1. Activities and User tasks  
   1. Import Question List  
    1.1 Login as Lecturers  
    1.2 Find subject  
    1.3 Upload question
2. Releases  
   Release 1-------------------------------------------------------------------------------------------------------------------  
   1.1.1 Login by email   
   1.1.2 Forget password  
   1.2.1 Choose a subject from full list  
   1.3.1 Upload from file excel  
   1.3.2 Upload by file PDF   
   1.3.3 Upload by text and image  
   1.3.4 Classify the questions (Multiple choices and Writing)  
   Release 2-------------------------------------------------------------------------------------------------------------------  
   1.1.3 Remember me   
   1.1.4 Log in by username and password  
   1.2.2 Search a subject by its ID  
   1.3.5 Upload by file Word  
     
     
   **Question 1:**In the circumstance, I agree with the proposal that Scrum process is suitable for the project for the following reasons :  
   \* In terms of requirements characteristics:  
    - Reliability :   
    + The requirements are quite clearly but they are not enough and still have some missing points that need to change later in the development process. Therefore, Scrum can help the project more flexible and develop easier.  
    - Types and number of requirements :  
    + In this project, there are both functional and non-functional requirements; all of them are well-defined and not confusing but not detail. Therefore this project has many complex functions.  
    - How often requirements can change :  
    + As given information, This is a new development system, so there may be many changes during the development process. With the frequently changing requirement, Scrum can adapt this condition by dividing project into many sprints in order to be handled easier.  
    - Determination the requirements at early stage :  
    + At early stage, these requirements are easy to understand but it is not sufficient for whole project.  
   \*In terms of development team:  
    - Team size : the project will include 4-5 extensive experience and skills developers. Using Scrum is well choice because the small team may manage the each stage of project better than the whole project in a time. In each sprint, the developers can receive more detailed requirements, so they can more and more understand about what they will improve for this application.  
    - How the level of understanding of user requirements by the developers:   
    + Our team is supported by FU`s IT department and other departments commit to sending employees to join the project team to support this project. This project also is undertaken by IT`s department and extensive experience members.   
   \* In terms of customer involvement :  
    + The customer participate in this project high. Therefore, there may many changes documentation. IT department can help our team to understand the continuous changing requirements of customers.  
     
   **=> In Conclusion,** Scrum is suitable for this software development process. With this framework, we can release the first version within 3 months and the project to meet the FU leadership’s expectation. In addition, early deploying are useful for collect feedbacks and reviews from end users to develop the application better.   
   **Question 2 :**The types of testing that I recommend the team to use the combination of functional and non-functional requirements :   
   - The functional testing can do the following levels:  
   + Unit Testing (test by developer): This application has many complex functions, so we have to ensure that the individual components run smoothly and react as expected.  
   + Integration Testing (test by tester): Integration testing is used for testing whether the individual components work together when they are connected. This process ensure modules work efficiently and exactly. Because of the scale of large project, this technique testing can make better so that it can run immediately when it is finished.  
   - The non-functional requirements can do the following levels:  
   + Performance testing : because the number of students enrolling has increased very rapidly in recent years and to adapt non-functional requirements is high performance. Therefore, this process of testing may assesses how well the system performs under the specific conditions like speed, responsiveness and stability. It will ensure that the application meet all the performance expectation and can handle varying loads.   
   + Security Testing: it is very important to protect the question bank of the exam. If it was leaked, it could be very danger. This testing will ensure confidential data, system integrity and functionality to be protected from unauthorized access, attacks and any kinds of risk.  
     
   **=>** I believe that the combination of functional and non-function requirements can ensure the application cover almost the problems of project. If there appeared any bugs, they are fixed immediately so that the system can operate efficiently, high quality, reliable and secure.  
   **Question 3:**- Functional requirements :   
    + for lecturers: import questions from Excel file  
    + for lecturers: import student list from the FAP system or from Excel files.  
    + for students: view a list of exam  
    + for students : view test result after he/she finished the test  
   - Non-Functional requirements :   
    + The system needs to ensure information security  
    + The system needs to ensure high performance  
   **Question 4:**Test case 1   
   - Description : Import question from file Excel   
   - Objectives: Ensuring the question is upload and inserted into question bank successfully  
   - Test steps :   
    + Log in by lecturer account  
    + Choose mange question  
    + Choose import   
    + Choose file Excel  
    + Fill in required fields(ID subject) and optional fields  
    + Click save  
   - Expected : File is less than 200 Mb, the chosen file have to file Excel  
   Test case 2   
   - Description : View a list of exams  
   - Objectives : The system show detail all the information of exam(Date and time, subject, room, type, note)  
    - Test steps :   
    + login by student account  
    + choose “Exam Schedule”  
   - Expected : The screen will show all the current exam of student   
   Test case 3 :   
   - Description : view test result after he/she finished the test  
   - Objectives: the student can see their marks  
   - Test steps :   
    + Login by student account  
    + choose “Mark Report”  
    + choose corresponding subject  
   - Expected :   
    + the mark will display on the screen with red text  
   **Question 5:** + for lecturers: import questions from Excel file  
    + for lecturers: import student list from the FAP system or from Excel files.  
    + for students: view a list of exam- As a lecturer, I want to import questions from Excel file so that question are created easier and quicker in question bank.  
   - As a lecturer, I want to import student list from the FAP system or from Excel files so that we can store the information of students simple and more security.  
   - As a student, I want to view a list of exam so that I can see all the information of current exams   
   to take the exam on time and know the rule.