Write a program for calculating the money earned in a parking area. The parking area can take up to 20 vehicles. Vehicles’ type can be “*small*”, “*medium*” or “*large*”. Small vehicles pay 5TL if they stay up to 2 hours. If they stay longer, they pay 1TL for each hour. Medium vehicles pay 6TL up to 2 hours and then they pay 2TL for each hour after 2 hours. Large vehicles pay 7TL for the first two hours and then they pay 3TL for each additional hour.

The program runs as below.

First the user chooses one of three options:

1: Enter Vehicle

2: Exit Vehicle

3: Terminate

The program continues until the user wants to terminate the program.

**Enter Vehicle**: In there are already 20 vehicles inside the parking area, the program gives a warning and asks to chose another option. Otherwise, the program asks the plate, type and the entrance hour of the vehicle and saves the vehicle to the array.

**Exit Vehicle**: The program asks the plate of the exiting car and finds it in the array. Then the program asks the exiting hour of the car and calculates the total money that the car should pay. Also the program deletes the car from the array.

**Terminate:** The program prints the total money earned in the parking area and exits.

The user will not enter any incorrect data (i.e. trying to exit a car which is not in the parking area) so the programmer does not need to make any error check.

There is an example execution of the program. To help to the user, the cars inside the parking area are listed at every option selection. Also, to be able to save some space, the maximum number of the cars is limited to 3 instead of 20.

Choose:

(1) Car Enter

(2) Car Exit

(3) Terminate

1

Enter vehicle's plate:01abc01

Enter vehicle's typesmall

Enter vehicle's enterence hour7

List of Vehicles Inside

01abc01 small 7

Choose:

(1) Car Enter

(2) Car Exit

(3) Terminate

1

Enter vehicle's plate:02abc02

Enter vehicle's typesmall

Enter vehicle's enterence hour6

List of Vehicles Inside

01abc01 small 7

02abc02 small 6

Choose:

(1) Car Enter

(2) Car Exit

(3) Terminate

1

Enter vehicle's plate:03abc03

Enter vehicle's typemedium

Enter vehicle's enterence hour9

List of Vehicles Inside

01abc01 small 7

02abc02 small 6

03abc03 medium 9

Choose:

(1) Car Enter

(2) Car Exit

(3) Terminate

1

There is NO room in the parking area

Choose:

(1) Car Enter

(2) Car Exit

(3) Terminate

2

Enter exiting vehicle's plate02abc02

Enter exiting hour10

The vehicle pays: 7

List of Vehicles Inside

01abc01 small 7

03abc03 medium 9

Choose:

(1) Car Enter

(2) Car Exit

(3) Terminate

2

Enter exiting vehicle's plate03abc03

Enter exiting hour11

The vehicle pays: 6

List of Vehicles Inside

01abc01 small 7

Choose:

(1) Car Enter

(2) Car Exit

(3) Terminate

2

Enter exiting vehicle's plate01abc01

Enter exiting hour22

The vehicle pays: 18

List of Vehicles Inside

Choose:

(1) Car Enter

(2) Car Exit

(3) Terminate

3

Total Money Earned: 31