

C_40 \Rightarrow Difference b/w for, while & do while

Entry Controlled loop

* for

* while

Exit Controlled loop

* do while

for loop

* Entry Controlled loop

```
* for (initialisation; condition; update/modify)
{
    Body of loop;
}
```

* Statements inside the body of loop will not be executed if condition is false.

* When we know the number of iterations we use for loop.

while loop

* Entry Controlled loop

```
* while (condition)
{
    body of loop;
}
```

* Here also statements inside loop body will not be executed if condition is false.

* When we don't know the no. of iterations; i.e. at the run time when user gives input.

do while loop

* Exit Controlled loop

```
* do
{
    statement 1;
    "
    "
} while (condition);
```

* But here the loop body is executed at least once whether condition is true or false.

* It is also same; (i.e) it is used when we don't know the no. of iterations.

for loop

Eg: $i=1$ $i \leq 10$

Iteration 10 times

* Here after 10th time loop terminates. It depends on terminating condition.

while loop

Eg: $while(1)$

(i.e.)
* print no. of integers until user enter 0.
* Here we don't know no. of iterations.

do while loop

Eg: same as while loop.