

while loop - pre-condition

```
while(cond)
{
```

```
}
```

```
int cnt = 1;
while(cnt<=10)
{
    ..
    ..
    cnt++;
}
```

```
char ch = 'y';
```

```
while(ch=='y')
{
    ..
    ..
    cout<<"\n Do u want to cont.. (y/n)";
    cin>>ch;
}
```

```
do {
    ..
    ..
}while(<condi>);
```

---

Print table of a given number.

Take a number and print table

```
#include<iostream>
using namespace std;

int main()
{
    int i, num;
    cout<<"\n Enter a number :";
    cin>>num; //2

    for(i=1 ; i<=10 ;i++) //4
        cout<<num<<" * "<<i<<" = "<<num*i;
```

```

    cout<<"\n i = "<<i; //11
    return 0;
}

```

```

i=1;
while(i<=10)
{
    cout.....
    i=i+1;
}

```

2. Take a number and print its factorial

```

#include<iostream>
using namespace std;

int main()
{
    int i,num,fact = 1;

    cout<<"\n Enter a number :";
    cin>>num; //5

    for(i=num ; i>1; i--) //i = 1
        fact = fact * i; // fact = 120

    for(i=2;i<=num;i++)
        fact = fact * i;

    cout<<"\nFactorial of "<<num<<" = "<<fact;
    return 0;
}

```

#3. Take a number and print its factors.

4 - 1, 2, 4

15 - 1, 3, 5, 15

17 - 1, 17

24 - 1, 2, 3, 4, 6, 8, 12, 24

```

int i, num;
cout<<"\n Enter number..";
cin>>num; //8

```

```

for(i=1; i<=num ;i++)

```

```

{
    if((num % i) == 0)
        cout<<" "<<i;
}

return 0;

```

Take a number and print it is prime or not?

```

num = 24;
for(i=2 ; i < num ;i++)
{
    if((num % i) == 0)
        break;
}

if(i == num)
    cout<<"prime";
else
    cout<<"not prime";

```

Take a number and print count of its digits

2345 - 4

0 - 7

```

int num, cnt = 0;
cout<<"\n Enter a number..";
cin>>num;

```

```

for( ; num>0 ; )
{
    cnt = cnt + 1;
    num = num /10;
}

```

sum of digits of a number.

```

int num, sum = 0,rem;
cout<<"\n Enter a number..";
cin>>num;                                //432567

```

```

for( ; num>0 ; )
{
    rem = num % 10;                        // 4
    sum = sum + rem;                       //sum = 27
}

```

```

        num = num /10;          num =0
    }

    cout<<"\n Sum of digits = "<<sum;
    return 0;

```

reverse of a number.

```

int num, rem, rev_no = 0;
cout<<"\n Enter a number..";
cin>>num;                //432567

for( ; num>0 ; )
{
    rem = num % 10;                2
    rev_no = rev_no * 10 + rem;    7652
    num = num /10;                num =432
}
use rev_num
cout<<"\n Sum of digits = "<<sum;
return 0;

```

---

Menu-driven program

```

1. Tea      -      10/-
2. Coffee   -      20/-
3. Black Tea -      22/-
4. Vada Paav -      15/-
5. Exit

```

```

#include<iostream>
using namespace std;

int main()
{
    int ch, qty, total_bill = 0;

    do {
        cout<<"\n 1. Tea      -      10/-";
        cout<<"\n 2. Coffee   -      20/-";
        cout<<"\n 3. Black tea -      22/-";
        cout<<"\n 4. Vada paav -      15/-";
        cout<<"\n 5. Exit";
        cout<<"\n Enter your choice..(1..5)";
        cin>>ch;
        if((ch>=1) && (ch<=4))
        {
            cout<<"\n Enter quantity :";

```

```
    cin>>qty;
}
switch(ch)
{
    case 1: total_bill = total_bill + qty * 10; break;
    case 2: total_bill = total_bill + qty * 20; break;
    case 3: total_bill = total_bill + qty * 22; break;
    case 4: total_bill = total_bill + qty * 15; break;
    case 5: break;
    default: cout<<"\n Invalid choice. Enter 1..5";
}

}while(ch!=5);

cout<<"Total Bill Amount = "<<total_bill;
return 0;
}
```

