TASK # 01

Run the sample programs, note the output and get familiar with the syntax of for loop.
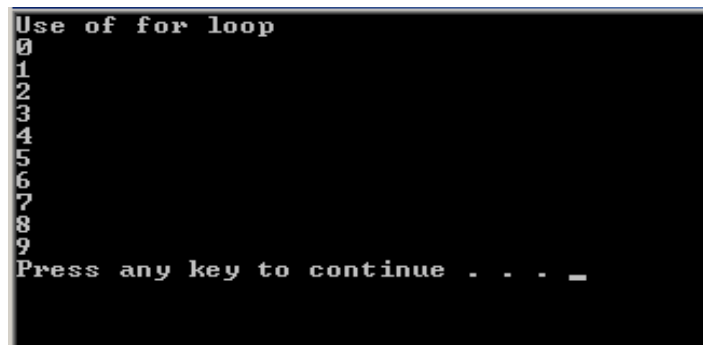
Sample 1:

Code:

```cpp
#include "stdafx.h"
#include<iostream>
using namespace std;
int main(){
        cout<<"Use of for loop"<<endl;
    int i;
    for(i=0;i<10;i++)
    {
        cout<<i<<endl;
    }

        system("pause");
                return 0;
}
```
Output:

```
Use of for loop
0
1
2
3
4
5
6
7
8
9
Press any key to continue . . . _
```

Sample 2:

Code:

```cpp
#include "stdafx.h"
#include<iostream>
using namespace std;
int main(){
        cout<<"use of nested loops"<<endl;
    for(int i=1;i<=4;i++)
    {
    for(int j=1;j<=3;j++)
    {
    cout<<i<<"\t"<<j<<endl;
    }
    }

        system("pause");
                return 0;
}
```

Output:

```
use of nested loops
1          1
1          2
1          3
2          1
2          2
2          3
3          1
3          2
3          3
4          1
4          2
4          3
Press any key to continue . . .
```

Sample 3:

Code:

```cpp
#include "stdafx.h"
#include<iostream>
using namespace std;
int main(){
int n, i, count=0;
cout <<" Enter a positive integer: \n";
cin >> n;
for(i=2;i<n;i++)
{
if(n%i==0)
{ count=1;
break;
}
}
if (count==0)
cout<<"This is a prime number\n";
else
cout<<"This is not a prime number\n";

        system("pause");
                return 0;
}
```

Output:

```
 Enter a positive integer:
6
This is not a prime number
Press any key to continue . . .
```

TASK # 02

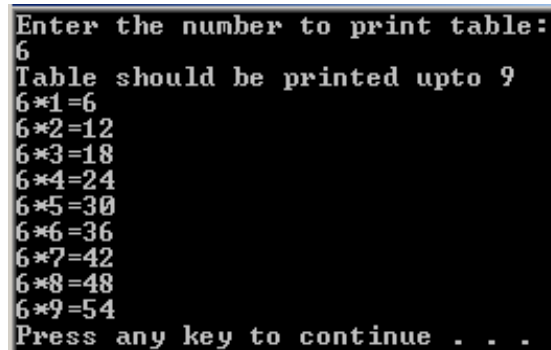Create a program which print the table of a number using for loop.

table of and table upto will be entered by user

Code:

```cpp
#include "stdafx.h"
#include<iostream>
using namespace std;
int main(){
    int n, t, count=0;
        cout<<"Enter the number to print table: \n";
        cin>>n;
        cout<<"Table should be printed upto ";
        cin>>t;
        for(int i=1;i<=t;i++)
        cout<<n<<"*"<<i<<"="<<n*i<<endl;

        system("pause");
            return 0;
}
```

Output:

```
Enter the number to print table:
6
Table should be printed upto 9
6*1=6
6*2=12
6*3=18
6*4=24
6*5=30
6*6=36
6*7=42
6*8=48
6*9=54
Press any key to continue . . .
```

TASK # 03

Create a c++ to find the sum of first 50 natural numbers using for loop

Code:

```cpp
#include "stdafx.h"
#include<iostream>
using namespace std;
int main(){
        int sum=0;
    for(int i=1;i<=50;i++)
                sum=sum+i;
        cout<<"Sum of first fifty natural numbers is "<<sum<<endl;

        system("pause");
            return 0;
}
```

Output:

```
Sum of first fifty natural numbers is 1275
Press any key to continue . . .
```
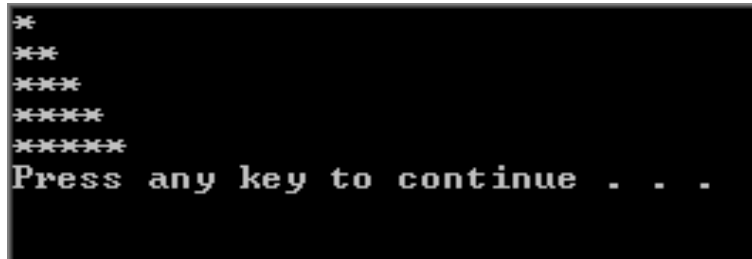
TASK # 04

Create a C++ program to print the following * patterns using for loop

Code:

```cpp
#include "stdafx.h"
#include<iostream>
using namespace std;
int main(){
    for(int i=1;i<=5;i++){
        for(int j=1;j<=i;j++)
            cout<<"*";
        cout<<endl;}

    system("pause");
        return 0;
}
```

Output:

```
*
**
***
****
*****
Press any key to continue . . .
```

TASK # 05

Create a program which take 10 values from user using for loop your program should count the total number of positive numbers, total number of negative numbers and total number of zeros

Code:

```cpp
#include "stdafx.h"
#include<iostream>
using namespace std;

int _tmain(int argc, _TCHAR* argv[])
{
    int n=0,np=0,nn=0,nz=0;
    for(int i=1;i<=10;i++){
        cout<<"Enter a number: \n";
        cin>>n;
        if(n<0)
            nn++;
        else if(n>0)
            np++;
        else if(n==0)
            nz++;}
    cout<<"Number of positive values: " <<np<<endl;
    cout<<"Number of negative values: " <<nn<<endl;
```

```cpp
        cout<<"Number of zero values: " <<nz<<endl;

    system("pause");
        return 0;}
```

Output:

TASK # 06

Write a program to print abc using their ascii values.

Code:

```cpp
#include "stdafx.h"
#include<iostream>
using namespace std;
int main(){

    for(int i=97;i<=122;i++)
        cout<<"ascii value for "<<(char)i<<" = "<<i<<endl;
    system("pause");
        return 0;}
```
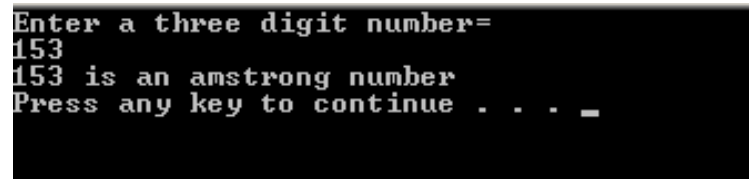**Output:**

TASK # 07

Write a program to print out all Armstrong numbers between 99 and 999. If sum of cubes of each digit of the number is equal to the number itself, then the number is called an Armstrong number.

Code:

```cpp
#include "stdafx.h"
#include<iostream>
using namespace std;
int _tmain(int argc, _TCHAR* argv[])
{
    int num, org, rem, res=0;
        cout<<"Enter a three digit number= \n";
        cin>>num;
        if((num>99)||(num<999)){
        org=num;
        while(org!=0){
                rem=org%10;
                res+=rem*rem*rem;
                org/=10;}
        if(res==num)
                cout<<num<<" is an amstrong number"<<endl;
        else
                cout<<num<<" is not an amstrong number \n";}
        else
                cout<<"Please enter a number between 99 and 999"<<endl;
    system("pause");
        return 0;
}
```

Output:

```
Enter a three digit number=
153
153 is an amstrong number
Press any key to continue . . . _
```