# IT 230 Coding Activity Submission

**Module 4-2: Fix If Statement**

**Document your work in the coding activity by completing each of the following items:**

1. **Provide a screenshot of the output that resulted from running your program successfully in Visual Studio. See the coding assignment instructions for an example of what should be included in the screenshot. Your screenshot must include the following elements:**
   1. **Your last name as the first printed text on the screen**
   2. **Verification that the program is fully functioning and data results are accurate for the given problem**

A screenshot of a computer program

Description automatically generated

1. **Copy and paste the source code text you wrote for this assignment from the \*.cs file into the space below. Only providing the \*.cs files or a screenshot does not meet the requirements for this part of the assignment. Code should be logically organized. It should also follow proper syntax and conventions noted in the Coding Activity Guidelines and Rubric.**

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace DebugFixIFStmt

{

class Program

{

static void Main(string[] args)

{

new Program().Run(); // Removed extra parenthesis. Changed 'run()' to 'Run()'

}

void Run() // Changed 'run()' to 'Run()'

{

int firstChoice = 0, secondChoice = 0, thirdChoice = 0;

Console.WriteLine("Rinehimer\n"); // Removed 'System'; changed to student name with \n for blank line for tidiness

firstChoice = 0; secondChoice = 0; thirdChoice = 0;

WriteCurrentChoices(firstChoice, secondChoice, thirdChoice);

firstChoice = 2; secondChoice = 0; thirdChoice = 0;

WriteCurrentChoices(firstChoice, secondChoice, thirdChoice);

firstChoice = 2; secondChoice = 5; thirdChoice = 0;

WriteCurrentChoices(firstChoice, secondChoice, thirdChoice);

firstChoice = 2; secondChoice = 5; thirdChoice = 7;

WriteCurrentChoices(firstChoice, secondChoice, thirdChoice);

}

void WriteCurrentChoices(int firstChoice, int secondChoice, int thirdChoice)

{

if (firstChoice == 0)

{

Console.WriteLine("Choices are: {0}, {1}, {2} => There are no choices yet", firstChoice, secondChoice, thirdChoice);

}

else if (secondChoice == 0)

{

Console.WriteLine("Choices are: {0}, {1}, {2} => Currently choices are {0}", firstChoice, secondChoice, thirdChoice, firstChoice);

}

else if (thirdChoice == 0)

{

Console.WriteLine("Choices are: {0}, {1}, {2} => Currently choices are {0}, {1}", firstChoice, secondChoice, thirdChoice,

firstChoice, secondChoice);

}

else

{

Console.WriteLine("Choices are: {0}, {1}, {2} => Currently choices are {0}, {1}, {2}", firstChoice, secondChoice, thirdChoice,

firstChoice, secondChoice, thirdChoice);

}

}

}

}

1. **Show that you understand the task by explaining the design of your program in the space below. Include the process and steps you took to write your code. Explain how you arrived at the solution to the problem and completed the activity.**

The assignment was to debug a pre-made program. However, an explanation of the program can be made.

The design of the program involves displaying the current choices based on three integer values: firstChoice, secondChoice, and thirdChoice. The program uses conditional statements to determine the output message depending on the values of these choices.

Here is a breakdown of the design:

### Namespace and Class Declaration

* The program is contained within the DebugFixIFStmt namespace.
* The Program class contains the Main method, which serves as the entry point of the application, and a Run method, which executes the core logic of the program.

### Main Method

* The Main method creates an instance of the Program class and calls the Run method.

### Run Method

* The Run method initializes three integer variables: firstChoice, secondChoice, and thirdChoice.
* It prints a header line with the name "Rinehimer" followed by a blank line.
* The method then sets the values of the choices in four different scenarios and calls the WriteCurrentChoices method after each setup to display the current choices.

### WriteCurrentChoices Method

* This method takes three integers: firstChoice, secondChoice, and thirdChoice.
* It uses a series of if-else statements to print different messages based on the values of the choices:
  + If firstChoice is 0, it prints that there are no choices yet.
  + If firstChoice is not 0 and secondChoice is 0, it prints the current firstChoice.
  + If firstChoice and secondChoice are not 0 and thirdChoice is 0, it prints the current firstChoice and secondChoice.
  + If all three choices are not 0, it prints all three choices.

### Output Behavior

* The method WriteCurrentChoices produces different outputs depending on the values of the choices passed to it.
* This design allows the program to handle different scenarios where some choices might not be set (i.e., equal to 0), and it adjusts the output accordingly.

1. **Reflect on your learning experience and what you learned from completing the activity.**

The initial debugging went smoothly. I was able to find the few errors and rectify the issues, as shown in the various commented sections in the code. Surprisingly, the most difficult part for me for this assignment was fixing the if statement section. Initially, I tried a series of if statements underneath each other, but the output wasn’t correct. It printed too many lines. Then I tried the code shown above, but the second ‘else if’ statement had ‘secondChoice == 5’ which consistently resulted in “… => Currently choices are 2, 5” being printed twice. After racking my brain on what to do, I realized that I set all the previous conditions ‘ == 0’. This caused me to change the second ‘if else’ to ‘thirdChoice == 0’ which finally gave the correct solution.

In my limited experience with coding, I’m finding that trial and error can be a viable tool for trying to solve problems. In this assignment, that was definitely the case for me. The other thing I am trying to learn is that patience is key. I actually walked away from the assignment for a little while because I became frustrated at the “close but no cigar” outputs while debugging. After cooling down my mind and my attitude, I came back to the assignment with fresh eyes and found the final fix in a relatively short amount of time.