

**IT 230 Coding Activity Submission**

**Name: Nathan Hallam**

**Date: February 11th, 2024**

**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 ConsoleRegisterStudent  {  class Program  {  static void Main()  {  (new Program()).Run();  }  void Run()  {  int choice;  int firstChoice = 0, secondChoice = 0, thirdChoice = 0;  int totalCredit = 0;  string yesOrNo;  Console.WriteLine("Hallam's Copy");  do  {  WritePrompt();  choice = Convert.ToInt32(Console.ReadLine());  switch (ValidateChoice(choice, firstChoice, secondChoice, thirdChoice, totalCredit))  {  case -1:  Console.WriteLine("Your entered selection {0} is not a recognized course.", choice);  break;  case -2:  Console.WriteLine("You have already registerd for this {0} course.", ChoiceToCourse(choice));  break;  case -3:  Console.WriteLine("You can not register for more than 9 credit hours.");  break;  case -4:  Console.WriteLine("Unexpected error occured while validating course selection...");  break;  case 0:  Console.WriteLine("Registration Confirmed for course {0}.", ChoiceToCourse(choice));  totalCredit += 3;  if (firstChoice == 0)  firstChoice = choice;  else if (secondChoice == 0)  secondChoice = choice;  else if (thirdChoice == 0)  thirdChoice = choice;  break;  }  WriteCurrentRegistration(firstChoice, secondChoice, thirdChoice);  Console.Write("\nDo you want to try again? (Y|N)? : ");  yesOrNo = (Console.ReadLine()).ToUpper();  } while (yesOrNo == "Y");  Console.WriteLine("Thank you for registering with us");  WaitForKey();  }  //Prints available courses to console  void WritePrompt()  {  Console.WriteLine("Please select a course for which you want to register by typing the number inside []");  Console.WriteLine("[1]IT 145\n[2]IT 200\n[3]IT 201\n[4]IT 270\n[5]IT 315\n[6]IT 328\n[7]IT 330");  Console.Write("Enter your choice : ");  }  //Checks if choice is allowed  int ValidateChoice(int choice, int firstChoice, int secondChoice, int thirdChoice, int totalCredit)  {  //If outside valid range  if (choice < 1 || choice > 7)  return -1;  //If already selected  else if (choice == firstChoice || choice == secondChoice || choice == thirdChoice)  return -2;  //If over "budget"  else if (totalCredit >= 9)  return -3;  //If valid choice  else if(choice >= 1 && choice <= 7)  return 0;  //default return  return -4;  }  //Prints selected courses to console  void WriteCurrentRegistration(int firstChoice, int secondChoice, int thirdChoice)  {  if (secondChoice == 0)  Console.WriteLine("You are currently registered for {0}", ChoiceToCourse(firstChoice));  else if (thirdChoice == 0)  Console.WriteLine("You are currently registered for {0}, {1}", ChoiceToCourse(firstChoice), ChoiceToCourse(secondChoice));  else  Console.WriteLine("You are currently registered for {0}, {1}, {2}", ChoiceToCourse(firstChoice), ChoiceToCourse(secondChoice), ChoiceToCourse(thirdChoice));  }  //Converts int choice to string course  string ChoiceToCourse(int choice)  {  string course = "";  switch (choice)  {  case 1:  course = "IT 145";  break;  case 2:  course = "IT 200";  break;  case 3:  course = "IT 201";  break;  case 4:  course = "IT 270";  break;  case 5:  course = "IT 315";  break;  case 6:  course = "IT 328";  break;  case 7:  course = "IT 330";  break;  default:  break;  }  return course;  }  //Waits for key input to close console  void WaitForKey()  {  Console.WriteLine("\n\nPress 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:  Most of the work was not done by me, but I did complete the finishing touches.  After reviewing the program and reading the specifications for its design I started with trying various case scenarios with the program's input. This included selecting a course twice, selecting a course that was outside the allowed range, and selecting more than three courses. I found logical errors with all of the options: the course out of range exceptions, course selected more than once exception, and the course over budget exception. The course out of range exception was checking for courses up to 70 when it should have been 7 while the other error was due to the logical and operator being used rather than the logical or operator. The course over budget exception was looking for when credits were over 9 which ultimately allowed the user to select four courses when they should only be allowed to select three. Changing the comparison operator to greater than or equal resolved the issue.  Next I looked at adding functionality to save the selected courses, and this was due to a missing if-else chain in the validation where zero needed to be returned. This was added after all the other checks to ensure that no unallowed actions would be taken by the user.  Lastly was code cleanup with minor comments explaining methods and removing unnecessary code. |
| **4.** | Reflect on this experience and the lessons you learned from it:  While I did not learn anything new during this activity I was able to practice reading the code of another person and working through the logical steps on how to resolve issues in the programming otherwise not caught by the compiler. |