

if-end statement

An if...end statement consists of an if statement and a boolean expression followed by one or more statements. It is delimited by the end statement.

Syntax

The syntax of an if statement in MATLAB is –

```
if <expression>
```

```
    % statement(s) will execute if the boolean expression is true
```

```
    <statements>
```

```
end
```

If the expression evaluates to true, then the block of code inside the if statement will be executed. If the expression evaluates to false, then the first set of code after the end statement will be executed.

Create a script file and type the following code:

```
b = 100;  
% check the condition using if statement  
if b < 20  
    % if condition is true then print the following  
    fprintf('b is less than 100\n' );  
end
```

When you run the file, it displays the following result –

b is less than 20

if else statement

An if statement can be followed by an optional else statement, which executes when the expression is false.

Syntax

The syntax of an if...else statement in MATLAB is –

if <expression>

 % statement(s) will execute if the boolean expression is true

 <statement(s)>

else

 <statement(s)>

 % statement(s) will execute if the boolean expression is false

end

If the boolean expression evaluates to true, then the if block of code will be executed, otherwise else block of code will be executed.

```
n= input('Enter the number');
% check if number is even or odd
if (mod(n,2)==0)
    % if condition is true then print the following
    fprintf('The number is even\n' );
else
    % if condition is false then print the following
    fprintf('The number is odd\n' );
end
```

When the above code is compiled and executed, it produces the following result

Enter the number

7

The number is odd