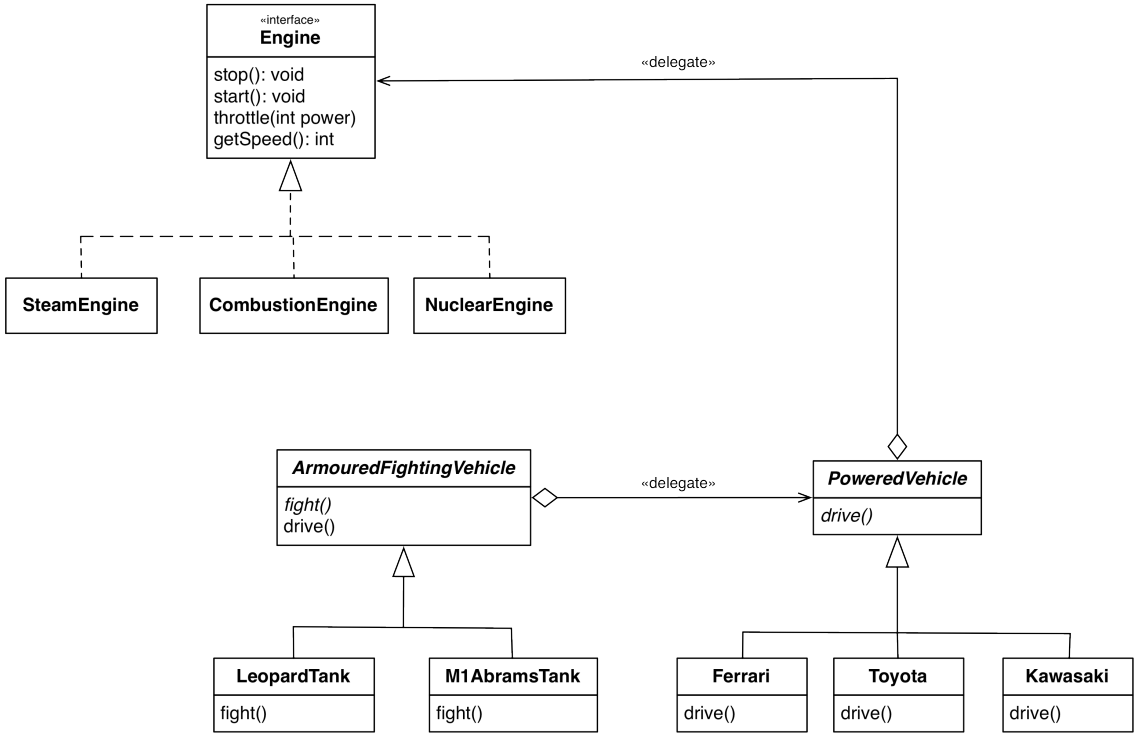
GALWAY-MAYO INSTITUTE OF TECHNOLOGY

Department of Computing & Mathematics

Advanced Object-Oriented Design Principles & Patterns (2012)
ASSESSMENT II

***Note*: This assessment will constitute 25% of the total marks for this module.**

The following UML diagram shows the relationships between three different hierarchies, engines, powered vehicles and armoured fighting vehicles (tanks).



You are required to implement the above UML in a set of Java classes (**hint:** use the ***source*** menu in Eclipse to increase your productivity). Please note the following carefully:

- The classes should all be contained in a package called **gmit**.
- Each sub-type of *Engine* should maintain an instance variable called *speed*.
- Increasing the throttle of an engine should alter the default/current value of speed.
- *PoweredVehicle* should contain delegate methods for an *Engine*. The type of *Engine* should be passed to the constructor of *PoweredVehicle*.
- The constructor of *ArmouredFightingVehicle* should accept as a parameter an instance of *PoweredVehicle* and call the *fight()* in its *drive()* method before delegating the method call.
- **When you have finished the assessment, upload Java source files to Moodle in a Zip archive called <id>.zip where <id> is your student ID number. You will lose marks if you do not submit the assessment correctly.**