

INFOST 340 – Systems Analysis

Project Assignment

Instructions for the Systems Analysis Deliverable

What is the Systems Analysis?

The Project Assignment has 3 deliverables that are due at different times within the semester:

- Project Plan
- Systems Analysis
- Proposed Solution

The Systems Analysis is the second of these deliverables.

Case Scenarios and Group Support Rules

Each student will complete the Project Assignment based upon the case scenario that they have been assigned. There are 5 different case scenarios. This number is sufficient that no two students in the same group will be assigned the same case scenario. You will be assigned one of these case scenarios before work on the Project Assignment begins.

This use of multiple case scenarios will allow members of the same group to confer with each other regarding their work without sharing their work product with another student who is solving the exact same problem. As stated in the course syllabus, students are encouraged to review the work of their team members and make suggestions for improvements. While students **are allowed** to exchange work with and confer with other students in their own group who are working on a different case scenario, students **are not allowed** to exchange work or confer with members of other groups who are working on the same case scenario.

The Systems Analysis

This should be a business document that combines diagrams and specifications that conform to the standards taught in class. The document should follow the outline provided below. **These outline headings should be included in your text in bold type** to make your work easier to find while grading. Since this report is a collection of smaller documents, it may be easiest to simply insert separator pages with headings in between the diagrams and specifications in order to create proper sections and subsections as shown in the outline.

Please note that this document includes a fairly large number of sub-documents. Some of these sub-documents are textual. Others are diagrams. **You are expected to combine these into a single PDF document that is arranged in the proper order before submission.** I typically accomplish this task with Adobe Acrobat Professional. Adobe

Acrobat Professional is available on all SOIS lab computers as well as the SOIS Virtual Lab. You may use any other suitable tool that combines PDFs into a single document.

Systems Analysis Outline

Note: Your systems analysis document must follow this outline and include these headings in bold type. Feel free to include titled separator pages to create a document that conforms to the outline.

1. Context Diagram

- The context diagram must describe the extent and limits of the automated system scope.
- The requirements for this section will be same as those for the Skills Practice Context Diagram assignment.

2. Use Case Diagrams

- The use case diagrams must describe the extent and limits of the automated system scope.
- Multiple diagrams should be used to arrange use cases into packages. **At a minimum, create separate packages for *business* and *administrative* use cases.**
- The use of relationships between use cases (<<extends>> or <<includes>>) is strongly discouraged. If used, these features must be used properly.
- Remember to include both *business* and *administrative* use cases. At a minimum, administrative use cases should include both Authorize User and Login.
- The requirements for this section will be the same as those for the Skills Practice Use Case Diagrams assignment.

3. Use Case Specifications

- Specifications must be provided for at least **three (3) non-trivial *business* use cases**. Do not choose *administrative* use cases like Login or Authorize User.
- Specifications must be created with the template provided in class.
- The requirements for this section will be the same as those for the Skills Practice Use Case Specification assignment.

4. Activity Diagram

- At least one activity diagram must be provided that illustrates a non-trivial scenario from one of the use case specifications included above.
- Remember that this is not just any activity diagram. It is an activity diagram that illustrates one use case scenario for one of the use cases for which you have created a use case specification.
- The requirements for this section will be the same as those for the Skills Practice Activity Diagram assignment.

5. Non-Functional Specifications

- This section should document all relevant non-functional requirements.
- The section should be organized appropriately for its length and complexity.
- The requirements for this section will be the same as those for the Skills Practice Non-Functional Specifications assignment.

6. Conceptual ERD

- This diagram should present a conceptual data model of the data that must be persisted in the system to support the functional requirements.
- To be complete, the data model should include entities and relationships to support all of the functionality that you have included in the scope.
- The notation should follow the approach taken for the Conceptual ERD skills practice assignment.
- Relationships should be named and include the cardinality indicators at both ends.
- Each entity type should have one or more of its attributed designated as an identifier by means of the PK symbol.
- Associative entities must be provided for all relationships that carry data. It is not necessary to create associative entities to implement many-to-many relationships. Direct many-to-many relationships are permitted in a conceptual data model.
- The requirements for this section will be the same as those for the Skills Practice Conceptual ERD assignment.

7. State-Machine Diagram

- One diagram must be provided that illustrates an important set of states and transitions in the application.
- Requirements for this section will be the same as those for the Skills Practice State Machine Diagram assignment

Document Length

The total length of this document is variable. Diagrams and specifications must be complete and their number must conform to the directions above. **All of these items must be combined into a single PDF document.** You may use titled separator pages to divide the report into the sections and subsections required in the outline.

Format

Please submit a **single PDF document**.

File Naming Conventions

The name of the PDF file which you submit should be consistent with the following model:

lastName_firstName_systems_analysis.pdf

Submission Deadline

The submission deadline and dropbox to which the assignment should be submitted will be indicated in the Weekly Schedule.

Grading

A separate grading rubric document will be posted in the Weekly Schedule.