

# C++ Virtual Lab Notes – BCA – 3<sup>rd</sup> Semester – 18112020

## Nested Loop Programming – Pattern Programming

/\* WAP to show the example of nested for loop - pattern programming \*/

#include<iostream.h>

#include<conio.h>

void main()

```
{
    int i,j;

    //for row
    for(i=1;i<=5;i++)
    {
        //for column
        for(j=1;j<=5;j++)
        {
            cout<<" "<<i;

        }
        cout<<"\n";
    }
}
```

/\* WAP to show the example of nested for loop - pattern programming \*/

#include<iostream.h>

#include<conio.h>

void main()

```
{
    int i,j;

    //for row
    for(i=1;i<=5;i++)
    {
        //for column
        for(j=1;j<=i;j++)
        {
            cout<<" "<<j;

        }
        cout<<"\n";
    }
}
```

```
/* WAP to show the example of nested for loop - pattern programming */
```

```
#include<iostream.h>
```

```
#include<conio.h>
```

```
void main()
```

```
{
```

```
    int i,j;
```

```
    //for row (no. of lines)
```

```
    for(i=5;i>=1;i--)
```

```
    {
```

```
        //for column (print values)
```

```
        for(j=1;j<=i;j++)
```

```
        {
```

```
            cout<<" "<<j;
```

```
        }
```

```
        cout<<"\n";
```

```
    }
```

```
}
```

```
/* WAP to show the example of nested for loop - pattern programming */
```

```
#include<iostream.h>
```

```
#include<conio.h>
```

```
void main()
```

```
{
```

```
    int i,j;
```

```
    //for row (no. of lines)
```

```
    for(i=5;i>=1;i--)
```

```
    {
```

```
        //for column (print values)
```

```
        for(j=i;j>=1;j--)
```

```
        {
```

```
            cout<<" "<<j;
```

```
        }
```

```
        cout<<"\n";
```

```
    }
```

```
}
```

```
/* WAP to show the example of nested for loop - pattern programming */
```

```
#include<iostream.h>
```

```
#include<conio.h>
```

```
void main()
```

```
{
```

```
    int i,j,k=1;
```

```
    //for row (no. of lines)
```

```
    for(i=1;i<=5;i++)
```

```
    {
```

```
        //for column (print values)
```

```
        for(j=1;j<=i;j++)
```

```
        {
```

```
            cout<<" "<<k++;
```

```
        }
```

```
        cout<<"\n";
```

```
    }
```

```
}
```

```
/* WAP to show the example of nested for loop - pattern programming */
```

```
#include<iostream.h>
```

```
#include<conio.h>
```

```
void main()
```

```
{
```

```
    int i,j;
```

```
    //for row (no. of lines)
```

```
    for(i=1;i<=10;i++)
```

```
    {
```

```
        //for column (print values)
```

```
        for(j=1;j<=10;j++)
```

```
        {
```

```
            if(j==10 || j==1 || i==10 || i==1)
```

```
            {
```

```
                cout<<"*";
```

```
            }
```

```
            else
```

```
            {
```

```
                cout<<" ";
```

```
            }
```

```
        }
```

```
        cout<<"\n";
```

```
    }
```

```
}
```

```
/* WAP to show the example of nested for loop - pattern programming */
```

```
#include<iostream.h>
```

```
#include<conio.h>
```

```
void main()
```

```
{
```

```
    int i,j;
```

```
    char temp = 'A';
```

```
    //for row (no. of lines)
```

```
    for(i=1;i<=5;i++)
```

```
    {
```

```
        //for column (print values)
```

```
        for(j=1;j<=i;j++)
```

```
        {
```

```
            cout<<" "<<temp;
```

```
        }
```

```
        cout<<"\n";
```

```
    }
```

```
}
```

```
/* WAP to show the example of nested for loop - pattern programming */
```

```
#include<iostream.h>
```

```
#include<conio.h>
```

```
void main()
```

```
{
```

```
    int i,j;
```

```
    char temp = 'A';
```

```
    //for row (no. of lines)
```

```
    for(i=1;i<=5;i++)
```

```
    {
```

```
        //for column (print values)
```

```
        for(j=1;j<=i;j++)
```

```
        {
```

```
            cout<<" "<<temp;
```

```
        }
```

```
        temp--;
```

```
        cout<<"\n";
```

```
    }
```

```
}
```

```
/* WAP to show the example of nested for loop - pattern programming
```

```
1
1 0
1 0 1
1 0 1 0
1 0 1 0 1
```

```
*/
```

```
#include<iostream.h>
```

```
#include<conio.h>
```

```
void main()
```

```
{
```

```
    int i,j;
```

```
    //for row (no. of lines)
```

```
    for(i=1;i<=5;i++)
```

```
    {
```

```
        //for column (print values)
```

```
        for(j=1;j<=i;j++)
```

```
        {
```

```
            cout<<" "<<j%2;
```

```
        }
```

```
        cout<<"\n";
```

```
    }
```

```
}
```

```
/* Triangle Pattern */
```

```
#include<iostream.h>
```

```
#include<conio.h>
```

```
void main()
```

```
{
```

```
    int r,s,c,x,num;
```

```
    cout<<"Enter the range: ";
```

```
    cin>>num;
```

```
    for(r=1;num>=r;r++)
```

```
    {
```

```
        for(s=num-r;s>=1;s--)
```

```
        {
```

```
            cout<<" ";
```

```
        }
```

```
    for(c=1;c<=r;c++)  
    {  
        cout<<c;  
    }  
    for(x=r-1;x>=1;x--)  
    {  
        cout<<x;  
    }  
    cout<<"\n";  
}  
}
```