```cpp
#include <iostream>

using namespace std;

int main()
{
        int n; int sum = 0;

        do
        {

                system("cls");
                cout<<"Input n (n must be greater than 0 and less than 65535)"<<endl;
          cin>>n;
        } while(n <1 || n > 65535);

        system("cls");
        cout<<"SUM("<<n<<") = ";

        for (int i = 1; i < n;i++)
        {
                cout<<i<<" + ";
                sum += i;
        }

        cout<<n<<"."<<endl<<endl;

        sum += n;
   cout<<"SUM("<<n<<") = "<<sum<<endl;
        cout<<endl;
        system("pause");
        return 0;
}
```