main function

while player is still playing

initialize ()

ask if still playing

while gameWon is false

drawBoard ()

playerTurn ()

increase turnCount by 1

checkWinner ()

computerTurn ()

increase turnCount by 1

checkWinner ()

end while gameWon

end while stillPlaying

initialize function

set each position of the game board to blank

drawBoard function

clear current screen

for each line on board

display line with vertical bars and dashes

if not at end of array

display vertical bars and player/computer moves

end for each line

playerTurn function

while validTurn is false

get input for cell row and column from player

validateTurn ()

end while validTurn

store move in board array

computerTurn function

generate random seed

while validTurn is false

generate random row

generate random column

validateTurn ()

end while validTurn

store move in board array

validateTurn function

if row is not 0, 1 or 2

return false

if col is not 0, 1, or 2

return false

if board[#][#] is an empty character

return true

else

return false

checkWinner function

for each row

if a row is all X’s

store the player as a winner of that game in score array

store the amount of turns it took to win in score array

return true

else if a row is all O’s

store the computer as winner of that game in score array

store the amount of turns it took to win in score array

return true

end for each row

for each column

if a column is all X’s

store the player as a winner of that game in score array

store the amount of turns it took to win in score array

return true

else if a row is all O’s

store the computer as winner of that game in score array

store the amount of turns it took to win in score array

return true

end for each column

if diagonal one is all X’s

store the player as a winner of that game in score array

store the amount of turns it took to win in score array

return true

else if diagonal one is all O’s

store the computer as winner of that game in score array

store the amount of turns it took to win in score array

return true

else if diagonal two is all X’s

store the player as a winner of that game in score array

store the amount of turns it took to win in score array

return true

else if diagonal two is all O’s

store the computer as winner of that game in score array

store the amount of turns it took to win in score array

return true

else

for each row

for each column

if any spots on the board are empty

return false

end for each column

end for each row

store the Cat as winner of that game in score array

store the amount of turns it took to win in score array

return true

menu function

if no games have been played yet

get input if they would like to play

while validInput is false

if input is ‘y’ or ‘Y’

validInput is true

gameWon is false

else if input is ‘n’ or ‘N’

exit program

else

prompt to enter a valid input

end while validInput

if a game has been played

get input if they would like to play again

while validInput is false

if input is ‘y’ or ‘Y’

validInput is true

gameWon is false

else if input is ‘n’ or ‘N’

findWinner()

exit program

else

prompt to enter a valid input

end while validInput

findWinner function

while the current row being processed is less than the total amount of games played

if the winner of the next  game is the computer

if the next game was won in the same amount of or less turns than the current game

the current winner is the winner of the next game

the fewest winning turns is now the next games

increment the row by 1

else

if the next game is won in less turns than the current game

the current winner is the winner of the next game

the fewest winning turns is now the next games

increment the row by 1

end  while current row

while the current row being processed is less than the total amount of games played

if this rows listed winner is the player

increment player wins by 1

increment row by 1

if this rows listed winner is the computer

increment computer wins by 1

increment row by 1

else

increment cat wins by 1

increment row by 1

end while current row

if the winner is the player

print that the player won overall in winningTurns amount of turns

else

print that the computer won overall in winningTurns amount of turns

print the total games won by the player

print the total games won by the computer

print the total games won by the cat