

```
#include <stdio.h>
#include <stdlib.h>
struct Student
{
    char name[20];
    int roll_number;
    int subject1;
    int subject2;
    int subject3;
    float percentage;
} st[1000];
int count = 0;

void insert()
{
    struct Student s;
    printf("Name : ");
    scanf(" %[^\\n]", s.name);
    printf("Roll Number : ");
    scanf("%d", &s.roll_number);
    printf("Marks in Subject1 : ");
    scanf("%d", &s.subject1);
    printf("Marks in Subject2 : ");
    scanf("%d", &s.subject2);
    printf("Marks in Subject3 : ");
    scanf("%d", &s.subject3);
    s.percentage = (float)(s.subject1 + s.subject2 + s.subject3) / 3;
    st[count++] = s;
}

void delete ()
{
    printf("Index : ");
    int index;
    scanf("%d", &index);
    for (int i = index; i < count; i++)
    {
        st[i] = st[i + 1];
    }
    count--;
}

void update()
{
    printf("Index : ");
```

```

int index;
scanf("%d", &index);
printf("Name : ");
scanf(" %[^\n]", st[index].name);
printf("Roll Number : ");
scanf("%d", &st[index].roll_number);
printf("Marks in Subject1 : ");
scanf("%d", &st[index].subject1);
printf("Marks in Subject2 : ");
scanf("%d", &st[index].subject2);
printf("Marks in Subject3 : ");
scanf("%d", &st[index].subject3);
}
void display()
{
    for (int i = 0; i < count; i++)
    {
        printf("%s\t%d\t%d\t%d\t%d\t%.2f\n", st[i].name, st[i].roll_number,
st[i].subject1, st[i].subject2, st[i].subject3, st[i].percentage);
    }
}
int main()
{
    FILE *ptr;
    ptr = fopen("data.txt", "r");
    if (ptr == NULL)
    {
        printf("\nError opening file");
    }
    else
    {
        while (fscanf(ptr, "%[^\\t]\\t%d\\t%d\\t%d\\t%d\\t%f\\n", st[count].name,
&st[count].roll_number, &st[count].subject1, &st[count].subject2,
&st[count].subject3, &st[count].percentage) != EOF)
        {
            count++;
        }
    }
    int ch;
    while (1)
    {
        printf("\n1. Insert Row\n2. Delete Row\n3. Update Row\n4.
Display\n5. Exit\n");
        printf("Enter your choice : ");
        scanf("%d", &ch);
        getchar();
    }
}

```

```

switch (ch)
{
case 1:
    insert();
    break;
case 2:
    delete ();
    break;
case 3:
    update();
    break;
case 4:
    display();
    break;
case 5:
{
    printf("\n**Exiting**\n");
    int i = 0;
    ptr = fopen("data.txt", "w");
    while ( i<count)
    {
        fprintf(ptr, "%s\t%d\t%d\t%d\t%.2f\n", st[i].name,
st[i].roll_number, st[i].subject1, st[i].subject2, st[i].subject3,
st[i].percentage);
        i++;
    }
    fclose(ptr);
    exit(0);
}
default:
    printf("Wrong Input.\n");
    break;
}
}

return 0;
}

```

OUTPUT

```
PS C:\Users\aadil\Desktop\CSE\clab> cd "c:\Users\aadil\Desktop\CSE\clab\" ; if ($?) { gcc program11.c -o program11 }

1. Insert Row
2. Delete Row
3. Update Row
4. Display
5. Exit
Enter your choice : 1
Name : Mohd Adil
Roll Number : 101
Marks in Subject1 : 96
Marks in Subject2 : 98
Marks in Subject3 : 95

1. Insert Row
2. Delete Row
3. Update Row
4. Display
5. Exit
Enter your choice : 1
Name : Abu Shama
Roll Number : 102
Marks in Subject1 : 98
Marks in Subject2 : 95
Marks in Subject3 : 92

1. Insert Row
2. Delete Row
3. Update Row
4. Display
5. Exit
Enter your choice : 4
Mohd Adil      101      96      98      95      96.33
Abu Shama      102      98      95      92      95.00
```

```
Enter your choice : 2
Index : 1

1. Insert Row
2. Delete Row
3. Update Row
4. Display
5. Exit
Enter your choice : 4
Mohd Adil      101      96      98      95      96.33

1. Insert Row
2. Delete Row
3. Update Row
4. Display
5. Exit
Enter your choice : 1
Name : Abu Shama
Roll Number : 102
Marks in Subject1 : 96
Marks in Subject2 : 98
Marks in Subject3 : 92

1. Insert Row
2. Delete Row
3. Update Row
4. Display
5. Exit
Enter your choice : 4
Mohd Adil      101      96      98      95      96.33
Abu Shama      102      96      98      92      95.33
```

```
Enter your choice : 1
Name : Soban
Roll Number : 103
Marks in Subject1 : 97
Marks in Subject2 : 91
Marks in Subject3 : 93
```

1. Insert Row
2. Delete Row
3. Update Row
4. Display
5. Exit

```
Enter your choice : 4
```

Mohd Adil	101	96	98	95	96.33
Abu Shama	102	96	98	92	95.33
Soban	103	97	91	93	93.67

1. Insert Row
2. Delete Row
3. Update Row
4. Display
5. Exit

```
Enter your choice : 3
```

```
Index : 2
```

```
Name : Soban Farooq
```

```
Roll Number : 103
```

```
Marks in Subject1 : 97
```

```
Marks in Subject2 : 91
```

```
Marks in Subject3 : 93
```

1. Insert Row
2. Delete Row
3. Update Row
4. Display
5. Exit

```
Enter your choice : 4
```

Mohd Adil	101	96	98	95	96.33
Soban Farooq	103	97	91	93	93.67

1. Insert Row
2. Delete Row
3. Update Row
4. Display
5. Exit

```
Enter your choice : 5
```

```
**Exiting**
```

```
PS C:\Users\aadil\Desktop\CSE\clab> cd "c:\Users\aadil\Desktop\CSE\clab\" ; if ($?) { gcc program11.c -o program11 }
```

1. Insert Row
2. Delete Row
3. Update Row
4. Display
5. Exit

```
Enter your choice : 4
```

Mohd Adil	101	96	98	95	96.33
Abu Shama	102	96	98	92	95.33
Soban Farooq	103	97	91	93	93.67

1. Insert Row
2. Delete Row
3. Update Row
4. Display
5. Exit

```
Enter your choice : 5
```

```
**Exiting**
```

And the file ...



data.txt

```
1 Mohd Adil 101 96 98 95 96.33
2 Abu Shama 102 96 98 92 95.33
3 Soban Farooq 103 97 91 93 93.67
4
```