

```
# -*- coding: utf-8 -*-
```

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''''''
```

```
Created on Sat Apr 11 10:36:00 2020
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@author: Corn
```

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''''''
```

```
pascal = [[0]*1001 for i in range(1001)]
```

```
pascal[0][0] = 1
```

```
for i in range(1, 1001):
```

```
    for j in range(1, 1001):
```

```
        pascal[i][j] = pascal[i-1][j] + pascal[i-1][j-1]
```

```
def dfs(n, path):
```

```
    (x, y) = path[-1]
```

```
    cand = []
```

```
    if pascal[x][y] == n : return True
```

```
    n -= pascal[x][y]
```

```
    for (dx, dy) in [(1,1),(0, 1),(-1,0),(1,0),(-1,0)]:
```

```
        nx, ny = x + dx, y + dy
```

```
        if (nx, ny) not in path and nx >= ny and nx > 0 and ny > 0 and pascal[nx][ny]
```

```
<= n:
```

```
            cand.append((pascal[nx][ny],nx,ny))
```

```
    cand = sorted(cand, reverse = True)
```

```
    for val, i, j in cand:
```

```
        path.append((i,j))
```

```
        if dfs(n, path): return True
```

```
        path.pop()
```

```
T = int(input())
```

```
for case in range(T):
```

```
    n = int(input())
```

```
    path = [(1,1)]
```

```
    dfs(n, path)
```

```
    print ('Case #{}:'.format(case+1))
```

```
    for p in path:
```

```
        print (str(p[0]) + ' ' + str(p[1]))
```

這是 google codejam RoundA(需要先過 Qualification Round)的第二題，也是我第

一次參加 codejam

最後拿到綜合排名 2500 名。內容是要解決在帕斯卡三角形中尋找一條不重複的路徑使得和為 n 。

我覺得自己在有限時間能夠打出感覺很優美的 code，並且過最難的測資($N \leq 10^{**9}$)

，覺得很有成就感。