Car Garage and Driving Project

# Part 1:

Create Car and Garage classes in accordance with the following specifications. I have provided the CarTester class as a test driver to test your Car and Garage classes. Do not change the CarTester class source code.

Car Class Specifications:

The Car class must be in a separate package from the CarTester class.

The Car class will contain, at a minimum, the following information as constants (in Java use final to specify a constant):

* make
* model
* year
* fuel tank size
* fuel economy – fuel economy at best speed
* optimal speed – speed at which the car has the most efficient fuel economy

You will need other fields besides those listed above. These other fields will not be constants. Some of the other fields:

* odometer
* trip odometer
* color
* fuel level

The Car class will also need 2 constructors:

* Car() – a no argument constructor that initializes an instance using random values.
* Car(String, String, String, int, double, double, double) – accepts arguments to initialize the new Car object with make, model, color, year, tank size, fuel economy, and best speed. You should also initialize the two odometers and the fuel level with random values.

The Car class must implement the following methods.

package addFuelToTank(double): double (Note: This method needs to be public for the CarTester program and package for the CarGarageDriver program. The package access modifier is implemented by leaving the method’s access modifier blank. Package is used to restrict access to classes in the same package.)

* Adds fuel to the car's fuel tank
* Precondition: Car’s fuel tank contains form 0.0 to tank size gallons of fuel
* Postcondition: Car's fuel tank may have added fuel
* Parameter available fuel to add to fuel tank
* returns: Negative number indicating the amount of fuel the tank will still take, Positive (nonzero) value of the amount of argument fuel not used, if 0 argument fuel just filled the tank

public toString():String

* Converts the Car object's state variables to a String representation
* Precondition: All state variables are initialized
* Postcondition: no change
* Returns a string representation of state variables

public equals(Car):boolean

* Checks to see if a select set of the calling Car’s and the argument Car’s state variables have the same values
* Precondition: Both the calling Car and argument Car are fully initialized
* Postcondition: no change
* parameter pCarObject
* returns true if the calling Car and the argument Car have the same state values for year, make, and model, else returns false

public driveCar():boolean

* drives the Car a predefined distance and speed.
* Precondition: Car's trip state variables have been initialized
* Postcondition: Car's fuel is reduced proportional to the distance and speed driven or depleted if the distance and speed combination is too great. Odometer and trip odometer are updated with the miles traveled added. Car's trip state variables, distance of travel and speed of travel, are set to zero.
* Return: true if the car travels the distance, false if the car runs out of fuel before traveling the distance.
* Hint: distance/fuel economy = fuel needed to make the trip.

public getTripOdometer():double

* gets trip odometer
* Precondition: none
* Postcondition: no change of state
* Return: double value of trip odometer to tenth of mile precision
* Hint: value % .1 returns the remainder(values less than .1)

public clearTripOdometer():void

* sets trip odometer mileage to 0.0
* Precondition: none
* Postcondition: trip odometer set to 0.0

public getOdometer():double

* gets odometer mileage
* Precondition: none
* Postcondition: no change to state
* Return: double value of odometer to nearest tenth of mile ( See hint for trip odometer )

public getFuelLevel():double

* retrieves fuel level in gallons
* Precondition: fuel level is initialized
* Postcondition: no change in state
* Return: fuel level in gallons with decimal values

public getFuelTankSize():double

* retrieves fuel level in gallons
* Precondition: fuel level is initialized
* Postcondition: no change is state
* Return: fuel level in gallons with decimal values

public setUpTrip(double, double): void

* Car's state is set to hold the speed of travel and distance to travel at that speed
* Precondition: none
* Postcondition: Car's state holds information on distance to travel and speed to travel
* Parameters: Average Speed to be driven, Distance to drive

Develop and use an algorithm that calculates the amount of fuel used and the actual distance driven in the drive() method. The algorithm must use a formula or multiple formulas ( as a piecewise function) that gives proportionately poorer mileage when the Car is driven faster or slower than its optimal speed. When a new Car object is instantiated, it is initialized with an optimal speed state variable. Your fuel usage algorithm should set limits on how poor of MPG your car will get, i.e. set an arbitrary limit of 2 or 3 miles per gallon. This is to prevent negative MPG values.

You may add other methods and fields as needed.

When a new Car object is created,

* the car’s odometer is set to a random value between 0.0 and 5.99,
* the car’s trip odometer is set to 0.0,
* its best fuel economy (MPG) is set to a random value between 15.0 and 54.99,
* its optimal speed is set to a random value between 45.0 and 64.99,
* and its fuel tank size is set to a random value between 8 and 34.99 gallons.

Hint: Use “helper” methods to generate these random values.

* Use Math.random( ) to generate your random numbers. Remember Math.random( ) generates a random double value from 0.0 up to but not including 1.0.
  + to get a random number between 0.0 and 99.99 you must multiply the result of Math.random( ) by 100.
  + To get a random number between 5 and 15(excluding 15), subtract the ‘floor value’ of 5 from the celling value of 15 to get a range of 10. Then multiply Math.random() by range (10) then add the floor value (5).
  + Example: If Math.random( ) produced 0.4584, multiplying it by 10 would produce 4.584. Then adding 5 would produce 9.584, which is a value between 5 and 15.

Since the new class Car inherits the .equals() and .toString() methods from the Java Object class, you will need to overload the .equals( ) method and override the .toString( ) method.

# Part 2:

After you are comfortable with the Car class, create a Garage class to store Cars. The Garage object is an instantiation of a Garage class that contains “parking”, as an array of the Car class. You must use a Car[] not an ArrayList<Car> for the “parking” in the garage. You will use Car objects to fill the garage. I will provide an algorithm for the CarGarageDriver class as a test driver to test your Car and Garage classes. You must implement this algorithm in Java.

The rules for the garage are:

* The size of the garage is specified by the user.
* The user may only use cars from the garage
* The garage creates all Cars at the request of the driver program
  + If the garage does not have a parking space to store a new car it will display a message stating that the garage is full and the car was not created.
* A Car is removed from the Garage when a user retrieves that Car from the Garage.
* The Car is returned to the Garage, after it is driven if it does not run out of fuel.
* The user interacts with the Car object after the Car object is retrieved from the garage.
* The program should not fail due to user input.
* A car may only be refueled while in the Garage
* The user may select to drive any car that is currently in the garage
* The user is the only one that may request that a car be refueled(do not refuel a car automatically)
* After the user gets a Car, they set up the drive by entering in the average speed and the driving distance.  
  See the Car methods above.
* the driving distance is the round-trip distance from the garage and back again.
* The driver program is only allowed to use the Car’s public methods listed above, and those you create for the Garage class.
* The user drives the car by telling that car to drive. Again, you may use menus to offer options to the user. (See the attached example run of a CarGarageDriver implementation.)

CarGarageDriver Algorithm:

/\*\*

\* **@param** args

\* Algorithm

\* START

\* DECLARE VARIABLES

\* REPEAT

\* DISPLAY greeting

\* PROMPT "Please enter the number of parking spaces in the new garage"

\* REPEAT

\* PROMPT "Enter a valid integer number between 1 and 10"

\* GET user input and STORE into parkingSize

\* UNTIL parkingSize >= 1 AND parkingSize <= 10

\* CREATE NEW Garage object with parkingSize parking spaces.

\* REPEAT

\* CALL Garage object method to display information on available cars

\* CALL displayOptions() method to display menu of

\* A) Refuel a car

\* B) Get a Car to drive

\* C) Add a Car

\* Q) Quit this garage

\* PROMPT user for menu choice

\* GET user input and store into menuChoice variable

\* SWITCH on menuChoice

\* CASE A

\* PROMPT user for parking space number

\* GET user input and STORE into spaceNumber

\* CALL Garage method refuelCar(spaceNumber)

\* END CASE A

\* CASE B

\* PROMPT user for parking space number

\* GET user input and STORE into spaceNumber

\* CALL Garage method getCar(spaceNumber) and STORE return value into currentCar

\* PROMPT user for distance to drive

\* GET user input and STORE into driveDistance

\* PROMPT user for speed to drive

\* GET user input and STORE into driveSpeed

\* CALL currentCar's Car method setUpTrip(driveDistance, driveSpeed) to set Car object's driving parameters

\* CALL currentCar's Car method drive() to drive Car object RETURNS state of car (0 for out of gas on side of road, or 1 for returned safely)

\* IF currentCar returned safely

\* CALL Garage method parkCar(currentCar)

\* ELSE

\* DISPLAY currentCar "out of gas and lost"

\* END IF

\* END CASE B

\* CASE C

\* PROMPT user to see if they want to enter car data or use random data

\* IF the user chooses to enter the data THEN

\* DISPLAY "Please enter year of vehicle”

\* REPEAT

\* PROMPT user for a year between 1920 and 2021

\* GET user input and store into year variable

\* UNTIL year is a valid number between 1920 and 2021

\* PROMPT user for Make of car

\* GET user input and store into make variable

\* PROMPT user for Model of car

\* GET user input and store into model variable

\* PROMPT user for color of car

\* GET user input and store into color variable

\* DISPLAY "Enter fuel tank size”

\* REPEAT

\* PROMPT user for a value between 8.0 and 34.99

\* GET user input and store into fuelTankSize

\* UNTIL fuelTankSize is a valid number between 8.0 and 34.99

\* DISPLAY "Enter vehicle’s optimal speed”

\* REPEAT

\* PROMPT user for a value between 45.0 and 64.99

\* GET user input and store into optimalSpeed

\* UNTIL optimalSpeed is a valid number between 45.0 and 64.99

\* DISPLAY "Enter fuel economy”

\* REPEAT

\* PROMPT user for a value between 15.0 and 54.99

\* GET user input and store into fuelEconomy

\* UNTIL fuelEconomy is a valid number between 15.0 and 54.99

\* CALL a garage method to create and park a new Car object using values (year,make,model,color,tankSize,optimalSpeed,fuelEconomy).

\* ELSE

\* CALL a garage method to create and park a new Car Object using random values.

\* END IF

\* END CASE C

\* CASE Q

\* DISPLAY 'Thank you for using this garage!'

\* END CASE Q

\* DEFAULT CASE

\* DISPLAY 'Invalid menu choice'

\* END DEFAULT CASE

\* END SWITCH

\* UNTIL menuChoice is EQUAL to Q

\* DISPLAY 'Would you like to repeat this program?'

\* REPEAT

\* DISPLAY 'Please enter "y" for yes or "n" for no.'

\* GET user input and STORWE into yesOrNo variable

\* UNTIL yesOrNo EQUALS 'y' or 'n'

\* UNTIL yesOrNo EQUALS 'n'

\* DISPLAY "Good-bye!"

\* STOP

\*

\*/

Sample run for the CarTester class with a working Car class.

Here are the current cars.

Space 1: 1954, Red, Lotus, Evija, with 5.16 gallons of gas in the tank, 1.49 miles on the odometer, and 0.00 miles on the trip odometer.

Space 2: 1954, Red, Lotus, Evija, with 5.16 gallons of gas in the tank, 1.49 miles on the odometer, and 0.00 miles on the trip odometer.

Here are the current cars.

Space 1: 1954, Red, Lotus, Evija, with 5.16 gallons of gas in the tank, 1.49 miles on the odometer, and 0.00 miles on the trip odometer.

Space 2: 1954, Red, Lotus, Evija, with 5.16 gallons of gas in the tank, 1.49 miles on the odometer, and 0.00 miles on the trip odometer.

Car in space 1 is the same Car object as the Car in space 2.

The duplicate reference is removed.

Here are the current cars.

Space 1: 1954, Red, Lotus, Evija, with 5.16 gallons of gas in the tank, 1.49 miles on the odometer, and 0.00 miles on the trip odometer.

Space 2: null

Would you like to add fuel to one of the cars?

Please enter "y" for yes or "n" for no.

y

Which car would you like to add fuel to?

Please enter the car's parking space number for your selection

2

There is no car in that space!

Please create a Car for that space.

Would you like to input the data yourself or create a random car?

Please enter "c" for create yourself or "r" for random car.

c

Input the year of the car?

Please enter a date between 1920 and 2021.

1954

Please enter the Make of the car.

Lotus

Please enter the Model of the car.

Evija

Please enter the color of the car.

Red

Input the size of the car's fuel tank.

Please enter a value between 8.0 and 34.99.

30

Input the car's optimal driving speed for best mileage.

Please enter a value between 45.0 and 64.99.

60

Input the car's fuel economy.

Please enter a value between 15.0 and 54.99.

59

Please enter a value between 15.0 and 54.99.

50

Space 2: 1954, Red, Lotus, Evija, with 25.02 gallons of gas in the tank, 4.71 miles on the odometer, and 0.00 miles on the trip odometer.

How much fuel would you like to add?

Please enter an amount greater than zero.

1

The tank is not full and can take 3.98 more gallons of fuel.

Which car would you like to drive?

Please enter the car's parking space number for your selection

2

How far would you like to drive?

Please enter an amount greater than zero.

100

How fast would you like to drive?

Please enter an amount greater than zero.

60

You drove the 1954, Lotus, Evija 100.00 miles and returned it to its parking space.

Would you like to repeat this program?

Please enter "y" for yes or "n" for no.

y

Here are the current cars.

Space 1: 1954, Red, Lotus, Evija, with 5.16 gallons of gas in the tank, 1.49 miles on the odometer, and 0.00 miles on the trip odometer.

Space 2: 1954, Red, Lotus, Evija, with 24.02 gallons of gas in the tank, 104.71 miles on the odometer, and 100.00 miles on the trip odometer.

Here are the current cars.

Space 1: 1954, Red, Lotus, Evija, with 5.16 gallons of gas in the tank, 1.49 miles on the odometer, and 0.00 miles on the trip odometer.

Space 2: 1954, Red, Lotus, Evija, with 24.02 gallons of gas in the tank, 104.71 miles on the odometer, and 100.00 miles on the trip odometer.

Car in space 1 is the same as the Car in space 2.

However, they are not the same Car object.

Would you like to add fuel to one of the cars?

Please enter "y" for yes or "n" for no.

y

Which car would you like to add fuel to?

Please enter the car's parking space number for your selection

1

Space 1: 1954, Red, Lotus, Evija, with 5.16 gallons of gas in the tank, 1.49 miles on the odometer, and 0.00 miles on the trip odometer.

How much fuel would you like to add?

Please enter an amount greater than zero.

30

The tank is full and you have 19.06 gallons left in the can.

Which car would you like to drive?

Please enter the car's parking space number for your selection

1

How far would you like to drive?

Please enter an amount greater than zero.

1000

How fast would you like to drive?

Please enter an amount greater than zero.

100

The Evija ran out of fuel.

It is parked somewhere on the side of the road.

Would you like to repeat this program?

Please enter "y" for yes or "n" for no.

y

Here are the current cars.

Space 1: null

Space 2: 1954, Red, Lotus, Evija, with 24.02 gallons of gas in the tank, 104.71 miles on the odometer, and 100.00 miles on the trip odometer.

Please add a car.

Would you like to input the data yourself or create a random car?

Please enter "c" for create yourself or "r" for random car.

r

Here are the current cars.

Space 1: 1983, Gold, Lotus, Evora, with 14.04 gallons of gas in the tank, 5.86 miles on the odometer, and 0.00 miles on the trip odometer.

Space 2: 1954, Red, Lotus, Evija, with 24.02 gallons of gas in the tank, 104.71 miles on the odometer, and 100.00 miles on the trip odometer.

THe cars are not the same.

Would you like to add fuel to one of the cars?

Please enter "y" for yes or "n" for no.

n

Which car would you like to drive?

Please enter the car's parking space number for your selection

20

Please enter the car's parking space number for your selection

2

How far would you like to drive?

Please enter an amount greater than zero.

20

How fast would you like to drive?

Please enter an amount greater than zero.

20

You drove the 1954, Lotus, Evija 20.00 miles and returned it to its parking space.

Would you like to repeat this program?

Please enter "y" for yes or "n" for no.

n

Sample run of the CarGarageDrive algorithm implemented in my CarGarageDriver class with correct Car and Garage classes.

Welcome to the Car and Garage program

Enter the number of parking space you would like to have in the garage.

The number should be between 1 and 10 inclusive.

4

There are no cars currently in the garage.

A) Refuel a car

B) Get a Car to drive

C) Add a Car

Q) Quit

Please select one of the above choices.

a

There are no cars currently in the garage.

A) Refuel a car

B) Get a Car to drive

C) Add a Car

Q) Quit

Please select one of the above choices.

b

There are no cars currently in the garage.

A) Refuel a car

B) Get a Car to drive

C) Add a Car

Q) Quit

Please select one of the above choices.

c

Would you like to input the data yourself or create a random car?

Please enter "c" for create yourself or "r" for random car.

r

Space 1: 1976, Yellow, Ford, F350, with 6.91 gallons of gas in the tank, 5.90 miles on the odometer, and 0.00 miles on the trip odometer.

A) Refuel a car

B) Get a Car to drive

C) Add a Car

Q) Quit

Please select one of the above choices.

c

Would you like to input the data yourself or create a random car?

Please enter "c" for create yourself or "r" for random car.

c

Input the year of the car?

Please enter a date between 1920 and 2021.

2002

Please enter the Make of the car.

Ford

Please enter the Model of the car.

Mustang

Please enter the color of the car.

Red

Input the size of the car's fuel tank.

Please enter a value between 8.0 and 34.99.

20

Input the car's optimal driving speed for best mileage.

Please enter a value between 45.0 and 64.99.

64

Input the car's fuel economy.

Please enter a value between 15.0 and 54.99.

30.2

Space 1: 1976, Yellow, Ford, F350, with 6.91 gallons of gas in the tank, 5.90 miles on the odometer, and 0.00 miles on the trip odometer.

Space 2: 2002, Red, Ford, Mustang, with 7.11 gallons of gas in the tank, 3.61 miles on the odometer, and 0.00 miles on the trip odometer.

A) Refuel a car

B) Get a Car to drive

C) Add a Car

Q) Quit

Please select one of the above choices.

c

Would you like to input the data yourself or create a random car?

Please enter "c" for create yourself or "r" for random car.

r

Space 1: 1976, Yellow, Ford, F350, with 6.91 gallons of gas in the tank, 5.90 miles on the odometer, and 0.00 miles on the trip odometer.

Space 2: 2002, Red, Ford, Mustang, with 7.11 gallons of gas in the tank, 3.61 miles on the odometer, and 0.00 miles on the trip odometer.

Space 3: 1953, Red, Chevrolet, El Camino, with 1.96 gallons of gas in the tank, 2.83 miles on the odometer, and 0.00 miles on the trip odometer.

A) Refuel a car

B) Get a Car to drive

C) Add a Car

Q) Quit

Please select one of the above choices.

c

Would you like to input the data yourself or create a random car?

Please enter "c" for create yourself or "r" for random car.

r

Space 1: 1976, Yellow, Ford, F350, with 6.91 gallons of gas in the tank, 5.90 miles on the odometer, and 0.00 miles on the trip odometer.

Space 2: 2002, Red, Ford, Mustang, with 7.11 gallons of gas in the tank, 3.61 miles on the odometer, and 0.00 miles on the trip odometer.

Space 3: 1953, Red, Chevrolet, El Camino, with 1.96 gallons of gas in the tank, 2.83 miles on the odometer, and 0.00 miles on the trip odometer.

Space 4: 1983, Blue, Opel, Kaddet, with 18.13 gallons of gas in the tank, 4.92 miles on the odometer, and 0.00 miles on the trip odometer.

A) Refuel a car

B) Get a Car to drive

C) Add a Car

Q) Quit

Please select one of the above choices.

b

Enter space number to select car to drive.

Enter an integer value between 1 and 4 inclusive.3

How far would you like to drive?

Please enter an amount greater than zero.

100

How fast would you like to drive?

Please enter an amount greater than zero.

100

The El Camino ran out of fuel.

It is parked somewhere on the side of the road.

Space 1: 1976, Yellow, Ford, F350, with 6.91 gallons of gas in the tank, 5.90 miles on the odometer, and 0.00 miles on the trip odometer.

Space 2: 2002, Red, Ford, Mustang, with 7.11 gallons of gas in the tank, 3.61 miles on the odometer, and 0.00 miles on the trip odometer.

Space 3: 1983, Blue, Opel, Kaddet, with 18.13 gallons of gas in the tank, 4.92 miles on the odometer, and 0.00 miles on the trip odometer.

A) Refuel a car

B) Get a Car to drive

C) Add a Car

Q) Quit

Please select one of the above choices.

c

Would you like to input the data yourself or create a random car?

Please enter "c" for create yourself or "r" for random car.

r

Space 1: 1976, Yellow, Ford, F350, with 6.91 gallons of gas in the tank, 5.90 miles on the odometer, and 0.00 miles on the trip odometer.

Space 2: 2002, Red, Ford, Mustang, with 7.11 gallons of gas in the tank, 3.61 miles on the odometer, and 0.00 miles on the trip odometer.

Space 3: 1983, Blue, Opel, Kaddet, with 18.13 gallons of gas in the tank, 4.92 miles on the odometer, and 0.00 miles on the trip odometer.

Space 4: 1996, Red, Opel, Tigra, with 10.22 gallons of gas in the tank, 0.79 miles on the odometer, and 0.00 miles on the trip odometer.

A) Refuel a car

B) Get a Car to drive

C) Add a Car

Q) Quit

Please select one of the above choices.

b

Enter space number to select car to drive.

Enter an integer value between 1 and 4 inclusive.2

How far would you like to drive?

Please enter an amount greater than zero.

30

How fast would you like to drive?

Please enter an amount greater than zero.

45

You drove the 2002, Ford, Mustang 30.00 miles and returned it to its parking space.

Space 1: 1976, Yellow, Ford, F350, with 6.91 gallons of gas in the tank, 5.90 miles on the odometer, and 0.00 miles on the trip odometer.

Space 2: 1996, Red, Opel, Tigra, with 10.22 gallons of gas in the tank, 0.79 miles on the odometer, and 0.00 miles on the trip odometer.

Space 3: 1983, Blue, Opel, Kaddet, with 18.13 gallons of gas in the tank, 4.92 miles on the odometer, and 0.00 miles on the trip odometer.

Space 4: 2002, Red, Ford, Mustang, with 6.34 gallons of gas in the tank, 33.61 miles on the odometer, and 30.00 miles on the trip odometer.

A) Refuel a car

B) Get a Car to drive

C) Add a Car

Q) Quit

Please select one of the above choices.

q

Thank you for using the garage.

Would you like to repeat this program?

Please enter "y" for yes or "n" for no.

y

Enter the number of parking space you would like to have in the garage.

The number should be between 1 and 10 inclusive.

2

There are no cars currently in the garage.

A) Refuel a car

B) Get a Car to drive

C) Add a Car

Q) Quit

Please select one of the above choices.

a

There are no cars currently in the garage.

A) Refuel a car

B) Get a Car to drive

C) Add a Car

Q) Quit

Please select one of the above choices.

b

There are no cars currently in the garage.

A) Refuel a car

B) Get a Car to drive

C) Add a Car

Q) Quit

Please select one of the above choices.

c

Would you like to input the data yourself or create a random car?

Please enter "c" for create yourself or "r" for random car.

r

Space 1: 1957, Magenta, Opel, Astra, with 5.62 gallons of gas in the tank, 2.34 miles on the odometer, and 0.00 miles on the trip odometer.

A) Refuel a car

B) Get a Car to drive

C) Add a Car

Q) Quit

Please select one of the above choices.

c

Would you like to input the data yourself or create a random car?

Please enter "c" for create yourself or "r" for random car.

r

Space 1: 1957, Magenta, Opel, Astra, with 5.62 gallons of gas in the tank, 2.34 miles on the odometer, and 0.00 miles on the trip odometer.

Space 2: 1966, Blue, Chevrolet, SSR, with 9.81 gallons of gas in the tank, 5.52 miles on the odometer, and 0.00 miles on the trip odometer.

A) Refuel a car

B) Get a Car to drive

C) Add a Car

Q) Quit

Please select one of the above choices.

c

There are no free parking spaces to add a new car.

Space 1: 1957, Magenta, Opel, Astra, with 5.62 gallons of gas in the tank, 2.34 miles on the odometer, and 0.00 miles on the trip odometer.

Space 2: 1966, Blue, Chevrolet, SSR, with 9.81 gallons of gas in the tank, 5.52 miles on the odometer, and 0.00 miles on the trip odometer.

A) Refuel a car

B) Get a Car to drive

C) Add a Car

Q) Quit

Please select one of the above choices.

r

Invalid menu choice

Space 1: 1957, Magenta, Opel, Astra, with 5.62 gallons of gas in the tank, 2.34 miles on the odometer, and 0.00 miles on the trip odometer.

Space 2: 1966, Blue, Chevrolet, SSR, with 9.81 gallons of gas in the tank, 5.52 miles on the odometer, and 0.00 miles on the trip odometer.

A) Refuel a car

B) Get a Car to drive

C) Add a Car

Q) Quit

Please select one of the above choices.

c

There are not free parking spaces to add a new car.

Space 1: 1957, Magenta, Opel, Astra, with 5.62 gallons of gas in the tank, 2.34 miles on the odometer, and 0.00 miles on the trip odometer.

Space 2: 1966, Blue, Chevrolet, SSR, with 9.81 gallons of gas in the tank, 5.52 miles on the odometer, and 0.00 miles on the trip odometer.

A) Refuel a car

B) Get a Car to drive

C) Add a Car

Q) Quit

Please select one of the above choices.

b

Enter space number to select car to drive.

Enter an integer value between 1 and 2 inclusive.1

How far would you like to drive?

Please enter an amount greater than zero.

200

How fast would you like to drive?

Please enter an amount greater than zero.

100

The Astra ran out of fuel.

It is parked somewhere on the side of the road.

Space 1: 1966, Blue, Chevrolet, SSR, with 9.81 gallons of gas in the tank, 5.52 miles on the odometer, and 0.00 miles on the trip odometer.

A) Refuel a car

B) Get a Car to drive

C) Add a Car

Q) Quit

Please select one of the above choices.

b

Enter space number to select car to drive.

Enter an integer value between 1 and 1 inclusive.1

How far would you like to drive?

Please enter an amount greater than zero.

200

How fast would you like to drive?

Please enter an amount greater than zero.

199

The SSR ran out of fuel.

It is parked somewhere on the side of the road.

There are no cars currently in the garage.

A) Refuel a car

B) Get a Car to drive

C) Add a Car

Q) Quit

Please select one of the above choices.

q

Thank you for using the garage.

Would you like to repeat this program?

Please enter "y" for yes or "n" for no.

n