**Final Project** **Requirement Specifications**

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**System Requirements**

* **Use visual studio**
* **Compile Assembler Code**
* **Access to Irvine Library**
* **X86 Architecture**
* **Windows OS**

**Design**

* **2D array (3x3)**
* **Normal Array (maybe?)**
* **Ascii art front end**
* **x,y global variables**

**Functions**

* **CheckWin**
* **DrawBoard**
  + **DrawSquare**
* **Turn**
  + **Places mark**
  + **Updates the board**
  + **Checks win**
  + **Changes mark**
* **Place(x, y)**
* **AIturn**

**CheckWin**

**(assume 0 is empty space, 1 is X, 2 is O)**

**Hard code each possibility to check for a win**

**if( arr[0][0] + arr[0][1] + arr[0][2] == 6){**

**O wins!**

**}**

**if( arr[0][0] + arr[0][1] + arr[0][2] == 3){**

**X wins!**

**}**

**Etc.**

**DrawBoard**

**Check for state of each square on the grid**

**Use Draw square to write the correct square matching the state**

**DrawBoard updates global variables to be used with Gotoxy for DrawSquare**

**DrawSquare**

**Gotoxy the global variables that are updated by DrawBoard**

**Loop:**

**Print line**

**Gotoxy line below**

**Place(x, y)**

**Access 2d array**

**If value at x,y is < 1**

**Change state**