Assignment #1 - Basics

Points: 30

Instructions (3 points)

1. Write a comment at the top that contains the following information
   ```
   // Your Name
   // CS 52
   // Assignment #1
   ```
2. Properly indent, format and comment your code as necessary
3. Read instructions carefully!
4. Name each program problemX.cpp where X is the problem number.
5. Upload your code to Canvas by the due date

Warning: - No late submission is accepted!
- Points will be deducted for entirely commented files!
- Name your files *problem{#}.cpp*, for example *problem1.cpp, problem2.cpp, etc.*
- *Canvas may append -1, such as problem2-1.cpp which is okay!*

Problem 1   **Errors**   **3 points**

Find and fix the error(s) in the following program.

```
using namespace std;

int MAIN()
        cout << "Hello << World;
        int name;
        cout << "Type your name:";
        cin << name;
        cout >> "Hello, " << << name;
}
```

Problem 2   **Concert Tickets**   **8 points**

There are three tickets for a concert. The VIP tickets cost $120, premium tickets cost $80, and regular tickets cost $40. Prompt the user how many tickets of each category he would like. Then print an invoice with overview of the order and total price. Include a sales tax of 9.25%.

```
How many tickets would you like to order?
VIP Tickets ($120): 0
Premium Tickets ($80): 4
Regular Tickets ($40): 2

Invoice:
VIP:        $120 x 0 = $   0.00
Premium:    $ 80 X 4 = $320.00
Regular:    $ 40 x 2 = $ 80.00
Sales Tax:     9.25% = $ 37.00
------------------------------
Total Price:           $437.00
```

Problem 3 **Program a Calculator** **8 points**

Write a program that can be used as a calculator. Prompt the user to enter which operation he/she would like to perform, that is addition, subtraction, multiplication, or division. Use a switch statements to properly handle the operator entered by the user. Then prompt the user to enter two operands. An example of the program may look like this:

```
Calculator
-------------------
What operation would you like to perform?
Addition (+), Subtraction (-), Multiplication (*), or Division (/)
Enter an operator: +
Enter operand 1: 23
Enter operand 2: 45
The results is: 23 + 45 = 78
```

Problem 4 **Months** **8 points**

Write a program that determines the season based on the month. The program prompts a user to enter a month (1-12) and then prints if that month is in spring, summer fall or winter. The program must also check if a valid month was entered. For simplicity, assume: 1-3: spring, 4-6: summer, 7-9 fall, 10-12 winter.

```
Enter a month (1-12): -5
That is not a valid month!
```

OR

```
Enter a month (1-12): 3
The 3. month is in spring!
```

```
Enter a month (1-12): 7
The 7. month is in fall!
```

OR

```
Enter a month (1-12): 14
That month must be in the future.
```