

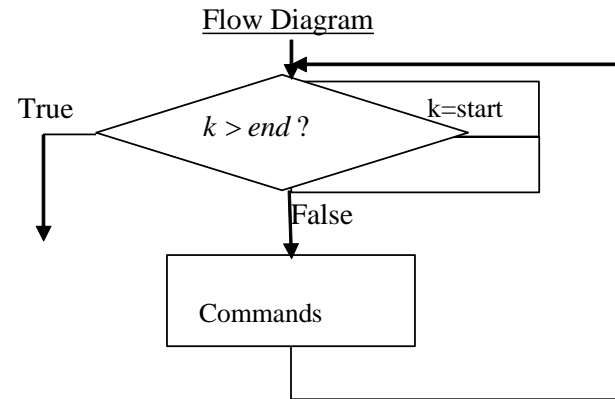
WEEK 8

For Loop

This command is used to repeat a command group

General Usage:

```
for k=start:increment:end  
    Commands  
end
```



for Loop

Example 1:

```
y(1)=1  
Top=y(1);  
  
for i=1:5  
y(i+1)=2*y(i);  
  
End  
  
for i=1:5  
Top=Top+y(i+1);  
end
```

for loop

Example 2

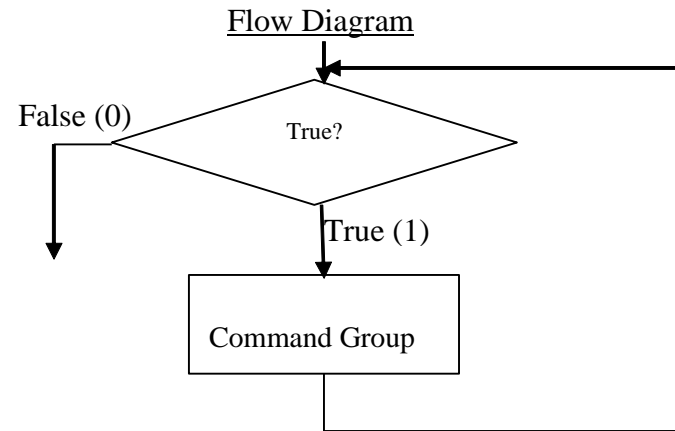
```
m=3; n=4;  
  
for i=1:m  
  
    for j=1:n  
        A(i,j)=1/(i+j-1)  
    end  
  
end
```

Example 3:

```
k=1  
for n=0:0.2:1  
    x(k)=n;  
    f(k)=n*n;  
k=k+1  
end
```

While Loop

General usage:
while condition
 Commands
end



Example 1:

```
q=pi;  
while q>0.01  
    q=q/2  
end
```

Example 2:

```
a=5  
while a<10  
    a=a+1  
end
```

Example 3:

```
a=0  
while a<10  
  
    disp('Civil Engineering Department')  
end
```


Example 4:

```
y=zeros(1,2)
x=[2 3]
while x>=0
    y=y+x
    x=x-1
disp(y)
end
```

Output;

2	3
3	5
3	6

fprintf Function

General usage:

```
fprintf('Text%f \n', value)
```

Example 1:

```
>>fprintf('pi number= %5.2f \n\n ', pi)
```

RESULT:

pi NUMBER= 3.14

Explanation:

%5; (5 digits)

.2f; (2)

\n; to start from next line

Example 2:

```
fprintf('Start of loop\n');  
for i = 4:-1:1  
    fprintf('MERHABA i = %g\n',i);  
end  
fprintf('\n end of loop\n');
```

Example 3:

```
for a=1:10  
    for b=1:10  
        carpim=a*b;  
        fprintf(' %d * %d = %d\n ', a, b, carpim)  
    end  
end
```