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#include <stdio.h>
#include <stdlib.h>
#include <string.h>

void q1(int a[])
{
    a[0] = 0;
    a[1] = 1;
    a[2] = 1;
    for (int i = 3; i < 30; i++)
    {
        a[i] = a[i - 1] + a[i - 3];
    }
}

//-----

/*void q2(char *a)
{
    int b = strlen(a);
    int c = b;
    for (int i = 0; i < c / 2; i++)
    {
        int t = a[i];
        a[i] = a[b];
        a[b] = t;
        --b;
    }
}

//-----

/*void q3(int *a, int *b)
{
    *a = *a ^ *b;
    *b = *a ^ *b;
    *a = *a ^ *b;
}*/

//-----

/*typedef struct faculty
{
    int salary;
    char name[50];
} fac;
void q4(fac *a)
{
    a->salary = a->salary + (a->salary * 0.2);
}*/

/*int i = 0;
struct sinfo

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{
    char fname[50];
    char lname[50];
    int roll;
    int cid[10];
} st[55];

void add_student()
{
    printf("Add the Students Details\n");
    printf("-----\n");
    printf("Enter the first name of student\n");
    scanf("%s", st[i].fname);
    printf("Enter the last name of student\n");
    scanf("%s", st[i].lname);
    printf("Enter the Roll Number\n");
    scanf("%d", &st[i].roll);
    printf("Enter the course ID of each course\n");
    for (int j = 0; j < 5; j++)
    {
        scanf("%d", &st[i].cid[j]);
    }
    i = i + 1;
}

void find_rl()
{
    int x;
    printf("Enter the Roll Number of the student\n");
    scanf("%d", &x);
    for (int j = 0; j < i; j++)
    {
        if (x == st[j].roll)
        {
            printf("The Students Details are\n");
            printf("The First name is %s\n", st[j].fname);
            printf("The Last name is %s\n", st[j].lname);
            printf("Enter the course ID of each course\n");

            for (int k = 0; k < 5; k++)
            {
                printf("The course ID are %d\n", st[j].cid[k]);
            }
            break;
        }
    }
}

void find_c()
{
    int id;
    printf("Enter the course ID \n");
    scanf("%d", &id);
    int c = 0;
    for (int j = 0; j <= i; j++)
    {
        for (int d = 0; d < 5; d++)
        {

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        if (id == st[j].cid[d])
        {
            printf("The Students Details are\n");
            printf("The First name is %s\n", st[j].fname);
            printf("The Last name is %s\n", st[j].lname);
            printf("The Roll Number is %d\n ", st[j].roll);

            c = 1;

            break;
        }
    }
}*/

int main()
{
    int i;
    int *b = calloc(30, sizeof(int));
    q1(b);

    for (i = 0; i < 30; i++)
    {
        printf("%d ", b[i]);
    }

    /*int *n;
    printf("The number of character you want to store\n");
    scanf("%d", n);
    char *a = malloc(*n * sizeof(char));

    scanf("%s", a);

    q2(a);
    printf("The Reversed characters are\n");
    for (int i = 0; i <= *n; i++)
    {

        printf("%c", a[i]);
    }*/

    /*int *a;
    int *b;
    a = (int *)malloc(sizeof(int));
    b = (int *)malloc(sizeof(int));
    printf("Enter two numbers\n");
    scanf("%d %d", a, b);
    q3(a, b);
    printf("the swap of two numbers are %d %d\n", *a, *b);
    */

    /* fac *a = malloc(sizeof(*a));
    printf("Enter the Faculty name\n");
    scanf("%s", a->name);
    printf("Enter the present Salary\n");
    scanf("%d", &a->salary);
    q4(a);
    printf("The incremented salary of %s is %d\n", a->name, a-
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>salary);*/

/* int choice, count;
while (1)
{
    printf("The Task that you want to perform\n");
    printf("1. Add the Student Details\n");
    printf("2. Find the Student Details by Roll Number\n");
    printf("3. Find the Student Details by Course Id\n");
    printf("4.To print summary of student registered in each
course\n");
    printf("5. To exit from loop\n");
    scanf("%d", &choice);
    switch (choice)
    {
        case 1:
            add_student();
            break;
        case 2:
            find_rl();
            break;
        case 3:
            find_c();
            break;
        //case 4:
        // break;
        case 5:
            exit(0);
    }
}*/

return 0;
}

```