**ITEC 630**

*Information Systems Analysis, Modeling, and Design*

# Individual Project Assignment

**Purpose**

The purpose of the individual system analysis and design project is to demonstrate student’s ability to apply the knowledge learned in this course to a real-world project.

**Topics Suggestions**

1. The system analysis and design project must be realistic and it will be done using techniques covered in this course. The list of topics suggested for this project is as follows:

1. Ticket purchase system (airline, train, cruise, concert, or others)
2. Internet shopping sites (clothing, shoes, books, music, or others)
3. Local real estate agency system
4. Rental system (car, video, or others)
5. Warehouse management system
6. Student record system
7. Banking system
8. Insurance purchase system (life, medical, homeowner, or others)
9. Credit card management system
10. Library circulation system

2. The above list is meant to be suggestive and if you have an idea about a specific topic, please consult with me early to determine if it is suitable for the course.

3. You have to select and submit the project topic for instructor’s approval by the end of Week 2.

**Project Deliverables**

The project requires students to perform three phases: (a) requirements analysis, (b) system and database design, and (c) a project plan. Note that in the phase 3, students are required to use the MS Project software for their project schedule.

*The deadline for the Individual Project can be found in the schedule section of the class syllabus.*

The following layout format covering a title page and all three phases is recommended for the project.

**Title page (project name, author, and date)**

**Phase 1: Requirement analysis**

A. Problem definition

B. Issues

C. Objectives

D. Requirements

E. Constraints

F. Description of the proposed system

G. Logical model design

* 1. Data flow diagrams
* Context diagram
* Diagram 0
  + Diagram 1 (Diagram 1 is optional)
* Descriptions of processes in each diagram
  1. Descriptions of outputs/inputs/performance/security or controls

H. Specific requirements, if any (interface, operational, resource, performance, etc.)

**Phase 2: System and database design**

A. User interface

Design an overall user interface consisting of screens, commands, controls, and features to enable users to use the system.

* 1. How data will be input to the system?
* The physical layout for each input
* The input design and procedures
  1. How data will be output from the system?
* The physical layout for each output
* The output design and procedures

B. Data design

Develop a plan for data organization, storage, updating, and retrieval.

1. Database design

* Database tables with their attributes should be presented
* Primary key(s) should be identified in each table, if any
* Three steps of normalization should be included.

1. Entity-relationship diagrams
2. Data file storage and access

C. System architecture

Determine the architecture of the system as Web-based interface, client/server architecture, Internet/Intranet interface, network configuration, etc.

**Phase 3: Project plan**

A list of tasks or activities needed for implementing the proposed system

Estimating completion time and costs

A project schedule for performing those activities (Gantt charts or PERT charts)

Note that there is no other required software package except the MS Project software in this ITEC-630 course. As a result, you are only required to use the MS Project software to handle the scheduling part of the project and for other parts, you can use any word editing software or any drawing tools software.

**Individual Project Rubric**

The individual project will account for **25%** of your total points possible and students should use the APA format for the format of the individual project reports. The following rubric will be used when grading your individual project:

|  |  |  |  |
| --- | --- | --- | --- |
| **Qualities and Criteria** | **Poor [0-80)** | **Good [80-90)** | **Excellent [90-100]** |
| **Format/Layout**   * Presentation of the text and structuring of text in an organized and thoughtful manner * Follows phases requirements   **(Weight 20%)** | Follows poorly the requirements related to format and layout. | Follows for the most part all the requirements related to format and layout. Some requirements are not followed. | Closely follows all the requirements related to format and layout. |
| **Content/Information**   * All phases of the project are addressed and contents in each phase are adequate * The project proposal is technically sound and realistic * The project is done using techniques covered in this course * MS Project software is used in the project plan * The project design can be implemented in reality * Activities and information are constructed in a logical pattern among phases to support the solution   **(Weight 70%)** | The project does not cover all phases and it is not done for the most part with techniques discussed in this course. The required software is used poorly in the project plan. The project proposal is hardly realistic and the tasks proposed can not be done easily in reality. Activities and information among phases are badly designed and do not support the solution. | The project covers all phases with adequate contents in each phase for the most part and it is done with some techniques discussed in this course. The required software is used in the project plan for the most part. The project proposal is relatively realistic and some proposed tasks can be done in reality. Activities and information among phases for the most part are designed to support the solution. | The project covers all phases with adequate contents and it is done with techniques discussed in this course. The required software is used in the project plan. The project proposal is realistic and the tasks proposed can be done in reality. Activities and information among phases are designed to support the solution. |
| **Quality of Writing**   * Clarity of sentences and paragraphs * No errors and spelling, grammar and use of English * Organization and coherence of ideas * APA style compliance   **(Weight 10%)** | The project is not well written, and contains many spelling errors, and/or grammar errors and/or use of English errors. The project is badly organized, lacks clarity and/or does not present ideas in a coherent way and it is somehow APA style compliance. | The project is well written for the most part, without spelling, grammar or use of English errors. The project is for the most part well organized, clear and presents ideas in a coherent way and it is somehow APA style compliance. | The project is well written from start to finish, without spelling, grammar or use of English errors. The project is well organized, clear and presents ideas in a coherent way and it is completely APA style compliance. |

*\* Some parts of this rubric are extracted from Dr. Stella Porto’s posting for ITEC-610.*