
```

clc,clear

load('Connect');
figure('WindowStyle','docked')
imshow([Board{1,:};Board{2,:};Board{3,:};Board{4,:};Board{5,:};Board{6,:}])
Board2=Board;
%Creates a vector for the game board
A=zeros(6,7);
%Sets the condition that "game" is true for the while loop
Game=true;
%Runs the game until someone gets four in a row

while Game==true;
%Establishes who's turn it is
turn=0;
%Checks if it is Player 1's turn and prompts Player 1 to insert a chip
into a valid column
if turn==0
k=0;
Guess=input('Player 1, please select a column:');
if Guess>7 | Guess<1
    Guess=input('Please select a column 1 through 7:');
elseif Guess~=1&Guess~=2&Guess~=3&Guess~=4&Guess~=5&Guess~=6&Guess~=7
    Guess=input('Please type an integer:');
else
    Guess=Guess;
end
%Places Player 1's chip into a non-filled column
for k=1:6
    if A(1,Guess)~=0
        Guess=input('Please select a column that is not full:');
    end
    if A(7-k,Guess)==0
        A(7-k,Guess)=1;
        Board(7-k,Guess)={redchip};

        imshow([Board{1,:};Board{2,:};Board{3,:};Board{4,:};Board{5,:};Board{6,:}])
        break
    elseif A(7-k,Guess)==1 | A(7-k,Guess)==2
        k=k+1;
    end
end
%Checks for verticle win for Player 1
x=1;
y=1;
for x=1:7
    for y=1:3
        if A(y,x)==1 & A(y+1,x)==1 & A(y+2,x)==1 & A(y+3,x)==1
            fprintf('Player 1 Wins!')
            Game=false;
        else
            turn = turn+1;
        end
    end
end

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        turn = mod(turn,2);
    end
end
end
%Checks for horizontal win for Player 1
if Game==true
    x=1;
    y=1;
    for x=1:4
        for y=1:6
            if A(y,x)==1 & A(y,x+1)==1 & A(y,x+2)==1 & A(y,x+3)==1
                fprintf('Player 1 Wins!')
                Game=false;
            else
                turn = turn+1;
                turn = mod(turn,2);
            end
        end
    end
end
%Checks for diagonal (up and to the right) win for Player 1
if Game==true
    x=1;
    y=1;
    for x=1:4
        for y=1:3
            if A(y,x)==1 & A(y+1,x+1)==1 & A(y+2,x+2)==1 & A(y+3,x
+3)==1
                fprintf('Player 1 Wins!')
                Game=false;
            else
                turn = turn+1;
                turn = mod(turn,2);
            end
        end
    end
end
%Checks for diagonal (up and to the left) win for Player 1
if Game==true
    x=1;
    y=1;
    for x=4:7
        for y=1:3
            if A(y,x)==1 & A(y+1,x-1)==1 & A(y+2,x-2)==1 & A(y
+3,x-3)==1
                fprintf('Player 1 Wins!')
                Game=false;
            else
                turn = turn+1;
                turn = mod(turn,2);
            end
        end
    end
end
end
end

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%Checks for stalemate
if Game==true
    if prod(A,'all')~=0
        fprintf('Stalemate! Game Over!')
        Game=false;
    end
end

end

%Checks if it is Player 2's turn and prompts Player 2 to insert a chip
into a valid column
if turn==1
    k=0;
    Guess=input('Player 2, please select a column:');
    if Guess>7 | Guess<1
        Guess=input('Please select a column 1 through 7:');
    elseif
        Guess~=1&Guess~=2&Guess~=3&Guess~=4&Guess~=5&Guess~=6&Guess~=7
        Guess=input('Please type an integer:');
    else
        Guess=Guess;
    end
%Places Player 2's chip into a non-filled column
for k=1:6

    if A(7-k,Guess)==0
        A(7-k,Guess)=2;
        Board(7-k,Guess)={blackchip};

        imshow([Board{1,:};Board{2,:};Board{3,:};Board{4,:};Board{5,:};Board{6,:}])
        break
    elseif A(7-k,Guess)==1 | A(7-k,Guess)==2
        k=k+1;
    else
        Guess=input('Enter a valid number:');
    end
end

%Checks for verticle win for Player 2
x=1;
y=1;
for x=1:7
    for y=1:3
        if A(y,x)==2 & A(y+1,x)==2 & A(y+2,x)==2 & A(y+3,x)==2
            fprintf('Player 2 Wins!')
            Game=false;
        else
            turn = turn+1;
            turn = mod(turn,2);
        end
    end
end

%Checks for horizontal win for Player 2

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if Game==true
    x=1;
    y=1;
    for x=1:4
        for y=1:6
            if A(y,x)==2 & A(y,x+1)==2 & A(y,x+2)==2 & A(y,x+3)==2
                fprintf('Player 2 Wins!')
                Game=false;
            else
                turn = turn+1;
                turn = mod(turn,2);
            end
        end
    end
end
%Checks for diagonal (up and to the right) win for Player 2
if Game==true
    x=1;
    y=1;
    for x=1:4
        for y=1:3
            if A(y,x)==2 & A(y+1,x+1)==2 & A(y+2,x+2)==2 & A(y+3,x
+3)==2
                fprintf('Player 2 Wins!')
                Game=false;
            else
                turn = turn+1;
                turn = mod(turn,2);
            end
        end
    end
end
%Checks for diagonal (up and to the left) win for Player 2
if Game==true
    x=1;
    y=1;
    for x=4:7
        for y=1:3
            if A(y,x)==2 & A(y+1,x-1)==2 & A(y+2,x-2)==2 & A(y
+3,x-3)==2
                fprintf('Player 2 Wins!')
                Game=false;
            %
                P=input('\nPlay again?    If yes, enter 1    If no,
enter 2:');
            % if P==1
            %     Game=true;
            %     Board=Board2;
            %
            imshow([Board{1,:};Board{2,:};Board{3,:};Board{4,:};Board{5,:};Board{6,:}])
            %
            % elseif P==2
            %     Game=false;
            % else
            %     P=input('Please enter either 1 or 2:');

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% end

        else
            turn = turn+1;
            turn = mod(turn,2);
        end
    end
end
end
%Checks for stalemate
if Game==true
    if prod(A,'all')~=0
        fprintf('Stalemate! Game Over!')
        Game=false;
    end
end
end

end
% P=input('\nPlay again?    If yes, enter 1    If no, enter 2:');
% if P==1
%     Game=true;
%
% elseif P==2
%     Game=false;
% else
%     P=input('Please enter either 1 or 2:');
% end

```

Warning: The initial magnification of the image is set to 'fit' in a docked figure.

*Error using input
Cannot call INPUT from EVALC.*

*Error in ConnectFour (line 19)
Guess=input('Player 1, please select a column:');*

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