

# Mates-Rates Rent-a-Car (MRRC) User Manual – Demo

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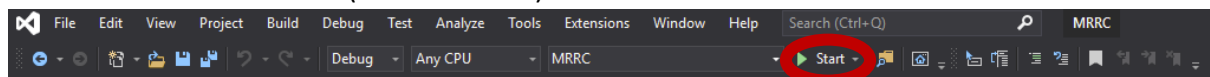
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## Building ----- |

To build the code this program entails. Navigate to the **root** folder containing all the project files to find the **MRRC.sln** file. Open this file with **Visual Studio** preferably the latest version. Navigate to the **Solution Explorer** toolbar typically located on the right side of the screen, expand the MRRC Solution, right click the **MRRC project** and continue to select build.

## Running ----- |

To run the program, navigate to the start button on the top tool bar and give it a single click. Button is as shown below (Circled in Red).



This then opens up a new console window where the program proceeds to run. Initially it checks to see if the program files exist (Creating some if not). Then prints to the console a greeting message and the **Main Menu**.

```
|---- Mates Rates Rent-a-Car Operation Menu ----|
```

Press the --- Q --- key to exit at anytime.

Press --- R --- to return to previous menu.

Please Enter a character corresponding to the options below:

a --> Customer Management.

b --> Fleet Management.

c --> Rental Management.

## File Storage

As a default the program stores its program files in the **Data** folder located inside the **root** folder. The program files are in a comma-separated value (CSV) file format. As listed below.

- fleet.csv - Vehicle fleet data
- customers.csv - Customer information data
- rentals.csv - Vehicle and customer rental data

Additionally, there are two temporary files which aren't used to store data but to assist with safely manipulating the data within the program. Namely:

- tempFile.csv - customers.csv data manipulation temp file.
- tempFile2.csv - fleet.csv data manipulation temp file.

In the case that the user decides to use files stored elsewhere. They should specify the new paths via command line arguments. To do this navigate to the **Solution Explorer** and right click the **MRRRC project** . Then select the **Debug tab** in the newly opened file and paste the following into the command line arguments text box:

```
--fleet=path/to/fleet.csv --customers=path/to/customers.csv --rentals=path/to/rentals.csv
```

You will need to replace the placeholder paths with paths to the files you wish to use in the program. Once this is done you may run the program as previously described.

## Program Usage ----- |

The program consists of a **Main menu** which provides the user input options to move to the **sub menus** containing the features of the program. Each of the sub menus is focused on the specific aspect of the system. As the greeting entails entering the **Q key** allows the user to exit the program whilst the **R key** returns to the previous menu. Additionally, the program is case-insensitive (Q or q will both quit the program...)

### Main Menu

Upon entering the menu, after the greeting message the **Main Menu** will be displayed:

Please Enter a character corresponding to the options below:

- a --> Customer Management.
- b --> Fleet Management.
- c --> Rental Management.

Entering (**a,b** or **c**) keys will take you to the corresponding sub menu and display it in the console. (You need to hit **ENTER** after typing the character. This confirms the choice and proceeds to the corresponding sub menu.)

### Customer Management Sub Menu

If **a** is **ENTERED** on the **Main Menu**. It will take you to the customer management sub menu. As the name suggests all the options this feature relate to the management of customers.

```
|---- a) Customer Management ----|
```

- a --> Display Customers
- b --> New Customer
- c --> Modify Customer
- d --> Delete Customer

After you input the character (**a,b,c** or **d**) ensuring to hit **ENTER** after inputting it. The program will move you to the corresponding **cascading menu**.

### a) Display Customers Cascading Menu

This cascading menu in the sub menu customer management simply displays all the customers on file into the CRM by printing them to the console. It should look similar to the text below:

ID	Title	First Name	Last Name	Gender	D.O.B
0	Ms	Elizabeth	Franklin	Female	26/09/1995
1	Miss	Finley	Sartini	Male	25/04/1965
2	Mr	Miron	Descoteaux	Male	4/06/1983
3	Mx	Tekla	Muhammad	Other	17/12/1989

### b) New Customer Cascading Menu

The cascading menu corresponding to b. Prompts the user to input fields which detail the information of a new customer. It asks the user to enter a Title, First Name, Last Name, Gender and D.O.B. In each field the user has to type in the response then hit ENTER so that the next field appears. Once all the fields are complete, the program will display a message saying it added the customer, whilst automatically generating a new unique id for the customer. The full process should look like the text below:

**Please Fill in the Following Fields. All with \* are mandatory.**

Title\*: Mr  
First Name\*: Joseph  
Last Name\*: Haddad  
Gender\*: Male  
D.O.B\*: 11/07/2000

**Successfully Created New Customer -> 10 Mr Joseph Haddad**

### **c) Modify Customer Cascading Menu**

To modify customers this cascading menu corresponding to c is the one they need to access. It works similarly to the way new customers are added in b. However, initially it asks the user what is the id of the customer they would like to modify. If the id corresponds to a user it will prompt the user to fill in the required fields just like when creating a new customer. Once the process is complete it will prompt that user that it has successfully modified the customer. Just as shown below:

**What is the ID number of the customer you would like to modify? 10**

**Please Fill in the Following Fields. All with \* are mandatory.**

**Title\*: Mrs**

**First Name\*: Josephine**

**Last Name\*: Haddad**

**Gender\*: Female**

**D.O.B\*: 11/07/2000**

**Successfully Saved Modified Customer.**

### **d) Delete Customer Cascading Menu**

The final cascading menu in the customer management sub menu corresponding to d. Is the deleting customers menu. This menu prompts the user to type in and ID then ENTER it. Then it simply deletes the customer from the CRM. It should output text to the console similar to the below:

**What is the ID number of the customer you would like to delete? 10**

**Successfully Deleted Customer 10**

## Fleet Management Sub Menu

If **b** is **ENTERED** on the **Main Menu**. It will take you to the fleet management sub menu. As the name suggests all the options this features relate to the management of the fleet.

|---- b) Fleet Management ----|

- a --> Display Fleet
- b --> New Vehicle
- c --> Modify Vehicle
- d --> Delete Vehicle

After you input the character (**a,b,c** or **d**) ensuring to hit **ENTER** after inputting it. The program will move you to the corresponding **cascading menu**.

### a) Display Fleet Cascading Menu

This cascading menu in the sub menu fleet management simply displays all the vehicles in the fleet on file in the CRM by printing them to the console. It should look similar to the table below:

Registration	Grade	Make	Model	Year	Num Seats	Transmission	Fuel	GPS	Sun Roof	Daily Rate	Colour
851V0J	Economy	Pontiac	Fiero 2M4	1985	2	Manual	Petrol	No GPS	No Sunroof	37.1	Black
169FBE	Economy	Pontiac	Fiero 2M4	1985	2	Manual	Petrol	No GPS	No Sunroof	48.8	Black
602VVZ	Economy	Pontiac	Fiero 2M4	1987	2	Manual	Petrol	No GPS	No Sunroof	37.9	Red

### b) New Vehicle Cascading Menu

The cascading menu corresponding to b. Prompts the user to input fields which detail the information of a new vehicle. It asks the user to enter required fields. In each field the user has to type in the response then hit ENTER so that the next field appears. Once all the fields are complete, the program will display a message saying it added the customer, whilst automatically generating a new unique id for the customer. If the user decides they want a custom grade they will need to type in additional fields otherwise the other grades will just set the default settings. The full process assuming the user selects a custom grade should look like the text below (Process for other grades is very similar):

**Please Fill in the Following Fields. All with \* are mandatory.**

**Registration\*: 123ABC**

**Make\*: Honda**

**Model\*: Civic**

**Year\*: 2002**

**Vehicle Grade\* (Economy, Family, Commercial, Luxury or Custom): Custom**

**Vehicle Grade\* (Economy, Family, Commercial, Luxury): Luxury**

**Number of Seats\*: 5**

**Daily Rate\*: 120**

Colour: Orange  
Transmission - (Manual or Automatic): Manual  
Fuel Type: Petrol  
GPS (YES or NO): Yes  
Sunroof (YES or NO): Yes

Successfully Created New Vehicle -> 123ABC Luxury Honda Civic

### c) Modify Vehicle Cascading Menu

To modify vehicles this cascading menu corresponding to c is the one they need to access. It works similarly to the way new vehicles are added in b. However, initially it asks the user what is the registration of the vehicle they would like to modify. If the registration corresponds to one in the CRM and is able to be modified it will start a process similar to the one detailed in the new vehicle cascading menu. Once the process is complete it will prompt that user that it has successfully modified the vehicle. As shown below:

What is the Registration of the vehicle you would like to modify? 123ABC

Please Fill in the Following Fields. All with \* are mandatory.

Registration\*: 321CBA  
Make\*: Toyota  
Model\*: MR2  
Year\*: 2020  
Vehicle Grade\* (Economy, Family, Commercial, Luxury or Custom): Custom  
Vehicle Grade\* (Economy, Family, Commercial, Luxury): Luxury  
Number of Seats\*: 2  
Daily Rate\*: 140  
Colour: Pink  
Transmission - (Manual or Automatic): Manual  
Fuel Type: Petrol  
GPS (YES or NO): YES  
Sunroof (YES or NO): YES

Successfully Modified Vehicles 123ABC

### d) Delete Vehicle Cascading Menu

The final cascading menu in the fleet management sub menu corresponding to d. Is the deleting vehicle menu. This menu prompts the user to type in a Registration then ENTER it. It simply deletes the vehicle from the CRM. It should output text to the console similar to the below:

What is the Registration of the vehicle you would like to delete? 321CBA  
Successfully deleted 321CBA

## Rental Management Sub Menu

### a) Display Rented Vehicles Menu

This cascading menu in the sub menu rental management simply displays all the vehicles on file that are being rented to a customer. Upon entering "a" It prints them to the console and should look similar to the table below:

Registration	Customer ID	Daily Rate
602VVZ	0	80
677UIA	6	43.3
471XBI	2	38
851V0J	3	50
357JIO	13	80

### b) Return Vehicle Menu

The returning vehicle menu allows the user once they select it by entering b. To be able to type in a registration, which providing it meets all the validations, will return the vehicle from the customer if they are renting it.

Enter the registration of the vehicle you would like to return: 357JIO  
Vehicle 357JIO has been returned.

### c) Rent a Vehicle Menu

Upon selection of option c. The user will be prompted to enter the ID of the customer they intend to rent a vehicle to. This is then followed by the registration and the amount of time that they would like to rent the vehicle for. This then proceeds to rent the vehicle out provided that it meets all the requirements and displays a message to let the user know that the vehicle has been rented.

Type in the ID of the customer you would like to rent a vehicle to: 13  
Type in the REGISTRATION of the customer you would like to rent a vehicle to: 357JIO  
How long is the rental in (days)? 5

Vehicle: 357JIO Has been rented to: 13  
Total cost for: 5 days \$400

#### d) Search Vehicle Menu

In this sub menu they user is able to enter different search queries to look through the list of vehicles. If the user would like to display the entire range a blank query by clicking the **space** key will display the entire range. As per the requirement it only displays vehicles that are currently not rented.

Enter what you would like to search:

234DDG ECONOMY DFS SDF 2020 4-SEATER AUTOMATIC PETROL NO-GPS NO-SUNROOF 50 BLACK  
169FBE ECONOMY PONTIAC FIERO 2M4 1985 2-SEATER MANUAL PETROL NO-GPS NO-SUNROOF 48.8 BLACK  
993QAN COMMERCIAL MITSUBISHI 3000 GT VR-4 1991 2-SEATER MANUAL PETROL NO-GPS NO-SUNROOF 37.8 RED  
509XRK COMMERCIAL DODGE DAKOTA 2002 4-SEATER MANUAL DIESEL GPS NO-SUNROOF 45.5 BLUE  
682GWJ COMMERCIAL AUDI A4 1997 5-SEATER MANUAL PETROL NO-GPS NO-SUNROOF 46.1 BLUE

#### Examples of searches:

Enter what you would like to search: **commercial**

993QAN COMMERCIAL MITSUBISHI 3000 GT VR-4 1991 2-SEATER MANUAL PETROL NO-GPS NO-SUNROOF 37.8 RED  
509XRK COMMERCIAL DODGE DAKOTA 2002 4-SEATER MANUAL DIESEL GPS NO-SUNROOF 45.5 BLUE  
682GWJ COMMERCIAL AUDI A4 1997 5-SEATER MANUAL PETROL NO-GPS NO-SUNROOF 46.1 BLUE

Enter what you would like to search: **commercial or luxury**

993QAN COMMERCIAL MITSUBISHI 3000 GT VR-4 1991 2-SEATER MANUAL PETROL NO-GPS NO-SUNROOF 37.8 RED  
509XRK COMMERCIAL DODGE DAKOTA 2002 4-SEATER MANUAL DIESEL GPS NO-SUNROOF 45.5 BLUE  
682GWJ COMMERCIAL AUDI A4 1997 5-SEATER MANUAL PETROL NO-GPS NO-SUNROOF 46.1 BLUE

Enter what you would like to search: **economy and 4-seater**

234DDG ECONOMY DFS SDF 2020 4-SEATER AUTOMATIC PETROL NO-GPS NO-SUNROOF 50 BLACK

Enter what you would like to search: **blue or red and commercial**

993QAN COMMERCIAL MITSUBISHI 3000 GT VR-4 1991 2-SEATER MANUAL PETROL NO-GPS NO-SUNROOF 37.8 RED  
509XRK COMMERCIAL DODGE DAKOTA 2002 4-SEATER MANUAL DIESEL GPS NO-SUNROOF 45.5 BLUE  
682GWJ COMMERCIAL AUDI A4 1997 5-SEATER MANUAL PETROL NO-GPS NO-SUNROOF 46.1 BLUE

Enter what you would like to search: **commercial and dodge and blue**

509XRK COMMERCIAL DODGE DAKOTA 2002 4-SEATER MANUAL DIESEL GPS NO-SUNROOF 45.5 BLUE

Enter what you would like to search: **luxury or commercial or family**

993QAN COMMERCIAL MITSUBISHI 3000 GT VR-4 1991 2-SEATER MANUAL PETROL NO-GPS NO-SUNROOF 37.8 RED  
509XRK COMMERCIAL DODGE DAKOTA 2002 4-SEATER MANUAL DIESEL GPS NO-SUNROOF 45.5 BLUE  
682GWJ COMMERCIAL AUDI A4 1997 5-SEATER MANUAL PETROL NO-GPS NO-SUNROOF 46.1 BLUE