

**IT 230 Coding Activity Submission**

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**Class:** IT 230

**Module:**

| **1.** | Insert a copy of your of the ZIP file of all of your Visual Studio project files here so that it can be loaded and run in another Visual Studio:  ***See Attached*** |
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| **2.** | using System;  namespace DebugFixIFStmt  {  class Program  {  static void Main(string[] args)  {  (new Program()).run();  }  void run()  {  int firstChoice = 0; int secondChoice = 0; int thirdChoice = 0;  Console.WriteLine("Hallam's Copy");  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);  WaitForKey();  }  void WriteCurrentChoices(int firstChoice, int secondChoice, int thirdChoice)  {  if (firstChoice == 0) //was secondChoice == 0  Console.WriteLine("Choices are: {0}, {1}, {2} => There are no choices yet", firstChoice, secondChoice, thirdChoice);  else if (secondChoice == 0) //was secondChoice = 0  Console.WriteLine("Choices are: {0}, {1}, {2} => Currently choices are {0}", firstChoice, secondChoice, thirdChoice);  else if (thirdChoice == 0) //was thirdChoice === 0  Console.WriteLine("Choices are: {0}, {1}, {2} => Currently choices are {0}, {1}", firstChoice, secondChoice, thirdChoice);  else if(thirdChoice != 0 )// was thirdChoice == 0  Console.WriteLine("Choices are: {0}, {1}, {2} => Currently choices are {0}, {1}, {2}",  firstChoice, secondChoice, thirdChoice);  }  //Added method to wait for key input from user  void WaitForKey()  {  Console.WriteLine("Press any key to continue . . .");  Console.ReadKey();  }  }  } |
| **3.** | Explain the design of your program, the steps you took to complete it, and how you coded it:  I was not the one who designed the program however I was tasked with solving issues within the code. I started with looking at all the errors flagged by the compiler and solved each issue systematically.  The first issue was in the WriteCurrentChoices method on the first else-if where secondChoice was being set to 0 using a single equals sign rather than being compared to zero using two equals signs. Adding the second equals sign resolved the issue,  The second flagged issue was the next else if statement where there were three equals signs when there needed to be two. Removing the third equals sign resolved the issue.  This resolved all the flagged issues however the program was still not running as intended. When in debug the console output showed that the second choice output was incorrect - a 2 was given in the first choice in the second iteration of the output, but the output claims no choices were made. Looking at the if-else chain I saw that it was checking for the second choice to be zero first, then checking the second choice to be zero again where it then prints the choices. This caused the chain to break early at the incorrect point. Changing the first if’s expression to firstChoice == 0 resolves the issue.  The next unflagged issue was with the missing fourth output. By stepping through the if-else chain in debug mode I found that where the fourth output should print the if-else boolean expression is checking for the wrong value. Currently the expression is looking for when the thirdChoice == 0 when it should be looking for when thirdChoice != 0. Changing the expression resolved the issue.  These changes appeared to resolve all the issues seen with the console output, and left me with cleaning up the code.  I started with removing unnecessary parameters in the formatted strings. Since each parameter in the formatted string is attached to a numerical value they can be reused, however the values are set multiple times for each instance of its use. I removed the unnecessary instances while keeping the original functionality.  Next I saw that the first, second, and third choices initialized to zero twice and removed the second initialization. I assume it was there to increase readability.  Lastly of note I removed the unused using statements and made a method to wait for an input at the end of the program, changed the run() method to be Run() to adhere to naming conventions and removed the unused string array args from Main() |
| **4.** | Reflect on this experience and the lessons you learned from it:  Although I did not learn anything new during this activity it was good practice in solving logical errors within expressions rather than going through the checklist that is the error logs in the compiler. |