PPS MINI PROJECT

Car Rental System

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Car Rental System

Car Rental System is an application in c designed to show various automobile models from which you can rent a vehicle and return it back

Source Code (Program):

```c
#include  <stdio.h>
#include<string.h>
struct car
{
 char
 customername[50];
 char customerId[13];
 char carrented[20]; int
 n,rent,days;
 int dr,mr,yr,dret,mret,yret;
};
char
carbrand[10][20]={"HYUNDAI","SUZUKI","HONDA","TOYOTA","FORD","T
ATA", "MERCEDES","AUDI","ISUZU"};
char carmodel[10][20]={"Veloster","Celerio","Civic","Avalon","Explorer","
Safari","E-Class","Q3","D-MAX"};
int carseat[10]={4,4,4,8,4,4,4,8,8,0};
int carrentperday[10]={250,250,250,250,250,250,250,250,250,0};
int carrentpermontly[12]={31,28,31,30,31,30,31,31,30,31,30,31}; int
z=0,u=0;
struct car c,ca[10],cr[10],cn={0};
void car_rent()
{
 int i,f;
 int t,days1=0,days2=0,days3=0;
```

```c
char ch;
int j,x;
printf("WELCOME DEAR CUSTOMER!!! \n");
display();
printf("ENTER THE BRAND OF CAR YOU WANT TO RENT:
");     scanf("%s",c.carrented);
printf("ENTER DATE ON WHICH YOU WILL TAKE THE CAR(dd mm
yyyy):                                                    ");
scanf("%d%d%d",&c.dr,&c.mr,&c.yr);
printf("ENTER THE DATE ON WHICH YOU WILL RETURN THE CAR(dd
mm yyyy): ");
scanf("%d%d%d",&c.dret,&c.mret,&c.yret);
printf("LETS CHECK WHETHER THE CAR IS
AVAILABLE OR
NOT\n");   //FILE *ptr;
//ptr=fopen("Car_rent.txt","r");
//fread(ca,sizeof(ca),1,ptr);
for(i=0;i<10;i++)
{
if(strcmp(ca[i].carrented,c.carrented)==0)
{
for(t=0;t<=ca[i].mr;t++)
days1+=carrentpermontly[t];
for(t=0;t<=ca[i].mret;t++)
days2+=carrentpermontly[t];
for(t=0;t<=c.mr;t++)
days3+=carrentpermontly[t];
days1+=ca[i].dr;
days2+=ca[i].dret;
days3+=c.dr;
if((days3-days1)*(days2-days3)>=0)
f=1;
else
f=0;
if(f==1)
{
printf("Car not available.Are you interested in          trying another
car?\nIf yes enter Y else enter N\n");        getchar();
                  scanf("%c",&ch);
                  //fclose(ptr);
                  if(ch=='y'||ch=='Y')
car_rent();
else
                  {
```

```c
printf("THANKS FOR COMING!!PLEASE VISIT AGAIN  \n\n\n");
//fclose(ptr);
                        break;
}
}
}
else if(strcmp(ca[i].carrented,c.carrented)!=0 ||f==0)          {
printf("CAR AVAILABLE!! \n");
FILE *fp;


fp=fopen("Car_rent","a");
strcpy(ca[u].carrented,c.carrented); ca[u].dr=c.dr;
ca[u].mr=c.mr;
ca[u].yr=c.yr;
ca[u].dret=c.dret;
ca[u].mret=c.mret;
ca[u].yret=c.yret;
//u++;
fwrite(&ca,sizeof(ca),1,fp);
fclose(fp);
printf("ENTER YOUR NAME: ");
scanf("%s",c.customername);
printf("ENTER YOUR ID
NUMBER: ");
scanf("%s",c.customerId);
c.n=date(c.yr,c.yret,c.mr,c.mret,c.dr,c.dret);          for(j=0;j<
10;j++)
{
x=strcmp(c.carrented,carbrand[j]);
if(x==0)
break;
}
c.rent=c.n*carrentperday[j];
printf("WARNING: If any damage is done to the car then you are
entirely responsible. The car has to be returned in its initial
condition.\n");
printf("Details:\n");   printf("NAME:\t%s\nID:\t%s\nCAR
RENTED:\t%s\nNUMBER
OF
    DAYS:\t%d\nRENT:\t%d\n",c.customername,c.customerId,c.carrented,
c
.n, c.rent);
//fclose(ptr);
strcpy(cr[z].customername,c.customername);   strcpy(cr[
```

```c
z].customerId,c.customerId);
  strcpy(cr[z].carrented,c.carrented);
  cr[z].n=c.n;
  cr[z].rent=c.rent;
  //z++;
  FILE *fptr;
  fptr=fopen("Car_rent.txt","a+");
  fwrite(&cr,sizeof(cr),1,fptr);
  fclose(fptr);
  break;
  }
  }
}
int date(int y1,int y2,int m1,int m2,int d1,int d2)
{
  int i,days1=0,days2=0,days3=0 ;
  for(i=0;i<=m1;i++)
  days1+=carrentpermontly[i];
  for(i=0;i<=m2;i++)

  days2+=carrentpermontly[i];
  days1+=d1;
  days2+=d2;
  return(days2-days1);
}
void car_return()
{
  //FILE *fptr,*nptr;
  char id[13];
  int dd,mm,yy,d,m,y,flag=0,i,j;
  printf("Welcome back dear customer \n");
  printf("Please enter your id\n");
  scanf("%s",id);
  //fptr=fopen("Car_rent","r");
  //fread(cr,sizeof(struct car),1,fptr);
  for(i=0;i<10;i++)
  {
  if(strcmp(cr[i].customerId,id)==0)
  {
  flag=1;
  printf("HELLO %s\n",cr[i].customername);     printf("For confirmation
please enter the date on which     you took the car and the date on
which you are returning the date   in(dd mm yyyy)format.\n");
  scanf("%d%d%d",&dd,&mm,
```

```c
  &yy);
  scanf("%d%d%d",&d,&m,&y);
  cr[i].days=date(yy,y,mm,m,dd,d);
  if(cr[i].days>cr[i].n)
  {
  cr[i].rent+=50*(cr[i].days-cr[i].n);          }
  printf("FINAL AMOUNT:%d
\n",cr[i].rent);          printf("\n\n");
  break;
  }
  }
  if(flag==0)
  {
  printf("Customer not found\n");
  //fclose(fptr);
  }
  else
  {
  //nptr=fopen("Car_rent","w+");
  //fread(cr,sizeof(cr),1,nptr);
  for(j=0;j<10;j++)
  {
  if(j==i)

memset(&cr[j].carrented[0],0,sizeof(cr[j].carrented[0]));
}
  //fclose(fptr);
  //remove("Car_rent");


  //rename("Car_temp","Car_rent");
  // fclose(nptr);
  }
  }
void display()
{
  printf("################################################
\n");     printf("#    CAR BRAND    #      MODEL   #    RENT
        PER          DAY(Php)    #
\n");
            printf("#############################################
####
\n");    printf("# HYUNDAI # Veloster # 250  # \n");  printf("# SUZUKI #
   Celerio   #   250 #  \n");      printf("#      HONDA   #       Civic
   #    250  #
\n");    printf("# TOYOTA # Avalon # 250 # \n");      printf("# FORD #
Explorer   #   250  #  \n");      printf("#     TATA #  Safari   #  250
```

```c
                 #
\n");  printf("# MERCEDES # E-Class # 250  # \n");        printf("# AUDI #
Q3  #    250   #   \n");       printf("#      ISUZU  #   D-MAX #    250
        #
\n");
                printf("###############################################
####
\n"); } int
main()
{
 int q,p=0,g,h;
 for(g=1;g<=365;g++
 )
 {
 for(h=1;h<=10;h++)
 {
 printf("\nIS THERE A NEW CUSTOMER NOW??\nENTER 1 FOR YES
                                                 AND 0
FOR NO\n");
 scanf("%d",&p);
 if(p==1)
 {
 label:
 printf("\aHI!! ARE YOU HERE TO TAKE THE  CAR SERVICE        OR
RETURN BACK THE CAR? \n 1.WANT TO RENT A CAR.\n 2.WANT TO
RETURN                                               THE CAR.\n");
 scanf("%d",&q);
 switch(q)
 {
 case 1:{car_rent();u++;z++;
                    break;}
                    case 2:car_return();
 break;
     default:{printf("Wrong choice!! Try again.\n"); goto label;}
 }
 }
 }
 printf("\n\n\nBYE!!Today's work is over\a\n\n\n");          }
}
```

Output:

Renting the car

Returning the car

Other Outputs –

```
IS THERE A NEW CUSTOMER NOW??
ENTER 1 FOR YES AND 0 FOR NO
0

IS THERE A NEW CUSTOMER NOW??
ENTER 1 FOR YES AND 0 FOR NO
1

IS THERE A NEW CUSTOMER NOW??
ENTER 1 FOR YES AND 0 FOR NO
0

IS THERE A NEW CUSTOMER NOW??
ENTER 1 FOR YES AND 0 FOR NO
1
HI!! ARE YOU HERE TO TAKE THE CAR SERVICE OR RETURN BACK THE CAR?
 1.WANT TO RENT A CAR.
 2.WANT TO RETURN THE CAR.
3
Wrong choice!! Try again.
HI!! ARE YOU HERE TO TAKE THE CAR SERVICE OR RETURN BACK THE CAR?
 1.WANT TO RENT A CAR.
 2.WANT TO RETURN THE CAR.
2
Welcome back dear customer
Please enter your id
1
Customer not Found

IS THERE A NEW CUSTOMER NOW??
ENTER 1 FOR YES AND 0 FOR NO
```