Lab Week 9 Instructions

# Part A

Q1 Carry out the following two tutorials ( pdf files provided in lab folder)

1. Constructing sequence diagram with existing classes
2. Draw Sequence Diagram using keyboard

# Part B

Purpose of Lab

Construct a Sequence diagram from existing classes

## Task

For each of the two problem definitions described below:

1. Identify the major classes present
2. Identify their most important operations and properties
3. Construct a class diagram showing any associations and aggregations
4. Construct a sequence diagram showing interaction between objects.
5. A person, identified by a unique identification number and a surname can own one

vehicle at a time. . A vehicle is given a maker’s name and a registration number. In addition a person must also be able to disown a vehicle and should be able to display the details of the vehicle owned.

1. *Show how a person could own a vehicle, display its details and then disown it.*
2. *Show how the same person could own a different vehicle and then display its details.*

Q2 A country has many cities. Each city has a name and a population, while a country has a name and a capital city. It is a requirement that a country should display , on request, its capital city through the operation displayCapital? as well as the names of all of its cities through the operation displayCities?. In addition , it should display the total population of the country through the operation displayTotalPoulation? and the average city population through the operation displayAveragePopulation?

1. *Show how the name of the capital city of a country is determined*
2. *Show how names of all the cities in a country are determined.*
3. *Show how the average population of a country is determined.*