// C++ program to find number of distinct

// permutations of a string.

#include <bits/stdc++.h>

using namespace std;

int main()

{

long long int t;

cin>>t;

// finding frequency of all the lower case

// alphabet and storing them in array of

// integer

while(t--)

{

string s;

cin>>s;

map<char,int>m;

long long int i;

for (i=0;i<s.size();i++)

m[s[i]]++;

if (m.size()<3)

cout<<"Dynamic"<<endl;

else

{

vector<int>v;

int flag=0;

map<char,int>::iterator it;

for (it=m.begin();it!=m.end();it++)

{

v.push\_back(it->second);

}

// finding factorial of size of string and

// dividing it by factorial

for (i=2;i<v.size();i++)

{

if (v[i]==v[i-1]+v[i-2])

continue;

else

{

cout<<"Not"<<endl;

flag=1;

break;

}

}

if (flag==0)

cout<<"Dynamic"<<endl;

}

}

}