Mind Reader Project Algorithm

1. Prompt user to start the game or exit
2. Randomly select one of the six cards to display.
   1. Randomly generate a number ‘n’ between 1 and 6.
   2. Check if number has been generated before, using an array that dynamically stores the values that were previously generated.
   3. If value already exists in array, repeat step 2a. Else, add value to array and proceed to step 3.
3. Generate card values. (Maybe using branch instructions depending on value of ‘n’, while loop)
   1. Start with an accumulator value initialized to 1.
   2. Use AND instruction to mask the value of the accumulator.
      1. E.g 000001 AND 000001 = 000001 – int 1 exists on card 1
      2. E.g 001001 AND 001000 = 001000– int 9 exists on card 4
      3. E.g 001000 AND 000001 = 000000 – int 8 does not exist on card 1
   3. If result == 0, add 1 to accumulator. If result is non-zero, add number to display array.
   4. When value of accumulator == 64, move on to step 4.
4. Display card.
   1. Print display array.
5. Prompt user to determine if their number exists on the card.
   1. If users selected number exist on “n” card, update guess value by adding 2^n.
   2. Else, move on to step 6.
6. Repeat steps 2 and 3 until all 6 cards have been displayed.
7. Display guess value.