**\*VIEW COMMENTS IN FINAL CODE FOR EXPLANATIONS\***

solenoidIn = when enabled, allow air to enter ballast system, raising the UUV.

solenoidOut = when enabled, release air and sink the UUV.

1. First sets the solenoid IN and OUT pins to zero as a fail safe.
2. Under the setup method, we enable data communication and initialize the barometer sensor as well as initializing the barometer to obtain data in freshwater setting.
3. Under the loop method contains all the steps for controlling the ballast system:
   1. Method barometerReadings() is called to display all the data that the barometer collects in the given time interval.
   2. With the depthReading() method, we obtain the depth of the UUV specifically and store that value to determine if the UUV should be floating or underwater.
   3. If the depth from the barometer reading is less than the listed value in meters, the UUV is currently floating and needs to submerge.
      1. Set pins for solenoid IN and solenoid OUT to remain at pin zero.
   4. Otherwise, if the depth is not less than listed value, assume UUV is underwater.
   5. Mission begins when the UUV is found to be floating…
      1. Set the solenoid IN pin to 1 and solenoid OUT pin to 2.
      2. Assign these pins on the Arduino Board.
      3. Enable solenoid OUT (releasing air) and wait couple of seconds.
      4. Disable solenoid OUT to stop releasing air.
   6. When mission comes to an end…
      1. Enable solenoid IN (allow air in) and wait couple of seconds
      2. Disable solenoid IN to stop allowing air from entering.