Week 1 Cohort Exercises

1. Explore how software engineering on how it can be applied beyond the realm of information technology.

2. What qualities do you think a good software engineer should possess? How do the qualities you description are relevant to you as an individual?

3. Using your daily routine as the context, define functional and non-functional requirements from your perspective.

Case Study

Form a team of 7- 5 members and work on the following Case Study Scenario. Be prepared to be called upon to present your work.

Read the following case study scenario carefully and complete the tasks listed below.

Global Knowledge Pte Ltd has a resource center to loan the software items to its internal staff within the company. A web application is to be developed with the functions described below.

The system allows staff to submit loan requests by specifying the purpose and the duration of the software items to borrow. The system will route the requests to the resource manager for approval and the staff will be notified by email on the outcome of the request. The system will allow the staff to check-out the items with a loan transaction created.

The software must be returned by the due date. The return date will be recorded, and the loan record status will be updated. If the loan is overdue, a reminder email will be sent to the relevant staff.

The system also allows the Resource Manager to generate a summary report to consolidate all the loan transactions at any point in time.

As far as the intended performance is concerned, the web application should support online loan applications for 50 concurrently users with processing time not more than 10 seconds in each request.

Tasks:

1. Identify the functional and non-functional requirements in the above case scenario.
2. Construct a use case diagram illustrating the main functionality of the web application.

      a. Identify and include potential misuse cases in your use case diagram.
3. Each member of the team should choose a use case and write an accompanying use case description.