

for → How many times need to execute the stmts. → 10, 100

while → execution of stmt will be continued till the condition is true.

Program → ] → ⑤  
while

stmts → execute

1 → true      12      5  
2      50  
3 4 5      51

App. →

While →  
↓  
stop

→ buys → find

Example

Store → for .  
→ 15 → job

for → App → 20 buys

for { Day 1 → Customer  
          → 10-7  
          Day 2 → 15  
                  → 15

while .

{ Day 1 → 20 → 10-7  
  Day 2 → (5)

for while :-

4 2 6 7 → (4)

2 3 → (2)

$> 0$  ← 4 6 7

7 6 4

↓ ↓ ↓  
1 2 3

Rev using loop

[1000000]

Please enter No 12 → 2 program

> 0

Rev  
21  
—

2. 4678 →

Syntax:

```

initialisation
while(condition){
    Stmt;
    inc/dec.
}
    
```

$$\begin{array}{r}
 8 \\
 5 \overline{)40} \\
 \underline{40} \\
 0 \rightarrow \underline{8}
 \end{array}$$

$$\begin{array}{r}
 42 \rightarrow Qr \\
 10 \overline{)425} \\
 \underline{40} \\
 25 \\
 \underline{20} \\
 5 \rightarrow \underline{Rem}
 \end{array}$$

$$\begin{aligned}
 &52 * 10 + 4 \\
 &520 + 4 = \underline{524} \rightarrow
 \end{aligned}$$

$$\begin{array}{c}
 425 \rightarrow 524 \\
 \text{H T O} \quad \text{H 500} \\
 \underline{\quad} \quad \underline{\quad} \quad \underline{\quad}
 \end{array}$$

$$\text{Step 1} \rightarrow 425 / 10 \rightarrow 5 \rightarrow \textcircled{1}$$

$$\text{Step 2} \rightarrow 425 / 10 \rightarrow \underline{42}$$

$$\begin{array}{ccc}
 \text{Rem} & \rightarrow & \text{Rev} \\
 \textcircled{1} \quad 5 & & \underline{5} \\
 \downarrow & & \rightarrow 52 \\
 (2) \quad 2 & \rightarrow & \underline{2} \quad 52
 \end{array}$$

$$\begin{aligned}
 &\text{Rev} = 0 \quad 52 \\
 &\quad \quad \quad \text{Rev} \quad 5 * 10 + 2 \\
 &\quad \quad \quad \underline{0 * 10 + \text{Rem}} \quad 52 \\
 &\quad \quad \quad \underline{0 * 10 + 5} \rightarrow \textcircled{5}
 \end{aligned}$$

using While Loop (find Reverse)

1. int num = 425  $\rightarrow$  42  $\rightarrow$  4

2. Reverse  $\rightarrow$  425.

3. Remainder  $\rightarrow$

1. rem  $\rightarrow$  % 10

2. num  $\rightarrow$  / 10  
 $\rightarrow$  rev = rev \* 10 + rem;



# Sum of digits of a Number  $\rightarrow$  4621  $\rightarrow$  (13)

# check whether number is palindrome or not  $\rightarrow$  111  $\leftarrow \rightarrow$  111

# check whether a number is Armstrong or not  $\rightarrow$  MAM  $\leftarrow$   
1331  $\leftarrow$

Armstrong

153  $\rightarrow$  Yes

$$\underline{1^3 + 5^3 + 3^3} \rightarrow \underline{153} \rightarrow 1 + 125 + 27$$

2 14  $\rightarrow$  X Not a Armstrong 153

$$2^3 + 1^3 + 4^3 = 8 + 1 + 64 \rightarrow 65 + 8 = \underline{73}$$

Do while :- Will execute the stmt without checking any condition.

1 → LD

Syntax: initialisation

do {

stmt;

inc/dec;

} while (condition);