

平时补题

1.字符串

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(1).字符串找到特定子串修改成别的字符串

数学

连续子段异或和

bit

(1).字符串找到特定子串修改成别的字符串

来源：L1-064 估值一亿的AI核心代码天梯赛

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```
#include<iostream>
using namespace std;
string a,b;

int ch(string s,int x)
{
    if(s[x]>='a' && s[x]<='z') return 1;
    else if(s[x]>='A' && s[x]<='Z') return 2;
    else if(s[x]>='0' && s[x]<='9') return 3;
    else if(s[x]==' ') return 4;
    else return 5;
}

int check(int x,int y)
{
    if((x<0||b[x]==' '||ch(b,x)==5)&&(y>=b.size()||b[y]==' '||ch(b,y)==5))
        return 1;
    else
        return 0;
}

int main()
{
    int N;
    cin>>N;
    getchar();
    while(N-->0)
    {
        getline(cin,a);
        cout << a << endl << "AI: ";
    }
}
```

```

int l = 0, r = a.size() - 1;
while(a[l] == ' ') l++;
while(a[r] == ' ') r--;
for(int i = l; i <= r; i++)
{
    if(ch(a, i) == 2 && a[i] != 'I')
        b += a[i] + 32;
    else if(a[i] == '?')
        b += '!';
    else if(a[i] == ' ' && (a[i+1] == ' ' || ch(a, i+1) == 5))
        continue;
    else
        b += a[i];
}
for(int i = 0; i < b.size(); i++)
{
    if(b[i] == 'I' && check(i-1, i+1))
        cout << "you";
    else if(b.substr(i, 2) == "me" && check(i-1, i+2))
        cout << "you", i++;
    else if(b.substr(i, 7) == "can you" && check(i-1, i+7))
        cout << "I can", i += 6;
    else if(b.substr(i, 9) == "could you" && check(i-1, i+9))
        cout << "I could", i += 8;
    else
        cout << b[i];
}
cout << endl;
b = "";
}
}

```

数学

连续子段异或和

[Problem - C - Codeforces](#)

```

#include <bits/stdc++.h>
using namespace std;
#define ll long long
const int inf = 0x3f3f3f3f;
const int N = 2e5 + 10;
const int M = 1e3 + 10;
int a[N];
int dp[M];
int suf[N];
void solve()
{
    int n;

```

```

cin>>n;
int ans=0;
for(int i=1;i<=n;i++)
{
    cin>>a[i];
    ans=max(ans,a[i]);
}
for(int i=1;i<=n;i++)
{
    suf[i]=suf[i-1]^a[i];
}

set<int>s;
s.insert(0);
for(int i=1;i<=n;i++)
{
    for(int j:s)
    {
        ans=max(ans,suf[i]^j);
    }
    s.insert(suf[i]);
}
cout<<ans<<"\n";
return ;
}
int main()
{
    ios::sync_with_stdio(false);
    cin.tie(0);cout.tie(0);
    int t;
    cin>>t;
    while(t--)
    {
        solve();
    }
    return 0;
}

```

bit

```

#include <bits/stdc++.h>
using namespace std;
#define ll long long
constexpr int inf=0x3f3f3f3f;
constexpr int N=2e6+10;
constexpr int M=1e3+10;
int b[N];
int a[N];
int f[N];
int ans[N];
void solve()

```

```

{
    int n,k;
    cin>>n>>k;
    for(int i=0;i<=n+1;i++)
    {
        ans[i]=0;
    }
    for(int i=0;i<=29;i++)
        a[i]=-1;
    f[0]=0;
    for(int i=1;i<=n-1;i++)
    {
        cin>>b[i];
        // b[i]=b[i]^b[i-1];
        f[i]=f[i-1]^b[i];
    }
    int flag=0;
    for(int i=0;i<n-1;i++)
    {
        for(int j=29;j>=0;j--)
        {
            if(((1<<j)&f[i])!=((1<<j)&f[i+1]))
            {
                if((1<<j)&f[i])// 1 0
                {
                    if(a[j]==0)
                    {
                        // flag=-1;
                        cout<<-1<<"\n";
                        return ;
                    }
                }
                else{
                    a[j]=1;
                }
            }
            else
            {
                if(a[j]==1)
                {
                    // flag=-1;
                    cout<<-1<<"\n";
                    return ;
                }
                else{
                    a[j]=0;
                }
            }
        }
        break;
    }
}
}

```

```

// for(int i=29;i>=0;i--)
// {
//     cout<<a[i]<<" ";
// }
// cout<<endl;
// return ;
int sum=0;//总的可能
for(int i=29;i>=0;i--)
{
    if(a[i]==-1)
    {
        sum=(sum<<1)|1;
    }
}
k--;
if(sum<k)
{
    cout<<-1<<"\n";
    return ;
}

int p=0;
while(k)
{
    int x=k&1;
    while(a[p]!=-1)p++;
    a[p]=x;
    k=k>>1;
}
for(int i=0;i<=29;i++)
{
    if(a[i]==-1)a[i]=0;
}
ans[1]=0;
for(int i=29;i>=0;i--)
{
    ans[1]=ans[1]*2+a[i];
}
for(int i=2;i<=n;i++)
{
    ans[i]=ans[i-1]^b[i-1];
}
if(ans[n]>pow(2,30))
{
    cout<<-1<<"\n";
    return ;
}

for(int i=1;i<=n;i++)
{
    cout<<ans[i]<<" ";
}

```

```
        cout<<"\n";
    }
    int main()
    {
        ios::sync_with_stdio(false);
        cin.tie(0);cout.tie(0);
        int t;
        cin>>t;
        while(t-->0)
        {
            solve();
        }
        return 0;
    }
```