

## MODULE 1: INTRODUCTION TO PROGRAMMING

### Managing Inheritance



# Yesterday

- What is polymorphism?
- What is one way to have polymorphism?
- What's the other?
- What is an interface?

# Access Modifiers

## Public

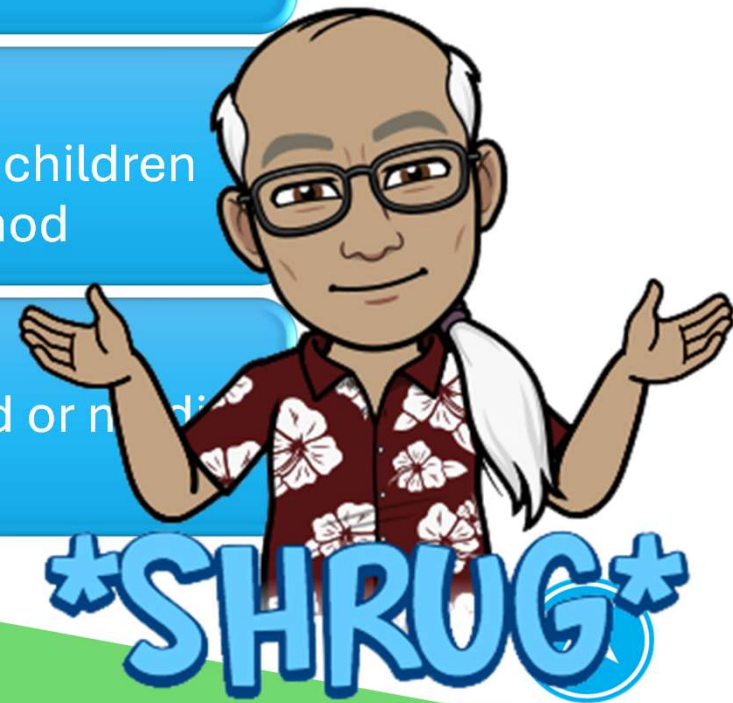
Any code with access to the class can add or modify the property or access the method

## Protected

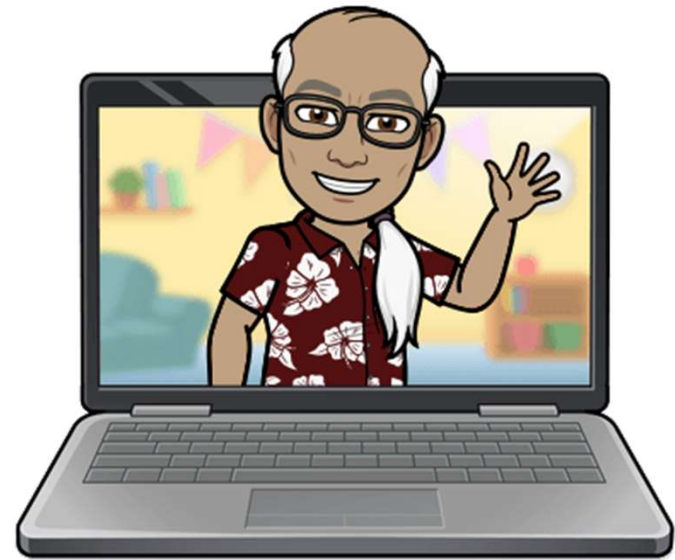
The object where the item is declared and all their children can add or modify the property or access the method

## Private

Only the object where the item is declared can add or modify the property or access the method



# LET'S CODE!



# Final

- Final classes are used to restrict the inheritance feature of object oriented programming. Once a class is defined as final class, this class cannot be inherited.
- Final methods prevent overriding a method of a class (default functionality in C#)



# Abstract

- Abstract classes can not have objects created from them, but they can provide logic and structure to their subclasses.
- Abstract methods are methods with no logic that must be implemented by concrete subclasses
- If a class has an abstract method, it must be an abstract class
- If a class does not override an abstract method from its parent, it must also be an abstract class

# Abstract vs Interface

- Abstract classes can still have implemented methods. Interfaces can have no implemented methods.
- A class can only inherit from one other class, but can implement as many interfaces as you want it to.
- Inheriting from a super class is kind of like making a more specialized version of that class. Implementing just means that you can be used in the context the interface is for. There is a difference in being a kind of Book versus being Sellable or Readable.



WHAT QUESTIONS DO  
YOU HAVE?





# Code Reviews

- Friday 4/4
- 5 minutes
- Sign up for slots
- Make sure no Pathway conflicts



# Reading for tonight:

## **Unit Testing**

