

Assignment 2: VGP125 – Interfaces

Due: Week 4 (Must be completed and checked in by the beginning of class)

Project Description:

- Using your Unity project created in Assignment 1, add the following:
 - create the following interfaces and public properties (get/set style) and functions:
 - IMoveable
 - float: speed
 - Vector3: position
 - MoveTo(Vector3 newPos)
 - IDataElement
 - int: id
 - string: displayName
 - IAttackable
 - Vector3: position
 - int: damage
 - float: range
 - Attack(IDamagable)
 - bool CheckRangeTo(IMoveable)
 - IDamagable
 - int: hp
 - TakeHit(int dam)
 - Apply these interface to your classes as they seem to fit (multiple may apply)
 - you can add more classes for things like obstacles or stationary objects, non-combat characters and apply the interfaces to them also
 - Fill out the functions as best you can for each class using the examples from the lesson
 - Create Prefabs for a player and some enemies (and other objects if you wish)
 - Create instances of the prefabs in a scene from the data you set up in the previous assignment (you only need to create one player if you wish) (Hint: you can link them to the data object by name or use a monobehaviour script on the prefab to link to the dataobject and back)
 - Set up conditions in your Main Update loop where you can cycle through your list of objects and call their appropriate functions through the interface version of the object in the correct situation. Examples
 - Having an IAttackable object attack a IDamageable object in range
 - Display the Data onscreen when something changes (eg, DisplayName and hp remaining
 - have an IMovable object chase another object at its speed
 - Hook up a mouse or game controller to the player's MoveTo function to go to where you clicked

Marking (10 total):

- Use of Interfaces (3)
- Data Object and Game Object Creation (3)
- Functions implementation and use in Update loop (4)