

## 22. OTHER LOOPS COMPARISONS (WHILE AND DO-WHILE LOOP)

### 1. WHILE LOOP

#### *1st Type*

```
i = 0; // initialization  
while(i ≤ n){ //condition  
    k = k + 1; //statement  
    i + +; //updatation  
}
```

**CAN ALSO BE IN FOR LOOP:**

```
for(i = 0; i ≤ n; i + +){  
    k = k + 1;  
}
```

#### *2nd Type*

```

n = 3//INITIALIZATION
m = 16 //INITIALIZATION
while(m! = n){ //CONDITION
if(m > n){
    m = m - n; //UPDATION
}

else{
    n = n - m; //UPDATION
}
}

```

**THIS CAN ALSO BE REPRESENTED AS:**

```

m = 100
n = 5
for(; m! = n ;    ){
if(m > n){
    m = m - n;
}
else
{
    n = n - m;
}
} //For loop ends,

```

## 2. DO WHILE LOOP

```
do{  
   $k = k + 1$ ; //statement  
   $i = i + 1$ ; //updation  
}while( $i < n$ ); //condition
```

*In While , conditions are checked at first(entry controlled)but in do while loop conditions are checked at last but both can be represented by for loop and gives same complexity and process is same .*