

Олимпиада «Ломоносов» по информатике
2024-2025 учебный год. Заключительный этап
Работа участника с id заявки 1436001, логином inf25f_348

Сводный итог по всем задачам в проверяющей системе

RunID	Time	Username	Prob	Lang	Result	Tests	Score
231	3:09:10	inf25f_348	5	clang++	Partial solution	1	0
85	1:18:09	inf25f_348	2	python3	OK	28	100
42	0:48:39	inf25f_348	1	python3	Partial solution	27	96
N/A	N/A	inf25f_348	3	N/A	N/A	0	0
N/A	N/A	inf25f_348	4	N/A	N/A	0	0

196 технических баллов

56 итоговых баллов

Посылка по задаче 1

```
[1] n1 = int(input())
[2] n2 = int(input())
[3] arr = []
[4] def f(n):
[5]     arr.append(n)
[6]     if n == 1:
[7]         return 1
[8]     if n % 2 == 0:
[9]         return f(n // 2)
[10]    return f(n * 3 + 1)
[11]
[12] if(n1 == n2):
[13]     print(0)
[14] else:
[15]     f(n1)
[16]     ar1 = arr[::-1]
[17]     arr = []
[18]     f(n2)
[19]     ar2 = arr[::-1]
[20]     # print(ar1)
[21]     # print(ar2)
[22]
[23]     i = 0
[24]     while(i < len(ar1) and i < len(ar2) and ar1[i] == ar2[i]):
[25]         i+=1
[26]     ans = ar1[i-1:][::-1] + ar2[i:]
[27]
[28]     ans = ans[1:-1]
[29]     print(len(ans) + 1)
[30]     if(len(ans) > 0):
[31]         print(*ans)
```

Посылка по задаче 2

```
[1] alf = sorted("QWERTYUIOPASDFGHJKLZXCVBNM") + sorted("qwertyuiopasdfghjklzxcvbnm")
[2] arr = []
[3]
[4]
[5] def f(stri):
[6]     stri = stri[::-1]
[7]     k = 0
[8]     i = 0
[9]     ans = 0
[10]    for j in stri:
[11]        if j == "^":
[12]            k = 52
[13]        elif j == "~":
[14]            k = 104
[15]        elif j == "_":
[16]            k = 156
[17]        else:
[18]            ans += (alf.index(j) + k)*52**i
[19]            k = 0
[20]            i+=1
[21]
[22]    return ans
[23]
[24]
[25] n = int(input())
[26] for i in range(n):
[27]     arr.append(f(input()))
[28]
[29] # print(arr)
[30] arr2 = sorted(arr)[::-1]
[31] # print(arr2)
[32] ans = []
[33] for i in range(len(arr)):
[34]     if arr[i] != arr2[i]:
[35]         ans.append(i + 1)
[36] print(*ans)
```

Посылка по задаче 3

Посылоч по задаче 3 не было отправлено.

Посылка по задаче 4

Посылка по задаче 4 не было отправлено.

Посылка по задаче 5

```
[1] #include <bits/stdc++.h>
[2] using namespace std;
[3] typedef long long ll;
[4]
[5] ll m, n, k;
[6] vector<vector<ll>> graph;
[7] vector<ll> gr2;
[8] map<pair<ll, ll>, ll> mapi;
[9] vector<ll> tin, tout;
[10] ll t = 0;
[11]
[12] void bfs(ll v){
[13]     t++;
[14]     tin[v] = t;
[15]     for(auto i : graph[v]){
[16]         bfs(i);
[17]     }
[18]     t++;
[19]     tout[v] = t;
[20] }
[21]
[22] bool visi(ll v1, ll v2){
[23]     return tin[v1] <= tin[v2] && tout[v1] >= tout[v2];
[24] }
[25]
[26]
[27] int main() {
[28]     cin>>m>>n>>k;
[29]     graph.resize(n);
[30]     gr2.resize(n);
[31]     tin.resize(n); tout.resize(n);
[32]     for(ll i = 0; i < n - 1; i++){
[33]         ll x, y, a;cin>>x>>y>>a;
[34]         x--;y--;
[35]         graph[x].push_back(y);
[36]         gr2[y] = x;
[37]         mapi[{x, y}] = a;
[38]     }
[39]     bfs(0);
[40]     for(ll _ = 0; _ < k; _++) {
[41]         ll v1, v2;
[42]         cin >> v1 >> v2;
[43]         v1--;
[44]         v2--;
[45]         set<ll> veci;
[46]         ll v0 = v1;
[47]         while (!visi(v0, v2)) {
[48]             veci.insert(mapi[{gr2[v0], v0}]);
[49]             v0 = gr2[v0];
[50]         }
[51]         // cout<<v0<<"\n";
[52]         v0 = v2;
[53]         while (!visi(v0, v1)) {
[54]             veci.insert(mapi[{gr2[v0], v0}]);
[55]             v0 = gr2[v0];
[56]         }
[57]         // cout<<v0<<"\n";
[58]         vector<ll> ansi;
[59]         ansi.push_back(0);
[60]         ansi.push_back(m + 1);
[61]         for (auto i : veci) {
[62]             ansi.push_back(i);
[63]         }
[64]         // cout << i << " ";
[65]         sort(ansi.begin(), ansi.end());
[66]         ll ans = 0;
[67]         for (ll i = 1; i < ansi.size(); i++) {
[68]             ans = max(ans, ansi[i] - ansi[i - 1]);
[69]         }
[70]         cout << ans<<"\n";
[71]     }
[72] }
```