My first decision was to create one bingo card on its own. I thought if I could create one then I could duplicate it later when needed.

I did this by first making a 3x9 array and used a random number generator to populate it.

Once I had this working I put the code within a for loop and prompted the user to enter the number of cards needed.

Once I had multiple cards printing to screen, my next task was to divide each column into 10’s

E.g. col1 (1-10) col2 (11-20) col3 (21-30) up to col9 (81-90)

To do this, I had to do some research on the net. This is when I found a piece of code that created a matrix with groups of 15’s and I decided to alter this to my needs.

This is the line that appears in the program:

bingo[row][col] = rand() \* 9 / RAND\_MAX + 1 + col \* 10;

Once I had the matrix broken into groups of 10’s, I moved on to the problem of the spaces.

After some research, I decided to generate 4 random numbers between 1-9, these numbers were going to be the spaces. When I had gotten the numbers, my next task was to force these numbers to be zero. Then when I went to print the cards I used an if statement to make the number zero print as an “X”. Then I printed the cards to screen.

Then I placed all this code into a function called makeCard. Then in the main I wrote a user prompt asking the user to enter 1 to start a game. When they picked 1, a switch statement was used to call the function and the prompt to enter the number of cards appears and when the user enters 2-6 the cards appear on screen.

Now the cards were working I went on to create a random number generator to create the number the caller would draw.

I did this by create a random number generator between 1-90. I used this piece of code

int numDrawn = rand() % 90 + 1;

I put this piece of code in a function called drawNum and placed it in a while loop. The reason for this was so the user could draw multiple numbers until they were finished. Then I created a second switch in the main and put in a user prompt.

I then moved to the load and save options. Unfortunately, I was unable to get these to work. I had a go at them and have left the commented-out code in the program. As the print to file didn’t work, I decided to go back and try to print the cards to file as they were being generated. I had some success with this as it appears to print the right number of cards but it prints the last card for the number wanted.