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                                  Mastermind Lab Pseudocode
       Pseudocode for mastermind() function
Initialize SIZE and dupe as integers
Print "Please enter the size of of pegs you want to play with from 4 and 8"
Do:
       Print "SIZE: "
       Store input in variable SIZE
       If the SIZE is greater than 8 or less than 4 print "INVALID: INPUT OUT OF BOUNDS"
Repeat "Do" while size is greater than 8 or less than 4
Initialize win result as a string
Initialize counter and set to 0
if the counter < SIZE:
       concatenate the character '+' to variable win_result
       increment counter by one
end if
print "please enter whether you want duplicated or not"
       "0. Duplicates OFF"
       "1. Duplicates ON"
Do:
       Print "Duplicates: "
```

Store input in dupe

If dupe is greater than 1 or less than 0 print "INVALID INPUT OUT OF BOUNDS"

Repeat "Do" while dupe is less than 0 or greater than 1

Initialize two-character arrays named code and guess where their size is based on the user input

Initialize result as a string

Initialize counter and set to 0

If the counter < SIZE:

Concatenate the character ' ' to the string result

Increment counter

End if condition false

Call the function createCode() to generate a code for the code array

Initialize a short variable named turn = 0

While turns $\neq 10$ and result \neq win result:

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Print "=====TURN: "<<turns+1<<"=======""
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Call function enterGuess() to input your guess

Increment turns

Call printCode() to print your array

Set result = getResult()

Print "result: " + result

End while-loop

If result == win result

Print "congrats you won!!!"

"You won in " + turns + " turns"

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"the winning code is "
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Call printCode() to print the code

Else:

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Print "You lost :( "
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"The correct code is: "

Call printCode() to print code