7.
```
#include <stdio.h>
typedef struct
struct students {
    char name[50];
    int electives;
};students;
void inputStudentDetails(int n, struct students a[])
{
    for(int i=0; i<n; i++){
        printf("Enter Student no. %d name", i+1);
        scanf("%d", &a[i].
        gets(a[i].name);
        printf("Enter student electives\n");
        printf("1.IOT\n");
        printf("2.Advanced Java\n");
        printf("3.J2EE\n");
        scanf("%d", &a[i].electives);
    }
}
void inputTotalNumber(){ int n;
    printf("Enter the total number of students\n");
    scanf("%d", &n);
    return n;
}
void int DisplayMenu(){ int n;
    printf("1.Display names of student for a
            particular elective\n");
    printf("2. Display count of each
```

```
typedef struct {
    char name[50];
} electives;
```

```
        elective");
        printf("3. Display name of students
                in all electives");
        printf("4. Exit");
        scanf("%d", &n);
        return n;
}
void displayParticularElectiveNames(students a[], int n)
{   int e;
    printf("Choose one of the elective\n");
        scanf("%d", &e);
    for(int i=0; i<n; i++) {
        if(a[i].elective == e)
            puts(a.[i].name);
    }
}
void displayNames(students a[], int n)
{
    elective elective e1[10], e2[10], e3[10];
    int c1=0, c2=0, c3=0;
    for(int i=0; i<n; i++)
    {
        if(a[i].elective == 1){
            c1++;
            e1[c1].name = a[i].name;
        } else if(a[i].elective == 2){
            c2++;
            e2[c2].name = a[i].name;
        } else if(a[i].elective == 3){
            c3++;
            e3[c3].name = a[i].name;
        }
    }
```

```
    printElection (e1, c1);
    printElection (e2, c2);
    printElection (e3, c3);
}
void printElection (election e[], int c)
{
    for (int i=0; i<c; i++)
        puts (e[i].name);
}
void countElection (students s[], int n){
    int c1=0, c2=0, c3=0;
    for (int i=0; i<n; i++){
        switch (s[i].election){
            case 1: c1++;
                    break;
            case 2: c2++;
                    break;
            case 3: c3++;
                    break;
        }
}
printf ("The count of the election is:\n");
printf ("1. %d", c1);
printf ("2. %d", c2);
printf ("3. %d", c3);
if (c1 < 3){
    printf ("Note that this election is
            less than 3 in strength\n");
    selectOtherElection (1, s, n);
}
if (c2 < 3){
    printf ("Note that this election is");
    selectOther Election (2, s, n);
}
```

```
    if (c2 < 3) {
        printf("Note that this election is");
        SelectOtherElection(3, s, n);
    }
}
void SelectOtherElection(int e, student s[], int n) {
    for (int i=0; i<n; i++) {
        if (s[i].election == e) {
            printf("Please reenter election
                    choice");
            scanf("%d", &s[i].election);
        }
    }
    countElection(s, n);
}
int main() {
    int n = inputTotalNumber(); d;
    students a[n];
    inputStudentDetails(a, n);
    do {
        d = DisplayMenu();
        switch(d) {
            case 1: displayPartiularsElectionNames(a, n);
                    break;
            case 2: countElection(a, n);
                    break;
            case 3: displayNames(a, n);
                    break;
            case 4: break;
            default: printf("Enter valid input");
        } while(d != 4);
    return 0;
}
```