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Step 1: noting down the basic rules of the game

Have a conditional statement to display rules or not

Create a word bank and set up list of words

Choose a random word

Tell the player how many letters the word has and how many lives they have left

Make the player guess a letter

Have conditional statements for if the letter is matching or not

If it matches, place the letter

If it doesn't match, the player looses a life

keep repeating until game ends

Step 2: determining what we need in this program

We need if conditions

for or while loops

random word from the word bank

input statements

Step 3 implement code

```
%Harshil Brinda, 1202 Section EC1


disp("You are now playing Hangman, welcome!")
```

```
You are now playing Hangman, welcome!
```

```
%the input accepts the input only as y or n
rulesCheck = input("Do you understand the game rules? (y/n)",'s');
clc
%if condition, executes if the player enters n and then displays game rules
if strcmpi(rulesCheck, 'n')
    disp("The game of Hangman is a one player game that requires you to " + ...
        "guess lowercase letters (a-z) to try to guess a word. " + ...
        "You have 8 lives. You lose a life for each wrong letter. " + ...
        "Zero lives results in a Game Over. A reguess of a letter WILL remove a
turn.")
end
```

```
% declares the word bank array of strings, can be edited to increase list of words
wordBank  = ["apple","value","string","plane","horse","fun","play","game",...
             "values", "variables", "possibilities", "universe", "coding",...
             "binary","computers","engineering","university","charlotte",...
             ];
% randomizes a number, used to choose a random word
a = randperm(length(wordBank),1);

% used the random number from line above to select word
word = wordBank(a);

% uses a function to display how many letters in a word
NumLetters = strlength(word);
disp("Your word in this game has " + NumLetters + " letters")
```

```
Your word in this game has 6 letters
```

```
%char_word = char(word); %converts word into characters
lives = 8; %assigns number of lives

%  creating blanks for unguessed letters
wordBlanks=strings;
for i=1:NumLetters
    wordBlanks(i)='_';
end

clc %clear command window
fprintf('%s',wordBlanks) %prints the word blanks
```

```
_____
```

```
winChecker = 0 %used in loop below
```

```
winChecker =
0
```

```
while lives<=8 && lives>0
    disp("You have " + lives + " lives left.") %prints lives left
    guess=input('Enter in your letter guess: ','s') % input your letter guess
    char_guess=char(guess); %converts guess into a character
    letterPos = strfind(word,guess); %finds if guess is part of the word


    if ~isempty(letterPos) %checks if player got guess right
        for i=1:length(letterPos)
            letterPlacer=letterPos(i);
            wordBlanks(letterPlacer)=guess; %stores guessed letter
            disp(wordBlanks)
```

```
            winChecker = winChecker + 1
        end
    else
        lives=lives-1; %removes a life if guess was incorrect
    end


    if winChecker == NumLetters % checks if letters correct = number of letters
        disp("You guessed the word! Thanks for playing!") %displays win
        break

    elseif lives==0 %if you run out of lives, you lose
        disp("You ran out of lives! The puzzle was: " + word)
    end
end
```

```
You have 8 lives left.
guess =
'd'
    "_"    "_"    "d"    "_"    "_"    "_"
winChecker =
1
You have 8 lives left.
guess =
'q'
You have 7 lives left.
guess =
'p'
You have 6 lives left.
guess =
'n'
    "_"    "_"    "d"    "_"    "n"    "_"
winChecker =
2
You have 6 lives left.
guess =
'h'
You have 5 lives left.
guess =
'd'
    "_"    "_"    "d"    "_"    "n"    "_"
winChecker =
3
You have 5 lives left.
guess =
'k'
You have 4 lives left.
guess =
'x'
You have 3 lives left.
guess =
'f'
You have 2 lives left.
guess =
't'
You have 1 lives left.
guess =
'e'
You ran out of lives! The puzzle was: coding
```