

model Lucas

```
1  #define ll long long
2  const int mo=7+1e9;
3  const int N=5+1e5;
4  ll fac[N];
5  ll qpow(ll a,ll b,ll p){a%=p;ll ans=1;for(;b;b>>1)
   {if(b&1)ans=ans*a%p;a=a*a%p;}return ans;}
6  void getFac(){
7      fac[0]=1;
8      for(int i=1;i<=mo;i++)
9          fac[i]=(fac[i-1]*i)%mo;
10 }
11 ll Lucas(ll n,ll m,ll p){
12     ll ans=1;
13     while(n&& m){
14         ll a=n%mo,b=m%mo;
15         if(a<b)
16             return 0;
17         ans=(ans*fac[a]*qpow(fac[b]*fac[a-b]%mo,mo-2,mo))%mo;
18         n/=mo;
19         m/=mo;
20     }
21     return ans;
22 }
```