User Input Instructions:

1. Enter an integer between 1 and 9 for the x-coordinate.
2. Enter an integer between 1 and 9 for the y-coordinate.
3. Who's turn it is will be printed before the user input prompts each turn. Turns alternate with black starting first.
4. If you input a coordinate that is already occupied or out of range, you will be prompted to try again and enter another x and y coordinate.
5. Type "stop" in either the x or y coordinate input prompt to quit the game.
6. The board will be printed at the beginning of the game and after each successful turn.

Note: The only features of Go that work are alternating turns between black and white, and not being able to place a stone on an already occupied space.

Algorithm:

Create a list of lists.

-This game will use a coordinate system to identify points on the board, where an x coordinate is inputted first, and a y coordinate is inputted second.

-Each sub list will store the x position, y position, a Boolean that tells if occupied, and the color that occupied(if applicable).

- The last 2 bits in each sub list will be determined dynamically while the game runs.

- A try and except statement will be used when the index of sub lists in the main list are called because an error will be raised if the last 2 bits are called upon when that space hasn't been occupied yet, because the last 2 bits of the sub list don't exist if they haven't been selected by the user, so therefore can't be printed. The except statement prints a "." when the calls for occupancy fail, hence the try and except statement.

1. Run a nested loop that runs through the x values inside a loop that runs through the y values to initialize the main list with just x and y coordinates as sub lists.

2. define a function to print the current state of the board.

    - Use a conditional modulus statement to determine when to start a new line.

    -Use a for loop to run through each sub list and print a character based on if it's occupied, and if so, which color is occupying the space.

    -A white hollow circle is used for black, a filled in white circle is used for white, and a period is used if the space is unoccupied.

    -advance to the input section.

3. define a function to receive user input for the x and y coordinates.

    -a Boolean will be used to determine and print who's turn it is.

-each input for the x and y coordinate will be checked first if “stop” was entered and end the game if so.

-the function will search for the index of the sublist containing those coordinates within the main list, and then append two Booleans: one telling the occupancy, and one telling the color. (white = false, and black = true)

-Since the last part is in a try/except statement, an error will raise if the coordinates are either out of range or already occupied, so the program will prompt the user to try again and then repeat the input function.

4. At the end of these 2 functions, it will run the other, so the game will only end if a user enters “stop.”