Find all factorial numbers less than or equal to N
BasicAccuracy: **48.65%**Submissions: **10K+**Points: **1**

A number **N** is called a factorial number if it is the factorial of a positive integer. For example, the first few factorial numbers are 1, 2, 6, 24, 120, Given a number N, the task is to return the list/vector of the factorial numbers smaller than or equal to N.

Example 1:

```
Input: N = 3
Output: 1 2
Explanation: The first factorial number is
1 which is less than equal to N. The second
number is 2 which is less than equal to N,
but the third factorial number is 6 which
is greater than N. So we print only 1 and 2.
```

Example 2:

```
Input: N = 6
Output: 1 2 6
Explanation: The first three factorial
numbers are less than equal to N but
the fourth factorial number 24 is
greater than N. So we print only first
three factorial numbers.
```

Your Task:
You don't need to read input or print anything. Your task is to complete the function **factorialNumbers()** which takes an integer N as an input parameter and return the list/vector of the factorial numbers smaller than or equal to N.

Expected Time Complexity: O(K), Where K is the number of factorial numbers.
Expected Auxiliary Space: O(1)

Constraints:
$1<=N<=10^{18}$

Code section:-

```cpp
class Solution
{
public:
    vector<long long> v;

    long long fact(long long i){

        if(i==1  || i==0){
            return 1;
        }
        return i*fact(i-1);
    }

    void factnumber(long long N){

        long long x;
        for(long long i=1;i<=(N/2)+1;i++){

            x=fact(i);
            if(x<=N){
                v.push_back(x);
            }
            else{
                return;
            }
        }
    }
    vector<long long> factorialNumbers(long long N)
    {
        // Write Your Code here
        factnumber(N);
        return v;


    }
};
```