

```
#include <stdlib.h>
#include <stdio.h>
void create();
void display();
void insert_begin();
void delete_begin();
void delete_end();
void delete_pos();
```

```
struct node { int id, sem;
               char name[20];
               int info;
               struct node *next; };
```

```
struct node *start = NULL;
```

```
int main()
```

```
{ int choice;
```

```
while(1) { printf("1. Create\n2. Display\n3. Use\n4. Delete from beginning\n5. Delete from\nthe end\n6. Delete from position\n7. exit\n");
```

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

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

```
switch(choice)
```

```
{ case 1: create();
      break;
```

```
case 2: display(); break;
```

```
case 3: insert_begin(); break;
```

```
case 4: delete_begin(); break;
```

```
case 5: delete_end(); break;
```

```
case 6: delete_pos(); break;
```

Case 7: `exit(0);`

`break;`

default:

`printf("Wrong choice\n");`
`break;`

`} } return 0;`
`}`

`void create()`

`{ struct node *temp, *ptr;`

`temp = (struct node *) malloc(sizeof(struct node));`

`if (temp == NULL)`

`{`
`printf("Out of memory space\n");`
`exit(0);`
`}`

`{`

`printf("Enter input");`

`scanf("%d", &temp->id);`

`temp->next = NULL;`

`if (start == NULL)`

`{ start = temp; }`

`else { ptr = start;`

`while (ptr->next != NULL)`

`{ ptr = ptr->next;`

`}`

`ptr->next = temp;`

`}`
`}`
`}`

`}`


```
void display()
```

```
{
```

```
    struct node * ptr;
```

```
    if (start == NULL)
```

```
        printf("List is empty\n");
```

```
        return;
```

```
}
```

```
else
```

```
{
```

```
    ptr = start;
```

```
    printf("The list is all\n");
```

```
    while (ptr != NULL)
```

```
    { printf("%d\t", ptr->d);
```

```
        ptr = ptr->next;
```

```
}
```

```
}
```

```
}
```

```
void insertbegin()
{
    struct node *temp;
    temp = (struct node *) malloc (size of struct node);
    if (temp == NULL)
    {
        printf ("Out of memory");
        return;
    }
    printf ("Enter id");
    scanf ("%d", &temp->id);
    printf ("Enter sem");
    scanf ("%d", &temp->sem);
    temp->next = NULL;
    if (start == NULL)
    {
        start = temp;
    }
    else
    {
        temp->next = start;
        start = temp;
    }
}

void insertend()
{
    struct node *temp, *ptr;
    temp = (struct node *) malloc (size of struct node);
    if (temp == NULL)
    {
        printf ("Memory more");
        return;
    }
}
```


else

```

{
    ptr = start;
    while (ptr → next != NULL)
    {
        ptr = ptr → next;
    }
    ptr → next = temp;
}

```

}

void insertpos()

{

struct node *ptr, *temp;

int i, pos;

temp = (struct node) malloc(sizeof(struct node));

if (temp == NULL)

```

{
    printf("no memory");
    return;
}

```

printf("Enter position");

scanf("%d", &pos);

printf("Enter data");

scanf("%d", &temp → id);

if (pos == 0)

```

{
    temp → next = start; start = temp;
}

```

else

```

{
    for (i = 0, ptr = start; i < pos - 1; i++)
    {
        ptr = ptr → next;
    }
    temp → next = ptr → next;
    ptr → next = temp;
}

```

}