**1104 Lab 3 (Revised)**

From feedback, I understand that the original lab assignments given is difficult for many students. As such I am revising the assigment. Inner products will only be done in Lab 4.

The following are taken from Coding the Matrix by Philip Klein. It is a very useful book that documents much of applied linear algebra, along with how to code. At this point the kindle form costs USD$9.99. Not compulsory for you to buy, but it’s useful. Book has a website by the same name. It contains a lot of useful information.

**\*I would like you to do only these 2 things in Lab 3** instead of computing the determinant and the old assignment, which is much harder. **Code it in Jupyter notebook and upload the codes into NTULearn.**

**Lab 3 assignment – 5 marks. Please submit on time.**

**No Quiz in Lab 3 & Lab 4.**

**But attendance is compulsory** as I want you all to come and learn from one another.

**Failure to attend labs without valid MCs will warant a penalty (minus some marks).**

**Class will have a combined final quiz on Part 2 of this course, called quiz 2, on 6 Apr 1130am-1230pm.**

**Deadline of submission**: **4 days after your day of lab.** For example, if your lab is on Monday, your submission dateline is Friday 10pm. If your lab is on Friday, deadline will be the following Tues 10pm.

**Again, I repeat: You need only to do these 2 problems.**

1. Follow step by step, and code the echelon form method stated below. (Read the step by step account below). Use your code to test out some matrices and see if they reduce it to echelon form. Because floats are cumbersome to deal with, I allow you to code with entries in GF(2), i.e. entries with only 0s and 1s.
2. Also do Gaussian Elimination over GF(2), which is much easier. Gaussian elimination over real numbers involves floats, and can be very tricky. Again test it with some matrices. (Pls Read step by step account below).











