

CS 1400 Lab 16: Should I go to work?

Introduction

The problem

Your friend Bob has written a program to tell him when he has to go to work. The program prompts him for the day of the week. If Monday through Friday are entered, the program tells him to go to work. If Saturday or Sunday are entered, the program announces that there is no work today.

The code

Here is the program that Bob wrote.

```
// File Prologue
// Name: Bob LazyBones
// CS 1400
// Project: Work?
// Date: February 2013
//

using System;

class Program
{
    static void Main()
    {
        // declare some constants for saturday and sunday
        const string SAT = "Saturday" ;
        const string SUN = "Sunday";

        // declare a variable to hold user's input
        string today ;

        // prompt the user to enter a day and get the
input        Console.WriteLine("Please enter a day of the week,
e.g. Tuesday: ");
        today = Console.ReadLine( );

        // see if it is a work day
        if (!(today == SUN || today == SAT))
        {
```

```

        // it is a workday, display the go to work
message
        Console.WriteLine("You have to go to work
today...");
    }
    else
    {
        // its not a workday, display the weekend
message
        Console.WriteLine("Ahh... the weekend. No
work!");
    }

    Console.ReadLine();
} //End Main()
} //End class Program

```

Your Assignment

1. The boolean expression

```
if (!(today == SUN || today == SAT))
```

is a little bit awkward and hard to decipher. Use DeMorgan's Law to change the boolean expression so that it uses an AND condition instead of an OR condition. Compile and execute this program with your changes, and make sure that it works correctly. Use this code as the basis for part 2 below.

2. Your friend Bob has decided that he wants you to modify his "Go to work" program so that it works as follows:

1. If it is neither Saturday nor Sunday, and it is above freezing, print the message "go to work".
2. If it is neither Saturday nor Sunday, but it is not above freezing, print the message "go to work and dress warmly".
3. If it is a Saturday or a Sunday, no matter what the temperature is, print the message "yeah! No work today!".

For a bit of brain teaser, arrange your program so that it does not ask for the temperature if you enter Saturday or Sunday.

File(s) to Submit:

Place the complete project folder in a zip file and name the zip file lab_16_your-initials_V1.0.zip. For example, I would name my file lab_16_RKD_v1.0.zip. Submit this assignment as Lab #16 on Canvas.

Grading Guidelines



Description	Points possible
Assignment meets grading guidelines: o Source code files contain a declaration that you did not copy any code, except that provided. o Assignment has been properly submitted to Canvas o Code meets style guidelines o Code contains a Console.ReadLine() statement at the end	2
DeMorgan's Law is correctly applied	2
Program executes correctly	1
Total	5