

118. Pascal's Triangle

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- array

Description

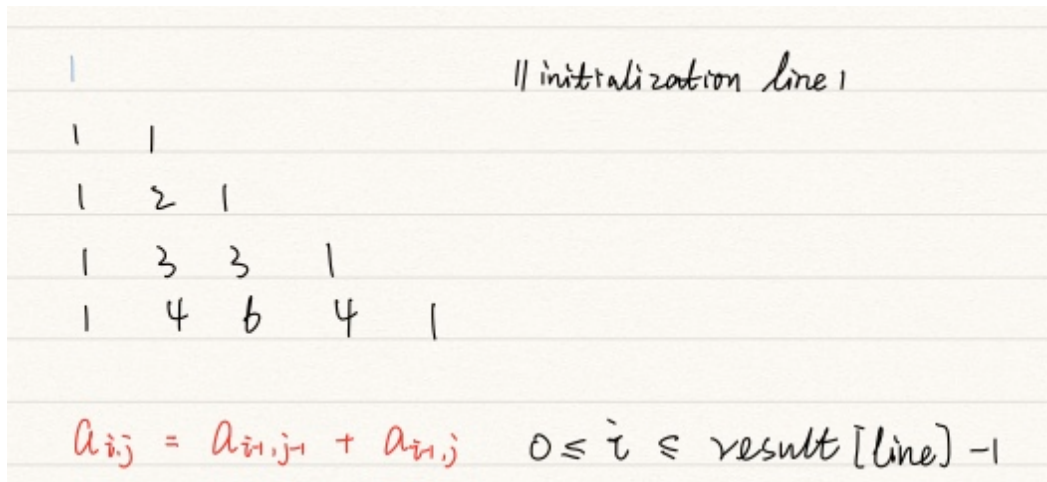
Given *numRows*, generate the first *numRows* of Pascal's triangle.

For example, given *numRows* = 5,

Return

```
[
  [1],
  [1,1],
  [1,2,1],
  [1,3,3,1],
  [1,4,6,4,1]
]
```

1. Thought line



2. Depth-first Search + Tree

```
class Solution {
public:
    vector<vector<int>> generate(int numRows) {
        if (numRows==0) return {};
        vector<vector<int>> result(numRows);
        result[0] = {1};

        for (int i = 1; i<=numRows-1; ++i){
            for (int j = 0; j<=i; ++j){
                int upLineSize = i; // [0, upLineSize-1]
                int lfElementUpLine = (i-1>=0 && j-1>=0)? result[i-1][j-1]:0;
                int rtElementUpLine = (i-1>=0 && j<=i-1)? result[i-1][j]:0;
            }
        }
    }
};
```

```
};  
    }  
}  
return result;  
}
```