

OOJ LAB-WEEK 2-PROGRAM 7

Program and Output

Mallika Prasad

1BM19CS081

Program 7-

```
#include <stdio.h>
#include <stdlib.h>
struct Student {
    char name[40];
    int elective;
};
int main(){
    int i,j,choice,n;
    int count[3] = {0,0,0};
    char electives[3][40] = {"IOT", "Advanced Java", "J2EE"};
    printf("Enter number of students: ");
    scanf("%d",&n);
    struct Student student[n];
    for(i=0;i<3;i++){
        printf("\n%d-%s",i+1,electives[i]);
    }
    for(i=0;i<n;i++){
        printf("\nEnter the name of student: ");
```

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scanf("%s",student[i].name);
printf("\nEnter the choice: ");
scanf("%d",&student[i].elective);
}
for(i=0;i<n;i++){
    if(student[i].elective == 1){
        count[0]++;
    }else if(student[i].elective == 2){
        count[1]++;
    }else{
        count[2]++;
    }
}
printf(" \n");
printf("Enter the choice of elective you want to get the list for: \n");
int x;
scanf("%d",&x);
for(i=0;i<n;i++){
    if(student[i].elective == x){
        printf(" %s\n",student[i].name);
    }
}
printf("\n");
printf("Number of students in %s elective: %d\n",electives[0],count[0]);

```

```

printf("Number of students in %s elective: %d\n",electives[1],count[1]);
printf("Number of students in %s elective: %d\n",electives[2],count[2]);
printf("\n");

if(count[0] < 3){

    printf("%s Less number of students, please pick another
elective\n",electives[0]);

    printf("choose between Advanced 2-Java and 3-J2EE\n");

    scanf("%d",&choice);

    for(i=0;i<n;i++){

        if(student[i].elective == 1){

            student[i].elective = choice;

            count[0]--;

            count[choice-1]++;

        }

    }

}

if(count[1] < 3){

    printf("%s Less number of students, please pick another
elective\n",electives[1]);

    printf("choose between 1-IOT and 3-J2EE\n");

    scanf("%d",&choice);

    for(i=0;i<n;i++){

        if(student[i].elective == 2){

            student[i].elective = choice;

            count[1]--;

```

```

        count[choice-1]++;
    }
}
}

if(count[2] < 3){
    printf("%s Less number of students, please pick another
elective\n",electives[2]);

    printf("choose between 1-IOT and Advanced 2-Java\n");
    scanf("%d",&choice);
    for(i=0;i<n;i++){
        if(student[i].elective == 3){
            student[i].elective = choice;
            count[2]--;
            count[choice-1]++;
        }
    }
}

printf("Number of students in %s elective: %d\n",electives[0],count[0]);
printf("Number of students in %s elective: %d\n",electives[1],count[1]);
printf("Number of students in %s elective: %d\n",electives[2],count[2]);

printf("\n");

for(i=0;i<3;i++){

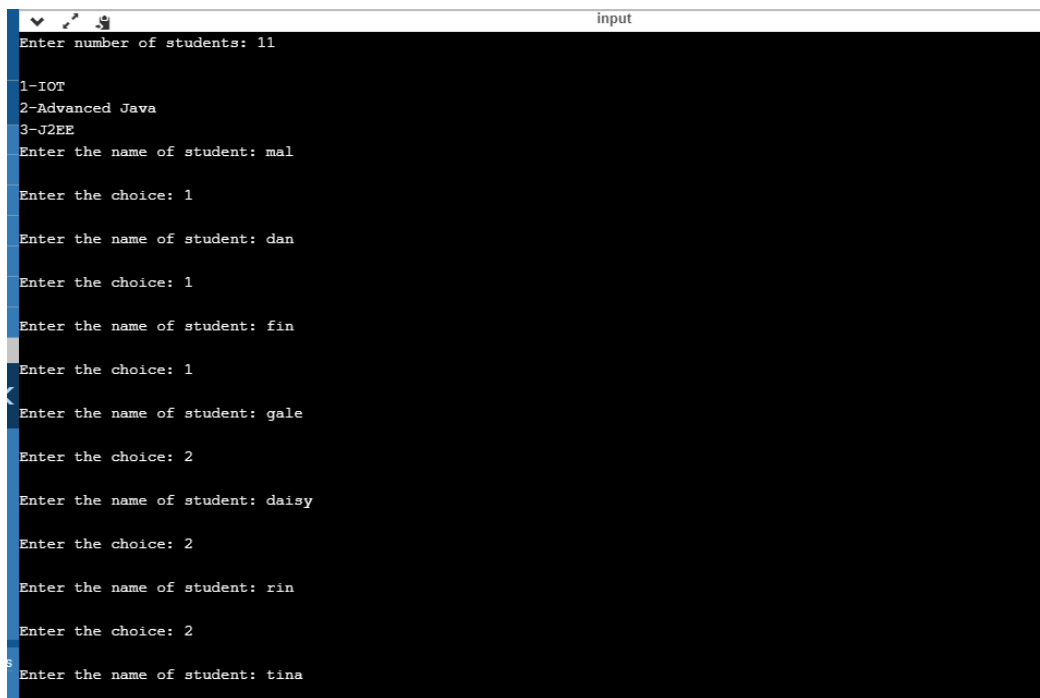
```

```

printf("\nStudents in %s: \n",electives[i]);
for(j=0;j<n;j++){
    if(student[j].elective == (i+1)){
        printf(" %s\n",student[j].name);
    }
}
}
return 0;
}

```

Output-



```

input
Enter number of students: 11
1-IOT
2-Advanced Java
3-J2EE
Enter the name of student: mal
Enter the choice: 1
Enter the name of student: dan
Enter the choice: 1
Enter the name of student: fin
Enter the choice: 1
Enter the name of student: gale
Enter the choice: 2
Enter the name of student: daisy
Enter the choice: 2
Enter the name of student: rin
Enter the choice: 2
Enter the name of student: tina

```

```
input

Enter the choice: 3

Enter the name of student: ham

Enter the choice: 1

Enter the name of student: elle

Enter the choice: 2

Enter the name of student: frank

Enter the choice: 1

Enter the name of student: carl

Enter the choice: 1

Enter the choice of elective you want to get the list for:
1
mal
dan
fin
ham
frank
carl

Number of students in IOT elective: 6
Number of students in Advanced Java elective: 4
Number of students in J2EE elective: 1
```

```
input

Number of students in Advanced Java elective: 4
Number of students in J2EE elective: 1

J2EE Less number of students, please pick another elective
choose between 1-IOT and Advanced 2-Java
2
Number of students in IOT elective: 6
Number of students in Advanced Java elective: 5
Number of students in J2EE elective: 0

Students in IOT:
mal
dan
fin
ham
frank
carl

Students in Advanced Java:
gale
daisy
rin
tina
elle

Students in J2EE:

Us
...Program finished with exit code 0
Press ENTER to exit console.
```