**PROGRESS TEST 3 \_PART 3**

When developing new software, the software development team must describe the software requirements in software requirements specification before they do designing and coding. They describe the software requirements by using text, formulas, drawing models, and table description. The software tool department at FPT Head Office desire to develop a new software tool named Dao Tao FPT (DTFPT) which in order to publish courses that all employees of FPT Corporation must learn for internal training. There are many subsidiary companies in the FPT Corporation, in this exam, we consider FPT University, the only subsidiary company that will have one HR Admin account in DTFPT website. The lower account levels of DTFPT website are Manager of the Course, Director of each campus of FPT University in Vietnam, Head of Department level and then Teacher or Staff level. The DTFPT website needs having many functions including adding courses, editing courses, searching courses, viewing courses, adding lesson, editing lesson, listing lessons, adding quiz, editing quiz, viewing quiz, taking quiz, recording quiz history and importing data into employee's list from mail.fpt.com.vn website by signing in DTFPT with @fpt.com.vn email accounts. All courses have start date the deadline to learn HR Admin can access the list learning screen to see all employee's information and the status of the course that the employees need to learn (Done or Not Done). Within 2 days prior to the deadline of the courses, the DTFPT will notify learners who have not yet completed the specific course by automatically sending email. All employees who have learned and completed the course will automatically get a pdf certificate sent to their own email. 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 the 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 user groups of the new software. Draw 1 Organization Chart that is described by one rectangle representing FPT Corporation; inside this rectangle will contain the rectangle of user types with the order from highest level to lowest level including HR Admin, etc. (0.9 point)

Which type of user 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 exam paper in an image file into 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 Lesson is: ........(0.2 point)
7. The secondary actor of the use case Add Lesson is: .......(0.2 point)
8. Based on the fact you have already used E-learning website, name two use cases in this 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 the extend use case (in 8.a) is: ........(0.2 point)  
   8.c The name of base use case (in 8.a) is: ........(0.2 point)
9. Based on the fact you have already used E-learning website, some 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 Lesson in template provided with this exam paper. (3.8 points)

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

a. Non-functional requirements are the input for architecture design process, you must choose the term of the most important non-functional requirement and write at least 2 statements. They should be specific in number, explaining the source of number or way to calculate 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, DTFPT system.

b. Non-functional requirements are the input 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 source of number or way to calculate 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, DTFPT system.