CS-224: Object Oriented Programming & Design Methodologies

Mid 02

Duration: 90 Minutes

Task 1:

Have a look at the following UML class diagram:
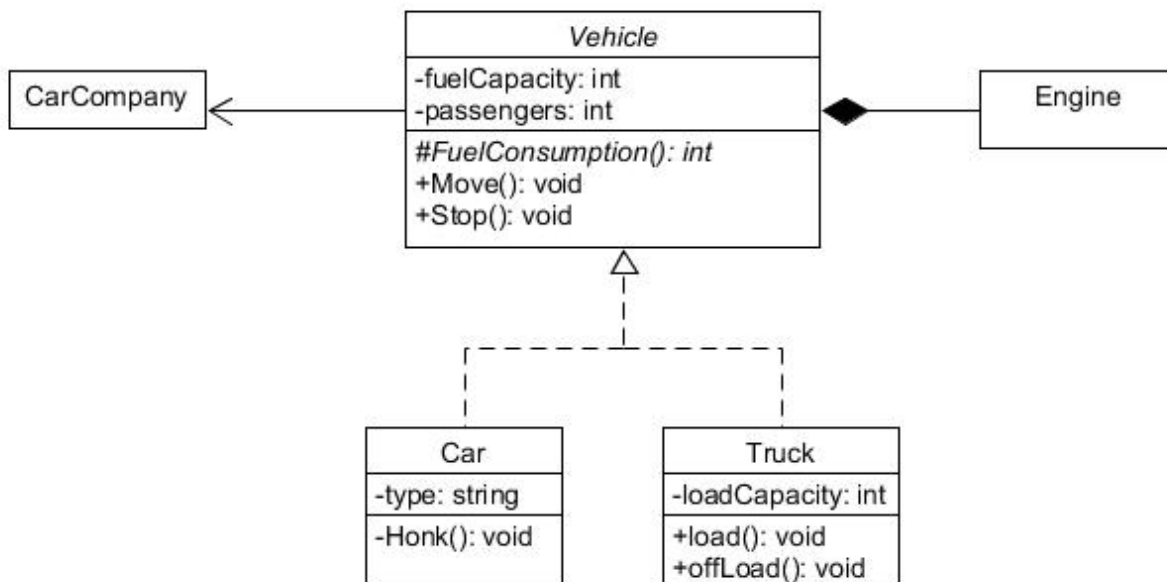
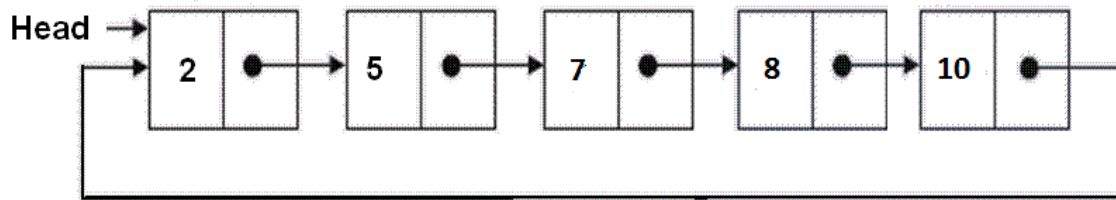Write code exactly like the class diagram given above. You only need to create header files. Where you think that the function body needs to be defined, define it in the header file. Where you think that you will need to define a new variable or function, define that but write in comments why you created it.

(2 marks for every class, hence 10 marks)

Task 2:

What you see here is a circular linked list. You need to create this list with the following conditions:

It will have only one "head" pointer

Create a Push() function that adds a value to the list (value is added to the head)

Create a Pop() function that removes the value that was added first (FIFO behavior)

Create a Show() function that shows the state of the list

Constructor and a Destructor

Overloaded -- operator (decrement operator) that removes the last value added (LIFO behavior)

(2 + 2 + 2 + 2 + 2) marks