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**Assignment Week 4**

#include <stdio.h>

#include <string.h>

#define MAX 8

typedef struct stack

{

int top;

char license[MAX][20];

char arrival[MAX][20];

char departure[MAX][20];

int moved[MAX];

} stack;

void arrival(stack \*st)

{

if (st->top == MAX)

printf("Parking full");

else

{

++(st->top);

char arrival[20], departure[20], license[20];

printf("Enter License no: ");

scanf("%s", license);

fflush(stdin);

printf("Arrival: ");

scanf("%s", arrival);

fflush(stdin);

printf("Departure: ");

scanf("%s", departure);

fflush(stdin);

strcpy(st->license[st->top], license);

strcpy(st->arrival[st->top], arrival);

strcpy(st->departure[st->top], departure);

st->moved[st->top] = 0;

}

}

void depart(stack \*st)

{

char license[20];

printf("Enter license no: ");

scanf("%s", license);

stack temp;

temp.top = -1;

if (strcmp(st->license[st->top], license) == 0)

{

printf("topmost eh\n");

printf("No of times removed: %d\n", st->moved[st->top]);

st->top--;

return;

}

for (int i = st->top; i >= 0; i--)

{

if (strcmp(st->license[i], license) == 0)

{

printf("No of times moved: %d\n", st->moved[i]);

st->top--;

while (temp.top >= 0)

{

++(st->top);

strcpy(st->arrival[st->top], temp.arrival[temp.top]);

strcpy(st->departure[st->top], temp.departure[temp.top]);

strcpy(st->license[st->top], temp.license[temp.top]);

st->moved[st->top] = temp.moved[temp.top];

--(temp.top);

}

return;

}

else

{

++(temp.top);

(st->moved[st->top])++;

strcpy(temp.arrival[temp.top], st->arrival[st->top]);

strcpy(temp.departure[temp.top], st->departure[st->top]);

strcpy(temp.license[temp.top], st->license[st->top]);

temp.moved[temp.top] = st->moved[st->top];

--(st->top);

}

}

}

void display(stack \*st)

{

int i = st->top;

while (i >= 0)

{

printf("\n%s %s %s %d\n", st->license[i], st->arrival[i], st->departure[i], st->moved[i]);

i--;

}

}

int main()

{

stack st;

st.top = -1;

int choice;

do

{

printf("\n1. Arrival 2. Departure 3. Display\n");

scanf("%d", &choice);

switch (choice)

{

case 1:

arrival(&st);

break;

case 2:

depart(&st);

break;

case 3:

display(&st);

break;

}

} while (choice < 4);

return 0;

}

**Output:**



