

When developing a new software, the software development team must describe the software requirements in software requirements specification (SRS) before they do designing and coding. They describe the software requirements by using text, formulas, drawing models and table description.

The software tools department at FPT University (FU) desire to develop a new software tool named FU Exam360 (FUE360) website in order to allow FPT University's students from all campuses to check-in and check-out the final exam of the courses they learning. All types of users accessing to FUE360 by using @fpt.edu.vn email and must be organized in the tree structure that includes Admin account, Head of Examination Department (of Hoa Lac, HCM city, Da Nang, Can Tho, Qui Nhon), lower level accounts for whom are Staff of Examination Department and each campus will have lower level accounts for whom are Proctors, and then Students. The FUE360 website needs having many functions including check-in, check-out, listing exam slot, **adding exam slot**, editing exam slot, importing students account from FAP website, notifying successful check-out exam slot of student by sending an email to Students, viewing the total number of students taking the exam and NOT taking the exam of specific slot per day, per semester by Head of Examination Department and Staff, adding requests to reassign, adding requests to change wi-fi password, listing exam code, adding exam code, editing exam code.

Use case approach is one of the most effective ways to describe the software requirements.

All the answers must be written in the provided template file, in English and reflect this exam paper. You must use Visual Paradigm software (offline) to draw Organization Chart and use case diagram and then press three keys Windows + Shift + S on your keyboard to copy and insert that image to answer the Q2, Q3. If your answers to the questions in this exam paper have any keywords not related to this electronic exam paper, the answers to the questions will get ZERO. If you do not use the provided template file to answer the exam you take today, your exam will get ZERO.

Question 1: Complete all parts of the first page of the software requirements specification template provided for you. (0.4 point)

Question 2: (1 point) Organization Chart is an effective way to visualize the Organization Structure of the users and authorization of who access the website. Draw 1 Organization Chart that has ≥ 3 levels and ≥ 2 FU Campuses by using Visual Paradigm offline, students must insert the Organization Chart based on the content of this exam paper in an image file into provided template file. (0.9 point)

Which type of user of the website in this exam has the largest number? (0.1 point).

Question 3: (3.8 points) Use case diagram is an effective way to visualize the interaction between actors and the software system. One Use case diagram is described by one rectangle which represents one system or one software application. One oval represents one use case. The name of the use case must begin with the verb and be followed by an object.

Draw 1 use case diagram (by using Visual Paradigm offline, students must insert the use case diagram based on the content of this electronic exam paper in an image file in to provided template

file) and the image must include the following information: **[NOTE. The flowing is guideline; if the student keeps the flowing in the final answer of your exam, your points will be decreased]**

1. In this exam paper, the name of the rectangle is:(0.1 point)
2. The actor may be human, other software systems or devices. In this exam paper, list the name of ≥ 4 actors is:(0.6 point)
3. In this exam paper, list the name of ≥ 5 use cases are:(1 point)
4. The actors are inside or outside of the rectangle? (0.1 point)
5. The ovals represent the use cases are inside or outside of the rectangle?(0.1 point)
6. The primary actor of the use case **Add Exam Slot** is:(0.2 point)
7. The secondary actor of the use case **Add Exam Slot** is:..... (0.2 point)
8. Based on the fact that you have already used FUEXAM360 website. The use cases in this electronic exam paper may have relationship.
 - 8.a List the name of two use cases that have **extend** relationship:(0.3 point)
 - 8.b The name of **base use case (in 8.a)** is:(0.2 point)
 - 8.c The name of **extend use case (in 8.a)** is:(0.1 point)
 - 8.d The dashed line with an arrow that points to which use case?(student write the name of use case) (0.1 point)
9. Based on the fact that you have already used FUEXAM360 website, the use cases in this exam paper may have relationship.
 - 9.a List the name of two use cases that have **include** relationship:(0.3 point)
 - 9.b The name of **based use case (in 9.a)** is:(0.2 point)
 - 9.c The name of **included use case (in 9.a)** is:(0.2 point)
 - 9.d The dashed line with an arrow that points to which use case? (student write the name of use case) (0.1 point)

Question 4: Writing in detail ONE use case **Add Exam Slot** in template provided with this electronic exam paper. (3.8 points)

Question 5: writing 2 non-functional requirements. (1 point)

- a. Non-functional requirements are the inputs for architecture design process, you choose the term of the most important non-functional requirements and write at least 2 statements. They should be specific in number, explaining the number so that the tester can test the software and make conclusion that the test is passed or failed. (0.5 point).
The answers to this question will get ZERO if your answers have any keywords not related to this electronic exam paper, FUE360 system.
- b. Non-functional requirements are the inputs for architecture design process, you choose the term of the second most important non-functional requirement and write at least 2 statements. They should be specific in number, explaining the number so that the tester

can test the software and make conclusion that the test is passed or failed. (0.5 point).
The answers to this question will get ZERO if your answers have any keywords not related to this electronic exam paper, FUE360 system.