HOMEWORK 1. SYSTEM ANALYSYS USING UML

Homework 1. is a group project and can't be accomplished individually.

Homework 1 is devoted to Analysis phase of SDLC, particularly:
1. Requirements identification/gathering
2. Use-cases identification and building Use-Case Diagram
3. Developing Class Diagram
4. Developing Sequence Diagram

All these steps must be applied to the system that was assigned to your team during JAD-meeting as followings:

1. JAD-group-01: Human Resources Management Systems
2. JAD-group-02: Content Management System (for Web)
3. JAD-group-03: Call Center Software
4. JAD-group-04: E-Commerce Software
5. JAD-group-05: Recruitment Software
6. JAD-group-06: Task Management Software (Multi User)
7. JAD-group-07: E-Learning Software
8. JAD-group-08: Library Management System
9. JAD-group-09: Grocery / Retail Software

1. **Generating Requirements**
   You are expected to provide **FUNCTIONAL** (12-20) and **NONE-FUNCTIONAL** (8-10) requirements for your system.
   Functional requirements must be divided into two groups:
   a. **Core requirements** (5-8) that well associated with any system like your system (let say, which requirements have to have any Accounting System...)
   b. **Optional/Additional** requirements you received from your potential customer during JAD-session (you still can extend and improve them)

2. **Develop and offer Use-Cases** (5-9) that cover all scenarios described in requirements. Try to improve it until you have good coverage and correlation between list of requirements and set of use-cases.
   Build Use-Case Diagram - identify Actors and build associations with set of Use-Cases. Pay attention to the types of associations (relationship) trying to cover all types: General association, Generalization, Extension, Inclusion.

3. **Build the Class Diagram** that reflects main concept of the intended system and demonstrates relationships between its main components. Pay attention that you on "Analysis" phase so abstraction level should be enough high. While building Class Diagram consider your Use-Case Diagram.

4. **Build Sequence Diagram** based on one of your most important use-cases that provides critical service in the framework of system you are working for. The

Sequence Diagram is expected to describe how objects from Class Diagram interact with each other to support specific service.

Important Recommendations: While working for this homework you are expected to work intensively Internet resources collecting more information about similar software solutions. Also carefully review Section III. Application (Chapters 8-12) of the (2nd recommended) book Object-Oriented Analysis and Design with Applications, 3rd Edition, Grady Booch.

Deliverables: The result is expected to be submitted through Blackboard as a single PDF Document that includes all sections of assignment (document must include all of four mentioned sections). As a cover page use "***cover-page.docx***" document available in course content.

Deadline for submission: Sunday, 10th March, 2019 at 23:59 through Blackboard

Evaluation: Your work will be evaluated based on:
1. Completeness, relevance and accuracy of requirements
2. Appropriateness of Use-Cases to main services of the system
3. Correspondence of all Diagrams to the guidelines and notation requirements
4. Overall quality of System Analysis

Wishing you success,
Dr. Abzetdin Adamov