**USER MANUAL**

Rules:

The number pyramid game is a game where the player must complete the pyramid of numbers. To do this, the player must fill in the blanks (In this version of the game, blanks are zeroes). A number is only valid if the two below it can be added to equal the input.

For Example:

4 This is valid. 5 This is invalid.

2 2 2 2

Setup:

To create new pyramids for this version of the game, the player must first run the “**numberTowerMaker.exe**” program in the pyramids folder to generate 10 possible pyramids for the game to pick. *(Note: the .exe must be in the pyramids folder, and the pyramids folder must be in the same directory as MARS.)*

After generating the pyramids, the player opens “**main.asm**” in MARS. Before compiling and running the program, the player must first click **Settings** and make sure the **Assemble all files in directory** checkbox is checked. *(They must also make sure “atoi.asm”, “getinput.asm”, “verifyinput.asm”, “load.asm”, and “print.asm” are in the same directory as “main.asm”.)*

Then in order to see a graphical bitmap display of the pyramid, go to **Tools** and open **Bitmap Display**. Once in the window, set **Unit Width/Height** to 4, then set **Display Width** to 1024 and **Display Width** to512. Finally toggle **Connect to MIPS**.

Once all that is checked, the player presses **Assemble**, and the game is ready to be played.

Playing the Game:

After the game is compiled and running, the player will be looking at a pyramid of 28 numbers. The majority of which have numbers already inputted. The format of each spot is a letter, then the number (or 0). Ex. f) 56. The zeroes represent an empty spot.

To input a number, the player types a labels in “Enter the label: ” and then a number into “Enter the number: ”. The label is one of the letters in the pyramid or one of two extra characters ({ or |). Again, the number is only valid if the two below add together to equal the input. If for whatever reason, the player enters an invalid label, the game will let them know. The game also lets the player know if the number they entered is incorrect.

Once the player enters a valid label and a correct number, the pyramid updates itself and the player must enter a new label and a new number.