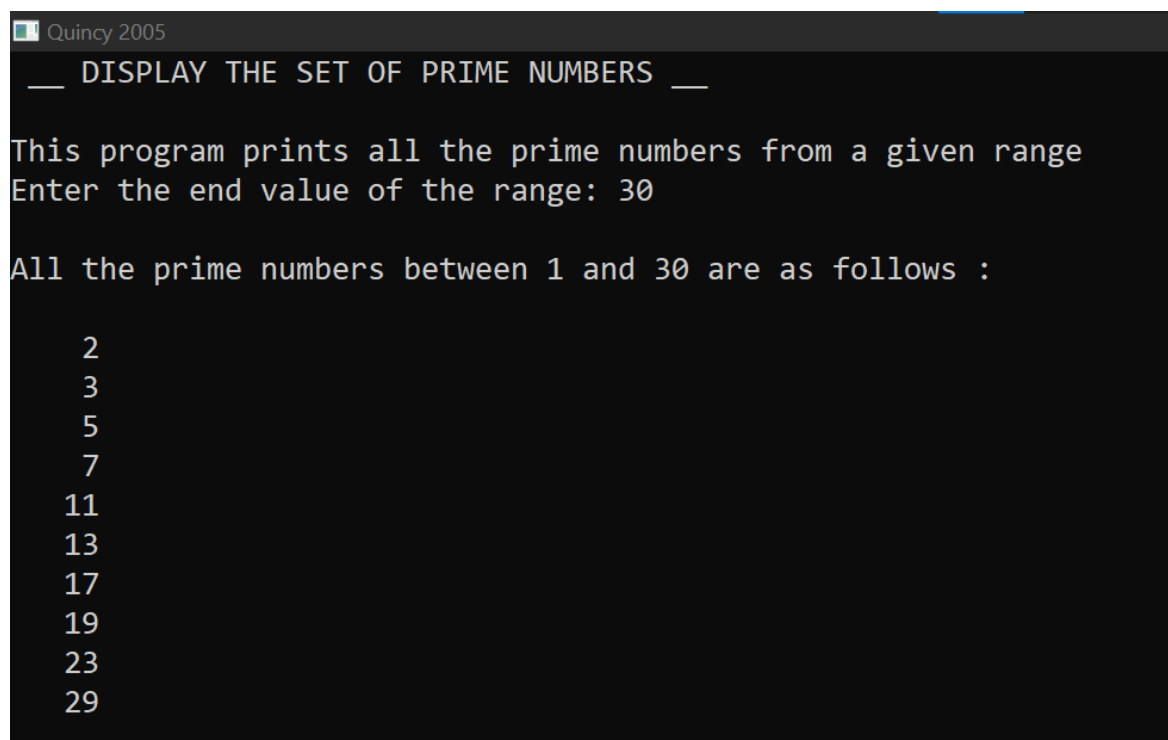


1. Write a program that displays all the prime numbers from a given range of numbers :

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

int main(){
    int num;
    cout<<setw(40)<<"__ DISPLAY THE SET OF PRIME NUMBERS __\n"<<endl;
    cout<<"This program prints all the prime numbers from a given range"<<endl;
    cout<<"Enter the end value of the range: ";
    cin>>num;

    cout<<"\nAll the prime numbers between 1 and "<<num<<" are as follows : \n"<<endl;
    for (int i=2; i<=num;i++){
        int flag=0;
        for (int k=2; k<i; k++){
            if (i%k==0)    flag=1; }
        if (flag==0){
            cout<<i<<endl;
        }
    }
    return 0; }
```



```
Quincy 2005
__ DISPLAY THE SET OF PRIME NUMBERS __

This program prints all the prime numbers from a given range
Enter the end value of the range: 30

All the prime numbers between 1 and 30 are as follows :

2
3
5
7
11
13
17
19
23
29
```

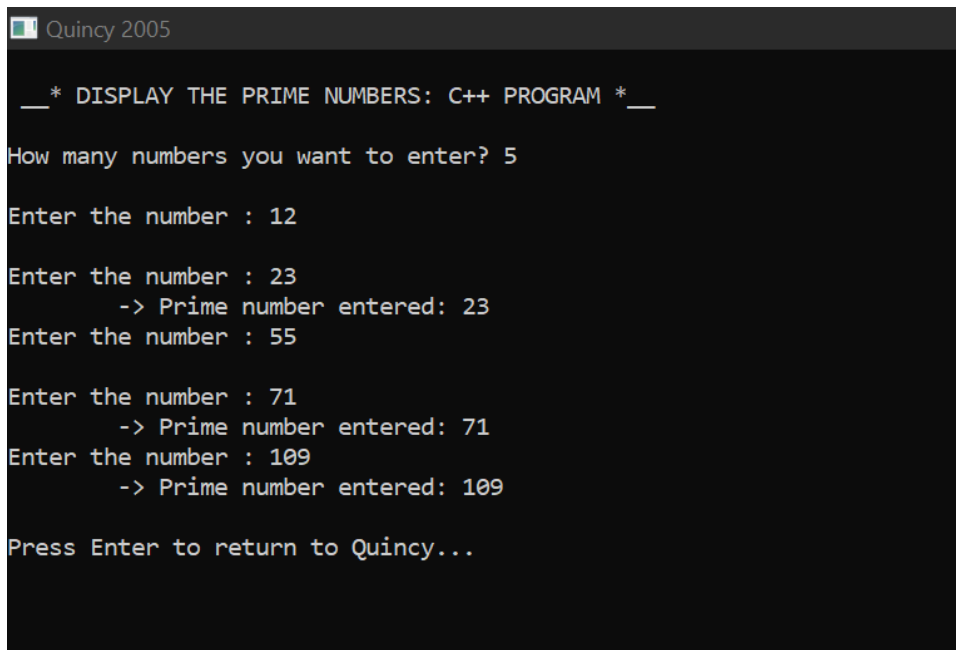
2. **Write a program that only displays the prime numbers out of the list of number entered by the user:**

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

int main(){
    cout<<setw(40)<<"\n __ * DISPLAY THE PRIME NUMBERS: C++ PROGRAM * __"<<endl;

    int i,n,x,max;
    cout<<"\nHow many numbers you want to enter? ";
    cin>>n;
    cout<<endl;
    i=1;
    while (i<=n){
        cout<<"Enter the number : ";
        cin>>x;

        int k=2;
        int flag=0;
        while(k<x){
            if (x%k==0) flag=1;
            k++;
        }
        if (flag!=1) cout<<"\t-> Prime number entered: "<<x<<endl;
        else cout<<endl;
        i++;
    }
    return 0;
}
```



```
Quincy 2005

__ * DISPLAY THE PRIME NUMBERS: C++ PROGRAM * __

How many numbers you want to enter? 5

Enter the number : 12

Enter the number : 23
        -> Prime number entered: 23
Enter the number : 55

Enter the number : 71
        -> Prime number entered: 71
Enter the number : 109
        -> Prime number entered: 109

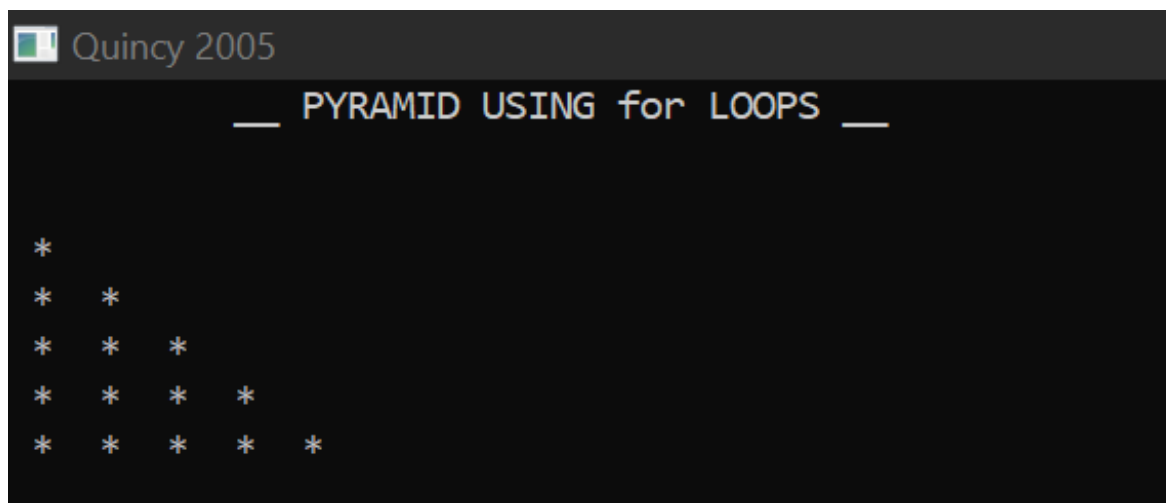
Press Enter to return to Quincy...
```

3. WAP that prints the following pattern :

```
*
* *
* * *
* * * *
* * * * *
```

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

int main(){
    cout<<setw(40)<<"__ PYRAMID USING for LOOPS __\n"<<endl;
    for (int i=0; i<=5; i++) {
        for (int j=1; j<=i;j++){
            cout<<" * ";
        }
        cout<<endl;
    }
    return 0;
}
```



4. WAP that prints the following pattern :

```
A
B B
C C C
D D D D
E E E E E
```

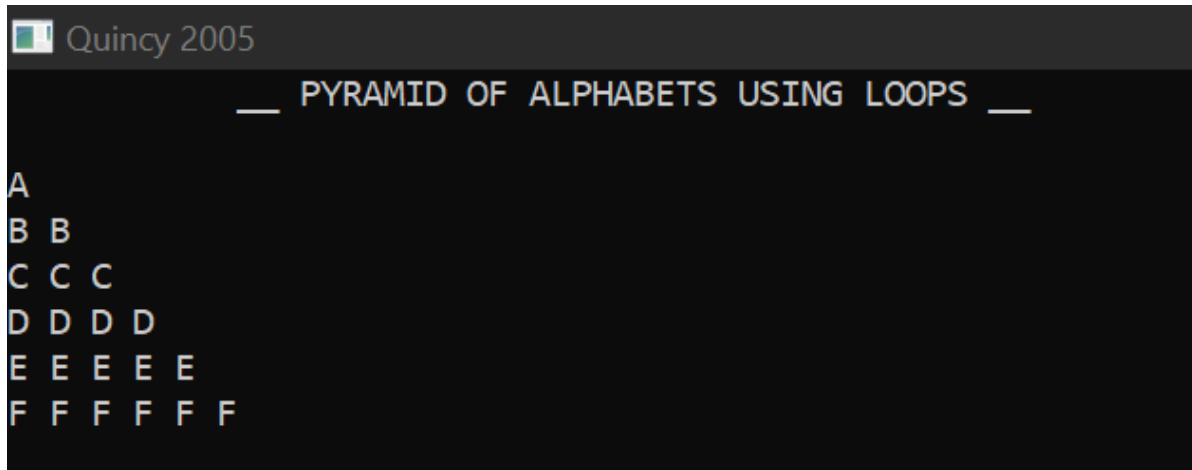
```
#include<iostream>
#include <iomanip>
using namespace std;

int main(){
    cout<<setw(50)<<"__ PYRAMID OF ALPHABETS USING LOOPS __\n"<<endl;
```

```

char ch='A';
for (int i=0; i<=5; i++) {
    for (int j=0; j<=i;j++){
        cout<<ch<<" ";
    }
    ch++;
    cout<<endl;
}
return 0;
}

```



**5. WAP that prints the following pattern :**

```

1
2 2
3 3 3
4 4 4 4
5 5 5 5 5

```

```

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

```

```

int main(){
    cout<<setw(50)<<"___ PYRAMID OF NUMBER USING LOOPS ___\n"<<endl;
    for (int i=0; i<=5; i++) {
        for (int j=1; j<=i;j++){
            cout<<j<<" ";
        }
        cout<<endl;
    }
    return 0;
}

```

```
Quincy 2005
__ PYRAMID OF NUMBER USING LOOPS __

1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
```

6. WAP that prints the following pattern :

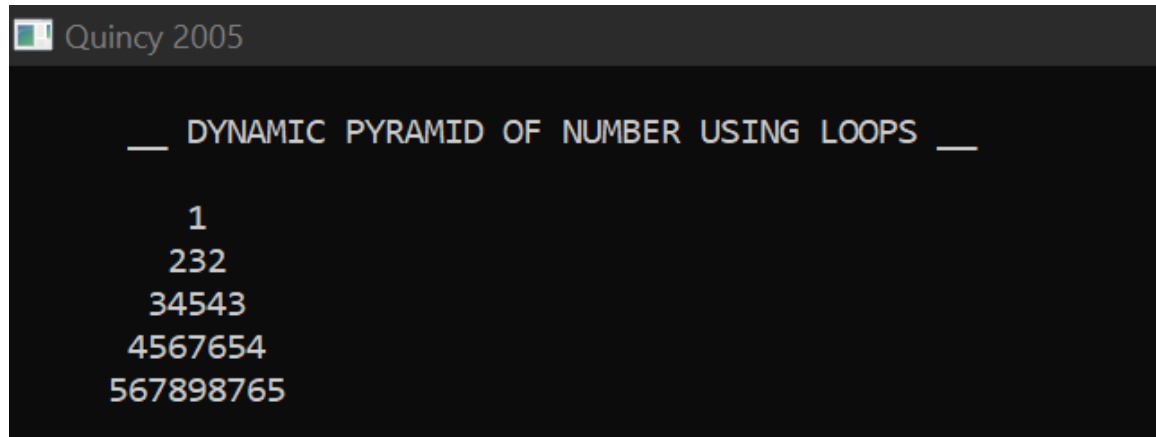
```
      1
    2 3 2
  3 4 5 4 3
4 5 6 7 6 5 4
5 6 7 8 9 8 7 6 5
```

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

```
int main(){
    cout<<setw(50)<<"__ DYNAMIC PYRAMID OF NUMBER USING LOOPS __\n"<<endl;
    int j=1;
    int i;
    int max=10;
    for (i =1; i<=5; i++) {
        cout<<setw(max);
        for (int k=i; k<=j;k++)
            cout<<k;

        for (int u=j-1; u>=i; u--)
            cout<<u;

        cout<<endl;
        j=j+2;
        max=max-1;
    }
    return 0;
}
```



7. WAP that prints the full pyramid :

```
      *
    ***
  *****
 *****
*****
```

```
#include<iostream>
#include <iomanip>
using namespace std;
int main(){

    cout<<setw(40)<<"__ FULL HALF PYRAMID __\n"<<endl;

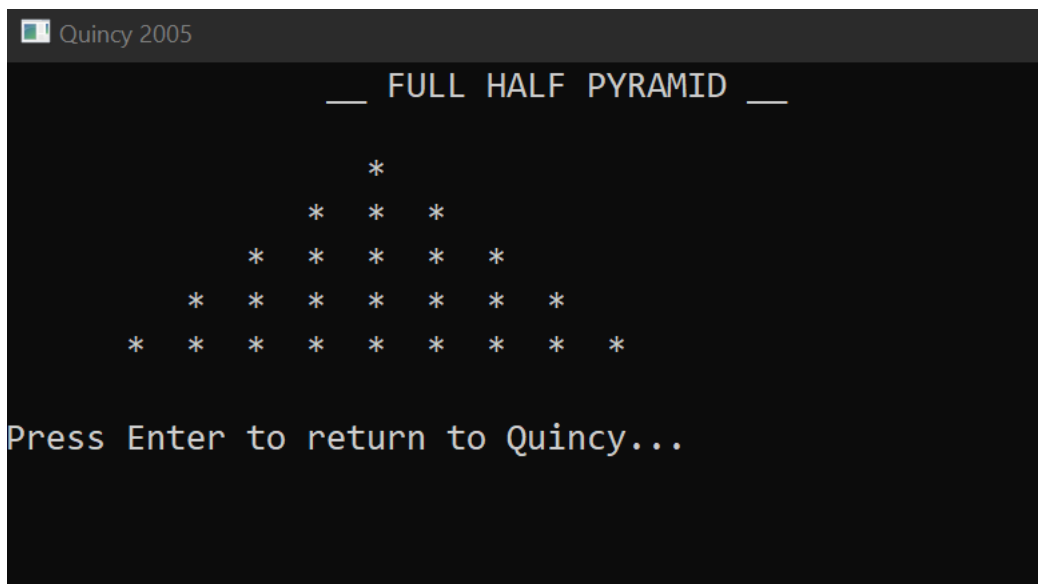
    int max=20;
    for (int i=0; i<5; i++){

        cout<<setw(max);

        for (int k=1;k<=i+1;k++)                //left side stars
            cout<<" * ";

        for (int j=1; j<=i; j++)                //right side stars
            cout<<" * ";

        cout<<endl;
        max=max-3;
    }
    return 0;
}
```



8. WAP that prints the following inverted half pyramid :

```

* * * * *
* * * *
* * *
* *
*

```

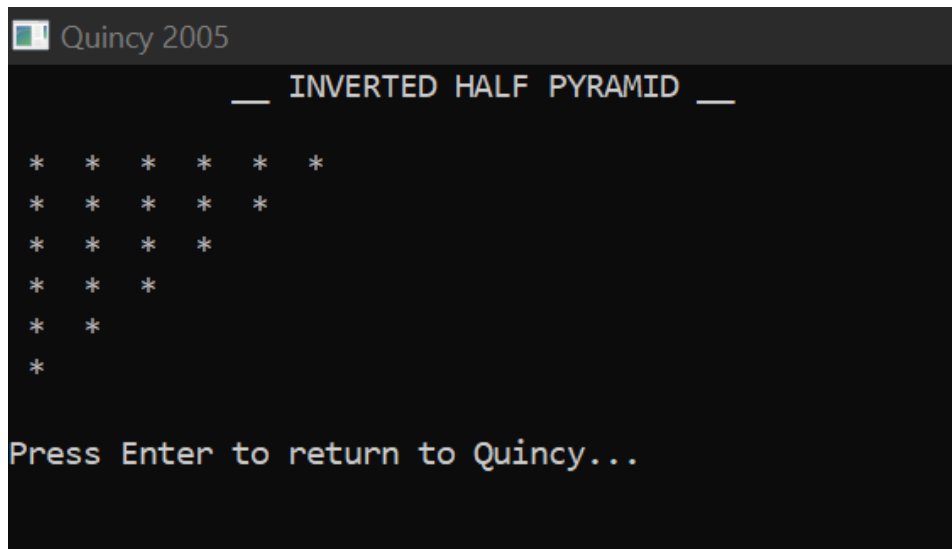
```

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

int main(){
    cout<<setw(40)<<"__ INVERTED HALF PYRAMID __\n"<<endl;

    for (int i=5; i>=0; i--) {
        for (int j=0; j<=i;j++){
            cout<<" * ";
        }
        cout<<endl;
    }
    return 0;
}

```



9. WAP that prints the following inverted half pyramid :

```

1 2 3 4 5
1 2 3 4
1 2 3
1 2
1

```

```

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

int main(){
    cout<<setw(40)<<"___ INVERTED HALF PYRAMID USING NUMBERS ___\n"<<endl;
    for (int i=5; i>=0; i--) {
        for (int j=1; j<=i;j++){
            cout<<j<<" ";
        }
        cout<<endl;
    }
    return 0;
}

```



```
__ INVERTED HALF PYRAMID USING NUMBERS __  
  
1 2 3 4 5  
1 2 3 4  
1 2 3  
1 2  
1  
  
Press Enter to return to Quincy..
```

**10. WAP that prints the following pattern but the number of rows depend on user input :**

```
*  
* *  
* * *  
* * * *  
* * * * *
```

```
#include<iostream>  
#include <iomanip>  
using namespace std;  
  
int main(){  
    cout<<setw(50)<<"__ PYRAMID of * USING LOOPS __\n"<<endl;  
  
    int row;  
    cout<<"Enter the number of rows you want : ";  
    cin>>row;  
  
    for (int i=0; i<=row; i++) {  
        for (int j=1; j<=i;j++){  
            cout<<" * ";  
        }  
        cout<<endl;  
    }  
    return 0;  
}
```

\_\_ PYRAMID of \* USING LOOPS \_\_

Enter the number of rows you want :

10

```
*
* *
* * *
* * * *
* * * * *
* * * * * *
* * * * * * *
* * * * * * * *
* * * * * * * * *
* * * * * * * * * *
```

Press Enter to return to Quincy...