

**OBJECTIVE** : Queue Operations, Stack&Queue Mix Questions

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**Q1.** In a petrol station, daily sales information is kept in the file **customers.txt**, such that each customer's information contains the **car plate**, **fuel type**, and **amount of petrol in liters bought** from this station.

Write a C program that gets several customers' information from the file and stores them in a structure queue. Then the program displays a daily report.

Make the necessary changes in the header file to create a **structure** queue. (**carPlate**, **fuelType**, **liter**, **payment**)

Write the following functions;

- **calculatePayment**: gets customer information as a parameter, and calculates the payment according to the fuel type of the car. If the fuel type is Diesel; the price is **21.42 TL** per liter. On the other hand, if the fuel type of it is Fuel; the price is **22.84 TL** per liter.
- **fillQueue**: reads the customer information from the file calculates the payment for each customer using the function above, and inserts the customers into the queue.
- **dailyReport**: gets the customer queue as a parameter and displays a detailed daily report;
  - information of each customer including the payment,
  - the total payment and the total liter amount sold from the station.

**customers.txt**

```
06UG215 F 90.55
06KF121 D 40.11
06SS350 F 80.20
06NV834 D 70.80
06KG507 F 25.14
06BV3911 F 43.23
06BC229 D 16.75
```

**Project Name:** LG17\_Q1

**File Name:** Q1.cpp

#### Example Run:

Plate	FuelType	Liter	Payment
*****	*****	*****	*****
06UG215	F	90.55	2068.16 TL
06KF121	D	40.11	859.16 TL
06SS350	F	80.20	1831.77 TL
06NV834	D	70.80	1516.54 TL
06KG507	F	25.14	574.20 TL
06BV3911	F	43.23	987.37 TL
06BC229	D	16.75	358.79 TL

Total liter sold: 366.78

Total payment : 8195.98 TL