

Assignment 3 is in three parts,
Create 3 projects for each of the parts below (part 1, part 2, and part 3), and submit them.

Part 1 (30 points)

The following is the solution to exercise 5.25 on page 207:
Write a function that returns the smallest of the three floating-point numbers

Write the following program, compile it, and run it several times with three numbers

This should be easy, because it should work if you do it exactly like below

// Exercise 5.25 Solution

```
#include <stdio.h>
#include "stdafx.h"

// function prototype
double smallest3(double a, double b, double c);

int main()
{
    printf("%s", "Enter three floating point values: ");
    double x; // first input
    double y; // second input
    double z; // third input
    scanf_s("%lf%lf%lf", &x, &y, &z);

    // determine smallest value
    printf("The smallest value is %f\n", smallest3(x, y, z));
    getchar();
    getchar();

}

// smallest3 returns the smallest of a, b and c
double smallest3(double a, double b, double c)
{
    double smallest = a; // assume a is the smallest

    if (b < smallest) { // if b is smaller
        smallest = b;
    }

    if (c < smallest) { // if c is smaller
        smallest = c;
    }

    return smallest; // return smallest value
}
```

Part 2. (40 points)

Same as above except that do it for finding the largest number:

Write a function that returns the largest of the three floating-point numbers

Part 3:

This part is the dolution to Exercise 5.23 on page 206.
There is one small mistake, which you need to find and correct

```
#include "stdafx.h"
#include <stdio.h>
#include <math.h>

// function prototype
int seconds(int h, int m, int s);

int main()
{
    printf("%s", "Enter the first time as three integers: ");
    int hours;// current time's hours
    int minutes;// current time's minutes
    int secs;// current time's seconds
    scanf_s("%d%d%d", &hours, &minutes, &secs);

    // calculate first time in seconds
    int first = seconds(hours, minutes, secs);

    printf("%s", "Enter the second time as three integers: ");
    scanf_s("%d%d%d", &hours, &minutes, &secs);

    // calculate second time in seconds
    int second = seconds(hours, minutes, secs);

    // calculate difference
    int difference = fabs((double)first - (double)second);

    // display difference
    printf("The difference between the times is %d seconds\n", difference);

    getchar();
    getchar();
}

// seconds returns number of seconds since clock "struck 12"
// given input time as hours h, minutes m, seconds s
int seconds(int h, int m, int s)
{
    return 3600 * h + 60 * m + s;
}
```
