C Language Programming: Homework #6

This program allows you to play a game called ***master mind***. In the program you have to do the following:

Define (input)

   (a) the number of integers (*N*) to play with. For example, input 5 means you like to play with 5 numbers which is 1 to 5 and

   (b) number of guesses (*G*) and input these G integers, For example, if G = 4, you can input 1 2 3 4.

   (c) both N and G are from argument list.

Part I: (play by the user)

1. Write a loop to let user to input his guesses. If both the position and number are correct, it generates an H and if only the number is correct, it generates an X. For example,

   1 2 3 4

   1 3 5 1 → 1 H and 1 X
   5 5 5 5 → 0 H and 0 X
   1 3 4 1 → 1 H and 2 X

2. User input his guesses until his guesses are correct and the program terminates.

Part II: (play by the computer)

1. Create an array to record all the combinations.
2. For all possible correct combinations, check each combination with the answers (H's and X's) for each guess to determine if this combination is the possible correct guess or not.
3. Randomly select one out of all possible correct combinations as the next guess and get the answer (H's and X's)
4. If the guess is correct, game is over. Otherwise, go back to step 2 to continue the game.

More requirements in page 2.

Other requirements:
- The codes must be split into 3 .c files and you have to design several .h files.
- You also have to use Makefile to compile the program.

File name example:
    hw6_F12345678_main.c
File name must be start with "hw6_F12345678_", "main" can be replace by any string (ex: hw6_F12345678_guess.c).

Please replace "F12345678" by your student ID.