

```
#include <stdio.h>

void searchAndReport(int *names, int name, int len){
    int idx = -1;
    for(int i = 0; i < len; i++){
        if(names[i] == name){
            // If the name occurs multiple times, print the message and
            // return since nothing more to do
            if(idx >= 0){
                printf("MULTIPLE RELATIONS");
                return;
            }
            idx = i;
        }
    }
    // If the name does not occur at all, print the message and return
    // since nothing more to do
    if(idx < 0){
        printf("NO RELATIONS");
        return;
    }
    // If we have not returned till now that means the name occurs once
    int numLevels = 0, gender;
    // Find the gender of the person
    if(idx % 2 == 0)
        gender = 'M';
    else
        gender = 'F';
    // How many levels do we have to go down till we reach the mother
    // or father of Mr C?
    while(idx > 1){
        numLevels++;
        idx /= 2;
        idx--;
    }
    for(idx = 0; idx < numLevels - 1; idx++){
        printf("GREAT ");
    }
    if(numLevels) printf("GRAND ");
    if(gender == 'M')
        printf("MOTHER");
    else
        printf("FATHER");
}

int main(){
    int n, i, name;
    scanf("%d", &n);
    int names[n];
    for(i = 0; i < n; i++)
        scanf("%d", &names[i]);
    for(i = 0; i < 4; i++){
        scanf("%d", &name);
        // Search for name in the array names with n elements
        searchAndReport(names, name, n);
        if(i < 3) printf("\n");
    }
    return 0;
}
```