# Assignment 4

Please complete the question listed below. This assignment forms part of the assessment for this module and you are required to upload a copy of your work on Moodle on or before next Sunday before midnight. Please use the file Assignment4\_2016 available on Moodle. You must include as header your name, student number and the assignment number.

**Question 1**

1. A computer program for a certain university has to manipulate both lecturers and students. A class is required for each. Write a class Person which encapsulates what is common to the notion of a person. The class should include a name, a phone number, a gender and an all argument constructor. Methods that retrieve name, phone and gender should be included. It should also have a toString() method that returns a string representing the state of the class.
2. A student is a person with additionally a student number (7 digits) and a subject of study. Write a class Student by extending class Person. It should include a toString() method and methods to retrieve name, phone, gender, student number and subject.
3. A lecturer is a person with additionally a staff number (4 digits) and a department. Write a class Lecturer by extending class Person. It should include a toString() method and methods to retrieve details about a lecturer.
4. Write a simple test program that tests your classes.

**Question 2**

Write a class Students that encompasses a collection of Student. It should be possible to add a new student, retrieve all students of a given gender, retrieve all students studying a given subject and find a student given their student number.