# LO5 Practices

**Student Practice:** Write an operator overloaded function to divide a Double by an Integer and return a Double and another function to divide an Integer by a Double and return a Double. Note: Functions need to appear before the code that uses it.

**Student Practice:** Store name, number of cats and number of dogs in a tuple. Create an array with a few entries in it. Then loop through the array and using a switch statement display one of the following messages: “Name likes cats better than dogs” if they have more cats than dogs, “Name likes dogs better than cats” if they have more dogs than cats, “Name likes dogs and cats the same amount” if number of cats and dogs is the same AND greater than zero, “Name does not like cats or dogs” if number of cats and dogs is zero. If dogs and/or cats is less than zero display “invalid values”.

**Practice:**  Write a method that accepts the width and height and returns a tuple containing the area and perimeter. Use external names for the tuple members.

**Practice:** Using with the Room Struct previously created use an extension to add a perimeter property.

**Student Practice:**  Write a Stack class that uses generics. Have two computer properties – isEmpty and numElements. Have two methods, pop – remove last element add and push – add new element to top of stack.

**Student Practice:**  Write the MyString class that implements the CustomStringConvertible protocol. This class stores an Array of characters. It has two computed properties – length and description. Create two initializers – one takes in a String to initialize the character array and the other is just the default initializer which creates an empty character array. Add a subscript method for this class to access individual characters in the String – do both get and set for subscript, if an index is specified beyond the end of the existing String just use last character in String. Also, write a += function for this class to append on another String.