SYSTEMS DESIGN - FINAL EXAM

PART 1: 5 short essay questions, each for 10 points for the total of 50 points. Please use APA citations.

PART 2: Report on user interface evaluation for 20 points.

PART 3: Use case, Sequence Diagram, Class and E-R Design for 30 points (NO HAND DRAWN DIAGRAMS)

TOTAL: 100 points.

Instructions:

The final exam must be submitted through iLearn ‘Assignment’ list as a word document. LATE SUBMISSION or SUBMISSION through email will not be accepted.

Naming convention: Yourname\_FinalExam

Font: Times New Roman

Font size: 12 pts.

---------------------------------------------------------------------------------------------------------------------

PART 1:

1. What are the differences between analysis modeling and design modeling?
2. What is meant by service-oriented architecture?
3. How do you know when "enough is enough"? What should you look for when determining when software is ready to go into production? What indicates that enough testing has been done?
4. Why do many projects end up having unreasonable deadlines? How should a project manager manage unreasonable demands?
5. How do non-functional requirements affect the design of a system? Please provide an example.

PART 2:

LibraryThing is a social media for book lovers. It promotes itself as ‘Facebook for books’. It is an online service to help people discover and catalog their books easily. Using the Principles for User Interface Design, evaluate LibraryThingand provide recommendations to improve the user experience.

Link: <https://www.librarything.com/>

PART 3

Marist College plans to develop a new ‘Course Registration System’ to better manage and streamline the online registration process for Graduate students. Based on the following requirements **create a Use Case, Sequence, Class, ER diagram and sql query for a REGISTRATION REPORT** (check Req# 9).

Requirements:

1. The system will allow students to register as well as drop both online and ground classes.
2. The system will allow the Graduate Director to add/remove/edit courses offered during each semester and set maximum seats availability for each course.
3. The system will allow students to view the courses offered for their graduate program during selected semesters.
4. The system will also list the pre requirement courses if any associated with a particular course.
5. The system should not allow students to register for a course unless the pre-requirement courses have been completed. For Example: A student should not be allowed to register for Systems Design unless s/he has completed its pre-req Information Analysis.
6. The system should not allow a student to register for more than 3 courses per semester.
7. In case of international students, the system should only allow registration for 1 online course per semester.
8. In case of inconsistencies and issues with registration, Graduate Director will have an authority to override.
9. Graduate Director would like to view a report showing a student’s class registration history by semester and year and the total credit remaining for his/her successful graduation. PLEASE PROVIDE A SQL query to generate the REGISTRATION REPORT.
10. Please recommend any other reports that your E-R diagram design can generate which may be beneficial for Graduate Director’s analysis purposes.