IT206 Assignment 1

Name: Suyash Chintawar

Roll No.: 191IT109

Topic: Pascal Triangle

Q1. Pascal Triangle program and its output.

```cpp
#include<bits/stdc++.h>
using namespace std;
int pascEle(int r,int c)
{
    if(r>=0 && (c==0||c==r))
    {
        return 1;
    }
    else{
    return pascEle(r-1,c)+pascEle(r-1,c-1);
    }
}
int main()
{
    int i,j,n;
    cin>>n;
    for(i=0;i<n;i++)
    {
        for(j=0;j<=(n-i-1);j++)
        {
            printf("   ");
        }
        for(j=0;j<=i;j++)
        {
            printf("%6d ",pascEle(i,j));
        }
        printf("\n");
    }
}
```


"C:\C++ projects\pascal_triangle\bin\Debug\pascal_triangle.exe"

```
10
                           1
                        1     1
                     1     2     1
                  1     3     3     1
               1     4     6     4     1
            1     5    10    10     5     1
         1     6    15    20    15     6     1
      1     7    21    35    35    21     7     1
   1     8    28    56    70    56    28     8     1
1     9    36    84   126   126    84    36     9     1

Process returned 0 (0x0)   execution time : 2.885 s
Press any key to continue.
```

Q2. Pascal Triangle Pseudo Code.

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Q2. Write pseudo code to print Pascal's Triangle.

Ans: main()
    input n
    for i←0 to n-1 do
        for j←0 to n-i-1 do
            print " "
        for j←0 to i do
            print pascEle(i,j)
        print "\n"

function pascEle(r,c)
    if r>=0 and (c=0 or c=r) then
        return 1
    else
        return pascEle(r-1,c) + pascEle(r-1,c-1)