

CIT 110 - Skills Tracking Sheet

Student Name	Date
Steven Winkler	5/28/2021

	M1	M2	M3-S1	M3-S2	M3-S3	M3-S4	M3-S5	M4
Mission 1								
Project - The Conversation								
Create a Visual Studio .NET C# Console solution and saving it to a local folder.	X							
Demonstrate saving, zipping, and uploading a Visual Studio solution.	X							
Add an information comment block.	X							
Add useful and consistent commenting in a code file.	X							
Read a string from the console and assigning it to a local variable.	X							
Embed a string variable in a string and displaying to the console.	X							
Read a string from the console, parsing or converting it, and assigning it to a local integer or double variable.	X							
Control the console using the Console class methods; BackgroundColor, ForegroundColor, CursorVisible, WindowHeight, WindowWidth, Clear(), and	X							
Implement an output decision based on a string variable.	X							
Embed an integer or double variable in a string and displaying to the console.	X							
Implement an output decision based on an integer or double variable.	X							
Implement an output decision based on a Boolean variable.	X							
Implement an if/else if/?/else code block.	X							
Implement a nested decision code block.	X							
Perform a math operation on a minimum of two variables and save the result in another variable.	X							
Mission 2								
Project - The Expert System								
Add an information comment block.								
Implement a screen-based UI in the console.								
Implement a consistent theme and structure for the UI using whitespace, intention, and font color.								
Embed an integer or double variable in a string and displaying to the console.								

Implement an output decision based on an integer or double variable.								
Implement an output decision based on a string variable.								
Implement an if/else if/?/else code block.								
Implement a nested decision code block.								
Implement a while or do/while code block.								
Perform a math operation on a minimum of two variables and save the result in another variable.								
Format strings representing numeric values as currency, and limiting decimals.								
Display a table of values, formatted with columns, column headers, and column totals.								
Use complex expression (&& or) in a conditional statement (if or else if).								
Implement a switch/case code block.								
Validate user input with a feedback message: string value.								
Validate user input with a feedback message: numeric value.								
Mission 3								
Project - Finch Control S1 (Talent Show)								
Push and pull code to and from GitHub.								
Create methods that do not require arguments.								
Create methods that require one or more arguments.								
Create methods that return a value.								
Create methods that follow the Single Responsibility Principle.								
Develop a menu system using a switch/case code block.								
Connect and disconnect from the Finch robot.								
Declare and instantiate an object.								
Control the LED and tones on the Finch robot.								
Control the movement of the Finch robot.								
Play a song on the Finch robot.								
Combine light, sound, and movement on the Finch robot.								
Use a for loop to move the Finch robot or control the LEDs and sounds in a regular pattern.								
Validate user input with a feedback message: string value.								
Validate user input with a feedback message: numeric value.								
Create a video walkthrough of an application and share it on a streaming website.								
Mission 3								
Project - Finch Control S2 (Data Recorder)								

Declare and instantiate an array.								
Add values to an array.								
Read values from an array.								
Use an array initializer.								
Demonstrate the following array methods; Sort, Sum, Average								
Access and perform operations on an array member.								
Use a for loop to read temperature data from the Finch robot and store it in an array.								
Use a for loop to read light data from the Finch robot and store it in an array.								
Use a for or foreach loop to display the values of an array.								
Convert Celsius to Fahrenheit.								
Convert Celsius to Fahrenheit using a method that returns a value.								
Validate user input with a feedback message: string value								
Validate user input with a feedback message: numeric value								
Mission 3								
Project - Finch Control S3 (Alarm System)								
Monitor temperature and sound an alarm when a minimum threshold is passed.								
Monitor light and sound an alarm when a maximum threshold is passed.								
Monitor both temperature and light, and sound an alarm when either threshold is passed.								
Validate user input with a feedback message: string value								
Validate user input with a feedback message: numeric value								
Mission 3								
Project - Finch Control S4 (User Programming)								
Declare and initialize a list of simple data types.								
Store user input into a list of enumerations.								
Display a list of enumerations using a foreach loop.								
Process a list of enumerations using a switch/case block.								
Program the Finch robot with standard commands: light, sound, movement								
Program the Finch robot with extended commands: combined light, sound, movement								
Program the Finch robot with extended commands: sensor values								
Store and process both command (enum) and command duration (int) as a list of tuple.								
Validate user input with a feedback message: string value								

Validate user input with a feedback message: numeric value								
Validate user input with a feedback message: enumeration								
Mission 3								
Project - Finch Control S5 (Persistence)								
Read and write a single line of text from a text file.								
Write a single line of text to a text file.								
Read more than one line of text from a text file.								
Write more than one line of text to a text file.								
Read an array or list from a text file.								
Write an array or list to a text file.								
Read a line of text with multiple values separated by a comma from a text file.								
Write a line of text with multiple values separated by a comma to a text file.								
Validate user input with a feedback message: string value								
Validate user input with a feedback message: numeric value								
Mission 4								
Project - The Capstone								
Develop an application that performs a useful service.								
Develop an application that has a strong, consistent themes.								
Develop an application that considers and implements a strong UI/UX.								
Write documentation for an application.								
Create a video that demonstrates all features of an application.								