**Exercise 9**

**Develop the following:**

**1.** Create a hierarchy of classes beginning with a *Vehicle* class. Make sure it’s an abstract base class.

**2.** From there create two sub classes called *Car* and *Tank*

**3.** Create *Ferrari* and *BMW* from *Car* and make *Tank* the final base class.

**4.** Virtually override the member functions of each child class that require specific functionality. For instance, a *Drive()* function will be different for each vehicle.

**5.** Add as many member functions and member variables as you deem necessary so that all vehicles behave in a particular way

**6.** Create a class called *Engine* and use *composition* or *aggregation* to instantiate the *Engine* object within the *Vehicle* class.

**7.** Instantiate your objects in *main.cpp* and test that they all work as they should.