

# MAIN ELEMENTS IN ALL COMPUTER LANGUAGES

- INPUT & OUTPUT

- STORAGE OF INFO - VAR'S, ARRAYS

- PROCESSING, e.g., MATH

- PROCEDURES → FUNCTIONS IN MATLAB.

→ LINES OF CODE  
CURL (USE) WITH  
ONE LINE

NOW

- DECISIONS → CHAP 4 'SELECTION' → IF STRUCTURES  
SWITCH ||

- REPEATS → CHAP 5 → FOR  
WHILE

PSEUDOCODE → COMMENTED LINES OR HANDWRITTEN  
→ DEVELOP LOGIC B4 WORRY ABOUT CODE

% WHILE USER WANTS TO CONTINUE ← NOW ADD LINES OF CODE  
% REPEAT DISPLAYING MENU BELOW COMMENTS,  
% GET USER'S CHOICE  
% TAKE ACTION DEPENDING ON CHOICE  
% CONTINUE REST OF PROGRAM

% ch is choice.

ch = 0 % INITIALIZE

while ch != 3 % START "REPEAT STRUCTURE"

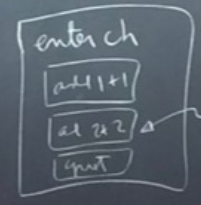
!= "NOT EQUAL"  
== "IS EQUAL"

REPEAT  
STRUCTURE

ch = menu('enter ch', 'add 1+1', 'add 2+2', 'quit');

```
switch ch
  case 1
    myResult = 1+1
  case 2
    myResult = 2+2
  case 3
    disp('goodbye')
end ← end
```

DECISION STRUCTURE  
(ATTAKKI 'SELECTION')



USER CLICKS SECOND  
BUTTON, MENU FUNCTION  
RETURNS 2

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```

% examples of
%   decision (selection) structures (Chap 4): if, switch
%   repeat structures (Chap 5): while, for
% structures can be "nested" inside each other

% ch is user choice
ch = 0; % initialize so enter repeat at least once

% start repeat structure
while ch ~= 3 % while ch not equal 3

    % display menu and get user choice
    ch = menu('enter ch', 'add 1+1', 'add 2+2', 'quit')
    % first string in menu is the prompt, following are button titles
    % when first button clicked, 1 is returned, etc.

    % start decision structure
    switch ch
        case 1
            % user clicked "add 1+1"
            myResult = 1+1
        case 2
            myResult = 2+2
        case 3
            disp('good bye')
    end
end

ch =

    1

myResult =

    2

ch =

    3

good bye

```

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