1B.cpp -o Lab1B && "/Users/brandonwu/Project1/Lab1/"Lab1B
Please input your first time: 0900
Please input your second time: 1730
Elapsed time is  8 hours and 30 minutes
sh: pause: command not found
Brandons-Air-2:Lab1 brandonwu$ cd "/Users/brandonwu/Project1/Lab1/" && g++ Lab1B.cpp -o Lab1B && "/Users/brandonwu/Project1/Lab1/"Lab1B
Please input your first time: 1730
Please input your second time: 0900
Elapsed time is 15 hours and 30 minutes
sh: pause: command not found
Brandons-Air-2:Lab1 brandonwu$
```