Instructions

*The goal of the game is to line up 4 of your color chips before the other player.

*Player 1 is black, represented by "B".

*Player 2 is red, represented by "R".

*Rows can be horizontal, vertical, or diagonal.

*Players take turns dropping chips 1 at a time into 1 of 7 columns of their choice.

*Chips will drop to the lowest unoccupied space in a column and stack on top of each other.

*A column can hold a maximum of 6 chips, after which it can no longer be selected.

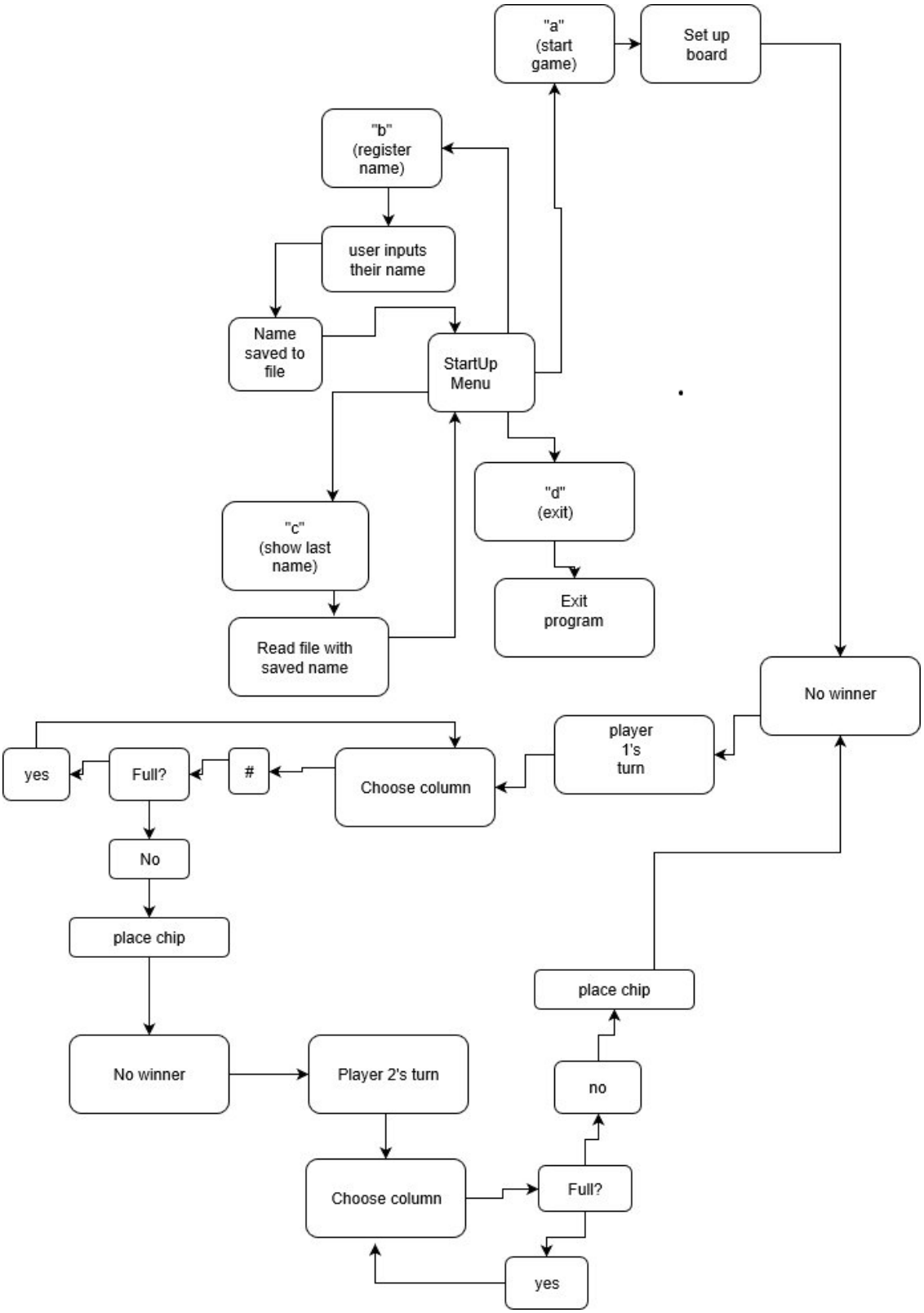
*If all columns are filled and neither player has made a row of 4, the game ends in a draw.

Summary of development

I used preexisting codes I found online as guiding sticks in order to make sure the output had a desirable appearance. A victory condition has not been included yet, as that requires functions/arrays/etc. in order to work. When I felt that I had a satisfactory product, I went back over the checklist and tried to implement as many additional features as I could without padding the project out too much.

Pseudocode

```
//This program is a recreation of the game "Connect Four"
//startup menu
//get the user's selection
//determine the user's selection
        //start the game if "a" was selected
                //construct the board
                //continue the game until a player wins
                        //determine player 1's turn
                                //if player 1 chose column (#)…
                                        //determine if column (#) is full
                                                //place a black chip if possible
                        //determine player 2's turn
                                //if player 2 chose column (#)…
                                        //determine if column (#) is full
                                                //place a red chip if possible
                //update and display the board after each turn
                //switch between players after each turn
                //increase the turn count
        //register the user's name if "b" was selected
        //show the list of registered names if "c" was selected
        //exit the program if "d" was selected
        //loop the menu unless "d" is selected
```


"a"
(start
game)
Set up
board
"b"
(register
name)
user inputs
their name
Name
saved to
file
StartUp
Menu
"d"
(exit)
Exit
program
"c"
(show last
name)
Read file with
saved name
No winner
player
1's
turn
Choose column
#
Full?
yes
No
place chip
No winner
Player 2's turn
Choose column
Full?
yes
no
place chip

Checklist

Topic	Where Line #"s
cout	24- 28, 78, 82, 95, 108, 121, 134, 147, 160, 173, 184, 193, 206, 219, 232, 245, 258, 271, 288, 291, 293, 295, 314, 319, 329, 335, 342, 343, 346
libraries	10-15
variables/literals	20, 60-72, et al.
Identifiers	61-68
Integers	60-69
Characters	20
Strings	316, 331
Floats No Doubles	
Bools	70-72
Sizeof *****	
Variables 7 characters or less	yes
Scope ***** No Global Variables	
Arithmetic operators	
Comments 20%+	yes
Named Constants	yes
Programming Style ***** Emulate	yes
cin	29, 84, 320
Math Expression	
Mixing data types ****	
Overflow/Underflow ****	
Type Casting	
Multiple assignment *****	
Formatting output	
Strings	316, 331
Math Library	
Hand tracing ******	
Relational Operators	

if	85
If-else	76-80, et al.
Nesting	22-348, 89-186, et al.
If-else-if	91-104, et al.
Flags *****	
Logical operators	
Validating user input	
Conditional Operator	
Switch	30
Increment/Decrement	101, 307, et al.
While	73
Do-while	22-348
For loop	36, 40, 44, 48, 52, 56
Files input/output both	318-320, 333-335
No breaks in loops ******	