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1 Setups

1.1 vimrc [6c9876]

```
se nu ai rnu cin ts=4 sw=4 | sy on
inoremap {<CR> {<CR>}<Esc>O
inoremap jk <Esc>
```

1.2 pbds [9f7c3e]

```
#include <bits/stdc++.h>
#include <bits/extc++.h>
using namespace __gnu_pbds;
using namespace std;

template <typename T>
using ordered_set = tree<T,null_type,less
    <T>,rb_tree_tag,tree_order_statistics_node_update>;

int main(){
    ordered_set<int> st;
    st.insert(1);
    st.find_by_order(0); //iterator to 1
    st.order_of_key(1); //returns 0
}
```

1.3 terminal [46fc34]

```
-- terminal --
$ setxkbmap -option caps:swapescape
```

1.4 debug [33c0d3]

```
#ifdef MIKU
string
    dbmc = "\033[1;38;2;57;197;187m", dbrs = \033[0m;
#define debug
    (x...) cout << dbmc << "[" << #x << "]" : ", dout(x)
void dout() { cout << dbrs << endl; }
template <typename T, typename ...U>
void dout(T t, U ...u) { cout
    << t << sizeof...(u) ? ", " : ""; dout(u...); }
#else
#define debug(...) 39
#endif

int main(){
    int a = 49;
    char c = '8';
    debug(a); // outputs "[a] : 49"
    debug(a, c); // outputs "[a, c] : 49, 8"
    debug("PCCORZ"); // outputs "[\"PCCORZ\"] : PCCORZ"
    debug(); // outputs "[ ] : "
}
```

1.5 template [5116af]

```
#include <bits/stdc++.h>
using namespace std;
#define fs first
#define sc second
#define F first
#define S second
#define FOR(i, j, k) for (int i = j, Z = k; i < Z; i++)
using ll = long long;
using lll = __int128_t;
typedef pair<int, int> pii;
typedef tuple<int, int, int> tiii;
typedef pair<ll, ll> pll

int main(){
}
```

2 Graph

2.1 Dominator Tree* [3b89c3]

```
struct DominatorTree{
    //1-indexed
    //not reachable from s -> not on tree
    int n;
    vector<vector<int>>> G,rG;
    vector<int> pa,dfn,id;
    int dfnCnt;
    vector<int> semi,idom,best;
    vector<vector<int>>> ret;
    void init(int _n){
        n=_n;
        G = rG = ret = vector<vector<int>>>(n+1);
        pa = dfn = id = vector<int>(n+1,-1);
        dfnCnt = 0;
        semi = idom = best = vector<int>(n+1,-1);
    }
    void add_edge(int u,int v){
        G[u].push_back(v);
        rG[v].push_back(u);
    }
    void dfs(int u){
        id[dfn[u]] = ++dfnCnt;
        for(auto v:G[u]) if(!dfn[v]){
            dfs(v,pa[dfn[v]] = dfn[u]);
        }
    }
    int find(int y,int x){
        if(y<=x) return y;
        int tmp = find(pa[y],x);
        if(semi[best[y]] > semi[best[pa[y]]])
            best[y] = best[pa[y]];
        return pa[y] = tmp;
    }
    void tarjan(int root){
        dfnCnt = 0;
        for(int i=1;i<=n;++i){
            dfn[i] = idom[i] = 0;
            ret[i].clear();
            best[i] = semi[i] = i;
        }
        dfs(root);
        for(int i=dfnCnt;i>1;--i){
            int u = id[i];
            for(auto v:rG[u]) if(v=dfn[v]){
                find(v,i);
                semi[i] = min(semi[i],semi[best[v]]);
            }
            ret[semi[i]].push_back(i);
            for(auto v:ret[pa[i]]){
                find(v,pa[i]);
                idom[v]
                    = semi[best[v]] == pa[i] ? pa[i] : best[v];
            }
            ret[pa[i]].clear();
        }
        for(int i=2;i<=dfnCnt;++i){
            if(idom[i] != semi[i]) idom[i] = idom[idom[i]];
            ret[id[idom[i]]].push_back(id[i]);
        }
    }
    vector<vector<int>>> solve(int s){
        tarjan(s);
        return ret;
    }
};
```

3 Data Structure

4 String

5 Math

6 Geometry

7 o

thers