

Program 5

```
#include <stdio.h>
#include <stdlib.h>
#include <string.h>
struct student {
    char name[100];
    char roll[10];
    struct student * next;
};

struct student * first = NULL, * last = NULL, * k;
void create (int n) {
    int i;
    first = (struct student *) malloc (size of (struct student));
    printf ("Enter the first name of student: ");
    scanf ("%s", first->name);
    printf ("Enter the roll no. of student:");
    scanf ("%d", first->roll);
    first->next = NULL;
    last = first;
    for (i = 1; i < n; i++) {
        k = (struct student *) malloc (size of (struct student));
        printf ("Enter the roll no. of student:");
        scanf ("%d", k->roll);
        k->next = NULL;
        last->next = k;
        last = k;
    }
    printf ("End display")
}
```

```
struct student *t;
```

```
t = first;
```

```
while (t != NULL)
```

```
{
```

```
printf("Roll no. of student: %05", t->roll);
```

```
printf("Enter name of student: %05", t->name);
```

```
t = t->next;
```

```
}
```

```
}
```

```
void insert_after()
```

```
{  
    char k[10];
```

```
    int flag = 0;
```

```
    printf("Enter the roll number you want to insert: ");
```

```
    scanf("%05", k);
```

```
    struct student *t;
```

```
    t = first;
```

```
    while (t != NULL)
```

```
{
```

```
        if (strcmp(k, t->roll) == 0)
```

```
        {
```

```
            k = (struct student *) malloc(sizeof(struct student));
```

```
            printf("Enter name of student: ");
```

```
            scanf("%05", k->name);
```

```
            printf("Enter the roll no. of student: ");
```

```
            scanf("%05", k->roll);
```

```
            k->next = t->next;
```

```
            t->next = k;
```

```
            flag = 1;
```

```
            break;
```

```
        }
```

```
        t = t->next;
```

```
void search()
```

```
{
```

```
    clear & l[0];
```

```
    int flag = 0;
```

```
    printf("Enter the roll no. you want to search:");
```

```
    scanf("%d", & r);
```

```
    struct student *t;
```

```
    t = NULL;
```

```
    while (t != NULL) {
```

```
        if (strcmp(r, t->roll) == 0) {
```

```
            printf("The roll no. found is:");
```

```
            flag = 1;
```

```
            break;
```

```
        } t = t->next;
```

```
    }
```

```
    if (flag == 0)
```

```
        printf("The roll no. is not in database!");
```

```
}
```

```
int main() {
```

```
    int n, 0;
```

```
    do {
```

```
        printf("Create database");
```

```
        printf("Display database");
```

```
        printf("Insert record after another");
```

```
        printf("Delete a record");
```

```
        printf("Search a record");
```

```
        printf("Exit");
```

```
        printf("Enter your choice:");
```

```
        scanf("%d", & o);
```

```
        switch (o) {
```

```

case 1 : printf ("Enter the maximum size of database:");
scanf ("%d", &n);
create(n);
break;
case 2: display();
break;
case 3: insert after();
break;
case 4: del(); break;
case 5 : search(); break;
case 0 : exit(0); break;
default: printf ("You have entered a wrong choice!");
}
while (0 != 0);

```

3.