MATLAB - Loop Types

```
for a = 10:1:20
   fprintf('value of a: %d\n', a);
end
```

```
value of a: 10
value of a: 11
value of a: 12
value of a: 13
value of a: 14
value of a: 15
value of a: 16
value of a: 17
value of a: 18
value of a: 19
value of a: 20
```

```
for a = 1.0: -0.1: 0.0
   disp(a)
end
```

```
      1

    0.9000

    0.8000

    0.7000

    0.6000

    0.5000

    0.4000

    0.3000

    0.2000

    0.1000

     0
```

```
for i = 1:5
   fprintf('%d',i)
end
```

```
12345
```

```
for i = 1:5
    sum= 0
    sum= sum + i;
   end
disp(sum);
sum =

     0


sum =

     0


sum =

     0


sum =

     0


sum =

     0

     5
```

The while Loop

```
a = 10;
% while loop execution
while( a < 20 )
   fprintf('value of a: %d\n', a);
   a = a + 1;
end

value of a: 10
value of a: 11
value of a: 12
value of a: 13
value of a: 14
value of a: 15
value of a: 16
value of a: 17
value of a: 18
value of a: 19


a = 10;
% while loop execution
while (a < 20 )
```

```
   fprintf('value of a: %d\n', a);
   a = a + 1;
      if( a > 15)
         % terminate the loop using break statement
         break;
      end
end
```

```
value of a: 10
value of a: 11
value of a: 12
value of a: 13
value of a: 14
value of a: 15
```

```
a = 9;
%while loop execution
while a < 20
   a = a + 1;
   if a == 15
      % skip the iteration
      continue;
   end
fprintf('value of a: %d\n', a);
end
```

```
value of a: 10
value of a: 11
value of a: 12
value of a: 13
value of a: 14
value of a: 16
value of a: 17
value of a: 18
value of a: 19
value of a: 20
```

Function in MATLAB

```
a= 30;
b= 20;
c= myfun(a,b);
function result= myfun(a,b)
result= a+b;
end
fprintf('addition result %d',c);
disp(c);
```

```
addition result 50    50
```

```
a= 50;
b= 40;
[c,d]= fun(a,b);
function [result1, result2]= fun(a,b)
```

```
result1= a+b;
result2= a+b;
end
fprintf('addition result %d',c);
disp(c);
disp(d);



addition result 90    90

    90
```