```
1 #include <bits/stdc++.h>
 2 const int INF = 1e9;
 3 const int MOD = 1e9+7;
 4 const long long LINF = 1e18;
 5 \# define dump(x) cout << 'x' << ' = ' << (x) << ` `;
 6 #define FOR(i,a,b) for(int i=(a);i<(b);++i)
 7 #define REP(i,n) for(int i=0;i<(n);++i)
 8 #define REPR(i,n) for(int i=n;i>=0;i--)
 9 #define FOREACH(x,a) for(auto& (x) : (a) )
10 typedef long long ll;
11 using namespace std;
13 class combM {
14 private:
15
       vector<ll> fac; //n!(mod M)
       vector<ll> ifac; //k!^{M-2} (mod M)
16
17 public:
       ll mpow(ll x, ll n);
18
19
       combM();
20
       ll com(ll a, ll b);
21|};
22
23 // x^n(mod M)
24 ll combM::mpow(ll x, ll n) {
25
       ll ans = 1ll;
26
       while(n != 0){
27
           if (n\&1) ans = ans*x%MOD;
28
           x = x*x\%MOD;
29
           n = n >> 1;
30
31
       return ans;
32 }
33
34 // aCb をmod計算
35 ll combM::com(ll a, ll b) {
36
       if (a == 0 \&\& b == 0) return 1;
37
       if (a < b | | a < 0) return 0;
       ll tmp = ifac[a-b]*ifac[b]%MOD;
38
39
       return tmp*fac[a]%MOD;
40 }
41
42 combM::combM() {
       fac.resize(300001);
43
44
       ifac.resize(300001);
45
       fac[0] = 1;
46
       ifac[0] = 1;
47
       for (ll i = 0; i < 300000; ++i) {
           fac[i+1] = fac[i]*(i+1)%MOD;
48
           ifac[i+1] = ifac[i]*mpow(i+1, MOD-2)%MOD;
49
50
       }
51 }
52
53 int main(int argc, char const *argv[]) {
54
       ll n, k;
55
       cin >> n >> k;
56
       combM C;
57
       ll ans = 0;
58
       ans = C.com(n, k);
59
       cout << ans << endl;</pre>
       return 0;
```

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