This lab revisits important UML concepts. You will be both drawing diagrams (in StarUML, another drawing application or just on paper) and answering questions on Moodle. The lab will be exclusively graded on Moodle.

Important Note: You must complete the Moodle quiz in order to collect marks for this lab.

Exercise 1: Theoretical Questions (see Moodle) [1 mark]

Indicate whether the following statements are true or false:

(a) A sequence diagram shows how classes operate with each other and in what order.
(b) Class diagrams model the static structure of a system, together with the behavior of individual classes or objects.
(c) An entity relationship diagram models parts of the system behavior.

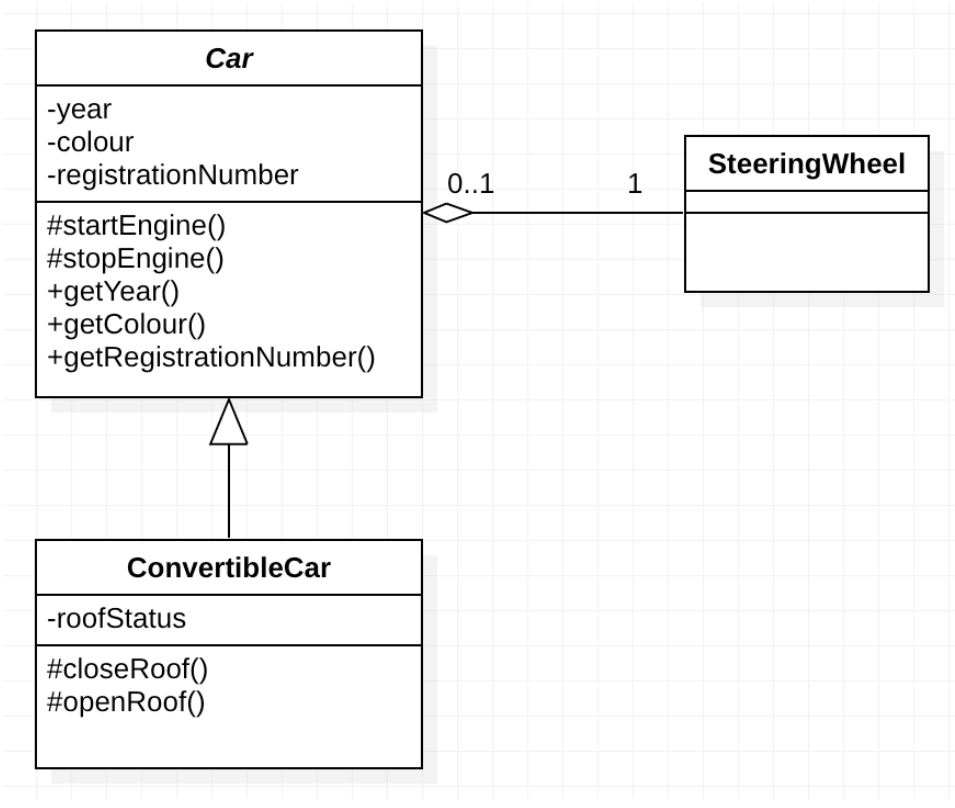
Exercise 2: Use Case Diagram [1 mark]

Boards.ie is an example of an online forum that is very popular in Ireland. Imagine that you are analyzing requirements for an online forum system that may be behind sites like Boards.ie.

Although forums can be very complex, imagine that we only have two types of users that interact with our system with different responsibilities: Regular Users and Administrators. Both can log in to the system, and part of logging in is an internal authentication process. Both can also register with the system, which also uses internal authentication. After logging in, everybody can post new messages to the board, however only Administrators can check statistics and create new threads. Regular users on the other hand can send private messages to other users, while administrators do not have this ability.

Draw a Use Case diagram that contains Actors, Use Cases and their relationship from the scenario described above.

Exercise 3: Class Diagram [1 mark]:



Identify the items from the list that are in the UML class diagram (drawn in StarUML). Marks will be awarded for correct identification, and subtracted for incorrect answers. Not all elements in the list appear in the diagram.

(a) Generalisation

(b) Public Attribute

(c) Exception

(d) Multiplicity

(e) Public Operation

(f) Private Attribute

(e) Composition

(f) Aggregation

(g) Association class

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