```
#include <stdio.h>
#include <stdlib.h>
#include <string.h>
typedef struct cars
{
  int lplate;
  int move;
  struct cars* link;
}car_t;
typedef struct list{
  car_t *top;
  int n;
}list_t;
void init(list_t *p)
{
  p->top=NULL;
  p->n=8;
}
int count(list_t *p)
{
  int c=0;
  car_t *q=p->top;
  while(q!=NULL)
  {
    c++;
    q=q->link;
  }
  return c;
}
car_t * createnode(int ele)
{
```

```
 car_t *temp=(car_t*)malloc(sizeof(car_t));
 temp->lplate=ele;
 temp->move=0;
 temp->link=NULL;
}
void arrived(list_t *p,int ele)
{
 if(count(p)>=p->n)
 {
  printf("Garage Full");
 }
 else{
  car_t *temp=createnode(ele);
  temp->link=p->top;
  p->top=temp;
  printf("car no %d is parked\n",p->top->lplate);
 }
}
void display(car_t *p)
{
 printf("Car licence plate no:%d",p->lplate);
 printf("No of times car moved:%d",p->move);
}
void depart(list_t *p,int l)
{
 car_t *pres=p->top;
 car_t *prev=NULL;
 if(count(p)==0)
 {
  printf("%s\n","Khali garage");
 }
```

```
else
{
  while(pres!=NULL)
  {
    if(pres->lplate==l)
    {
      if(pres==p->top)
      {
        p->top=pres->link;
        pres->link=NULL;
      }
      else if(pres->link==NULL)
      prev->link=NULL;
      else
      {
        prev->link=pres->link;
        pres->link=NULL;
      }
      printf("Details of the car departed:");
      display(pres);
      free(pres);
      break;

    }
    else
    {
      pres->move=pres->move+1;
      prev=pres;
      pres=pres->link;
    }
  }
```

```
  }
}
void displayg(list_t *p) {
  if(p->top==NULL)
  printf("Empty list\n");
  else
  {
    car_t *q=p->top;
    while(q!=NULL)
    {
      printf("%d",q->lplate);
      q=q->link;
    }
  }
}
int main()
{
  list_t p;
  init(&p);
  int choice,l;
  do{
    printf("Enter your choice\n 1. Arravil\n2.Depature\n3.Display Garage\n4.Exit");
    scanf("%d",&choice);
    switch(choice)
    {
      case 1:
      printf("Enter liscence plate number:\n");
      scanf("%d\n",&l );
      arrived(&p,l);
      break;
      case 2:
```

```
    printf("Enter liscence plate number:\n");
    scanf("%d\n",&l );
    depart(&p,l);
    break;
    case 3:
    displayg(&p);
    break;
   }
  }while(choice!=4);
  return 0;
}
```

```
Enter your choice
 1. Arravil
2.Depature
3.Display Garage
4.Exit3
Empty list
Enter your choice
 1. Arravil
2.Depature
3.Display Garage
4.Exit1
```

```
Enter your choice
 1. Arravil
2.Depature
3.Display Garage
4.Exit1
Enter liscence plate number:
9872
2
car no 9872 is parked
Enter your choice
 1. Arravil
2.Depature
3.Display Garage
```

```
 1. Arravil
2.Depature
3.Display Garage
4.Exit3
9872Enter your choice
 1. Arravil
2.Depature
3.Display Garage
4.Exit2
Enter liscence plate number:
9872
1
Details of the car departed:Car licence plate no:9872No of times car moved:1Enter your choice
 1. Arravil
2.Depature
3.Display Garage
```