

Lab: Object Oriented Design; Introduction, Basics, and Beyond

LCSCI5202: Object Oriented Design
Week 1

Working with Variables

- Download project 01.Code.A to your computer
- Open project 01.Code.A
 - Press Ctrl/Cmd + Shift + P
 - Type “File: Open Folder” or use Open Folder from File option
 - Locate the 01.Code.A folder on your computer
- Examine Program.cs

Task 1: Area of a Rectangle

- In this task, you will learn to work with variables by calculating the area of a rectangle. You will use given values for the length and width, store them in variables, and then calculate and display the area using these variables.
 - Step 1: Declare two variables: one for the length and one for the width of the rectangle. Assign the length variable a value of 10 and the width variable a value of 5.
 - Step 2: Create a new variable called area and assign it the result of multiplying the length and width variables. This will give you the area of the rectangle.
 - Step 3: Use a print statement to output the value of the area variable to the console.

Task 2: User input

- Update the previous example so that the sides of the rectangle are an input from the user.

Task 3

- Task: Write a function called `GreetUser` that:
 - Takes one string parameter, `name`.
 - Prints a greeting message like: `"Hello, [name]! Welcome!"`.
 - This function should not return any values.
 - Example use:
 - `GreetUser("John");`

Task 4

- Task: Write a function called `ConcatenateStrings` that:
 - Takes two string parameters, `firstString` and `secondString`.
 - Returns a single string by concatenating them with a space between.
- Example use:
 - `string combined = ConcatenateStrings("Hello", "World");`
 - `Console.WriteLine(combined);`

Task 5

- Write code that takes two inputs from the user.
- Write a function called SubtractNumbers that:
 - Takes an int parameters a and a float parameter b.
 - Returns a descriptive string
 - “Subtracting b from a gives x”
 - Example use of the function:
 - `string result = SubtractNumbers(10, 4.0f);`
 - `Console.WriteLine(result);`