11. **https://www.geeksforgeeks.org/print-all-prime-numbers-less-than-or-equal-to-n/**

```
#include <bits/stdc++.h>
using namespace std;

bool isPrime(int n)
{
	if (n <= 1)
		return false;
	if (n <= 3)
		return true;

	if (n % 2 == 0 || n % 3 == 0)
		return false;

	for (int i = 5; i * i <= n; i = i + 6)
		if (n % i == 0 || n % (i + 2) == 0)
			return false;

	return true;
}

void printPrime(int n)
{
	for (int i = 2; i <= n; i++) {
		if (isPrime(i))
			cout << i << " ";
	}
```

```
}

int main()
{
        int n = 100;
        printPrime(n);
}
```

12. https://practice.geeksforgeeks.org/problems/number-pattern0517/1

MySolution:

```
vector<string> numberPattern(int N)
   {

      vector<string>v;

      for(int i=1;i<=N;i++)
      {
         string temp="";int j=1;
         for( j=1;j<=i;j++)
         {  cout<<j;
         }

          for(int k=j-2;k>=1;k--)
          {
              cout<<k;
          }


          cout<<" ";
      }
```

```
    return v;
}
```

Gfg_Solution:

```
class Solution
{
public:
    string int_to_string(int x){
        string ans;
        while(x){
            ans.push_back(char(x%10)+'0');
            x/=10;
        }
        reverse(ans.begin(), ans.end());
        return ans;
    }

    vector<string> numberPattern(int N)
    {
        vector<string> res;
        for(int i = 1 ; i <= N ; i++){

            string temp;

            for(int j = 1 ; j <= i ; j++){
                temp+=int_to_string(j);
            }

            for(int j = i-1 ; j >= 1 ; j--){
                temp+=int_to_string(j);
            }

            res.push_back(temp);
        }
        return res;
    }
```

```
};
```

Close

13. https://www.geeksforgeeks.org/program-to-print-pyramid-pattern/

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

int main() {
int n;
cin>>n;
for(int i=1;i<=n;i++)
{
    for(int j=1;j<=i;j++)
    cout<<"* ";
    cout<<endl;
}
for(int i=5;i>=1;i--)
{
    for(int j=1;j<=i;j++)
    cout<<"* ";
    cout<<endl;
}
        return 0;
}
```

14. https://practice.geeksforgeeks.org/problems/pascal-triangle0652/1

```
vector<ll> nthRowOfPascalTriangle(int n) {
        // code here

        vector<ll>v;
        ll a[n][n];
            for(int i=0;i<n;i++)
```

```
    {
        for(int j=0;j<=i;j++)
        {
            if(j==0||j==i)
            a[i][j]=1;
            else
            a[i][j]=(a[i-1][j-1]+a[i-1][j])%1000000007;
        }
    }
    for(int i=0;i<n;i++)
    v.push_back(a[n-1][i]);
     return v;
  }
```

https://practice.geeksforgeeks.org/problems/ncr1019/1#

```
  int nCr(int n, int r){
      // code here
    if(n<r)
    return 0;

     int a[n+1][r+1];
           for(int i=0;i<=n;i++)
    {
        for(int j=0;j<=min(r,i);j++)
        {
            if(j==0||j==i)
            a[i][j]=1;
            else
            a[i][j]=(a[i-1][j-1]+a[i-1][j])%1000000007;
        }
    }
```

```
    return a[n][r];


}
```

15. Help Manmohan to print pattern of a given number. See the output pattern for given input n = 5.

Input Format
Single integer N denoting number of lines of the pattern.
Constraints
N<=1000
Output Format
Pattern.
Sample Input
5
Sample Output
1
11
202
3003
40004
Explanation
If row number is n (>1), total character is n. First and last character is n-1 and rest are 0.

```
#include <iostream>

using namespace std;


int main() {

int n;

cin>>n;


for(int i=0;i<n;i++)

{



   for(int j=i;j<n-1;j++)

   cout<<" ";

   if(i==0)

   cout<<i+1;
```

```
   else
   {cout<<i;
  for(int k=1;k<i;k++)
  cout<<"0";
  cout<<i;}
  cout<<endl;
}
            return 0;
}
```

16. https://practice.geeksforgeeks.org/problems/inverted-triangle-of-stars0110/1

```
vector<string> invIsoTriangle(int N) {
        // code here
        vector<string>v;
        for(int i=N;i>=1;i--)
        {
            string s="";
            for(int k=N-i;k>0;k--)
            s+=' ';
            for(int j=1;j<=i;j++)
            s+='*';
            for(int l=1;l<i;l++)
            s+='*';
            v.push_back(s);
        }return v;
    }
```

17. https://www.geeksforgeeks.org/program-to-print-the-ladder-pattern/

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

int main() {
int n;
```

```
cin>>n;
for( int i=1;i<=n;i++)
{
   cout<<"*   *"<<endl<<"*   *"<<endl;
   cout<<"*****"<<endl;
}
cout<<"*   *"<<endl<<"*   *";
          return 0;
}
```

18. https://www.geeksforgeeks.org/program-to-print-double-headed-arrow-pattern/

    Pending….