CIS 341 Course Project

Spring 2017

The systems analysis and design project that you choose should meet the following requirements. The project should address a real project or situation. It needs to be implementable; however, you will stop with the design. The project needs to be sufficiently complex and include a current system that will be upgrades or improved.

Project Description

- For the course project, analyze an existing system and propose a new improved system.
- Identify the major functions that a visitor can perform on the website or application
- Use a Story Board to illustrate the major portions of the user interface (not the entire UI, at least 3 web pages)
- Document each function and process needed in the system or used for the inputs, and the outputs generated, identify any other data used by the system
- Identify at least three problems or limitations related to the functionality that are able to be improved. These would be hypothetical issues that must be addressed in the project
- Individual work is preferred; however teams of no more than 2 students can be formed to accomplish the project. All teams must be approved prior to the project proposal due date.

Project Deliverables

Final Project report will include 2 deliverables:

Deliverable #1: Project Proposal

Before the project can start a Project Proposal must be approved. Date for the proposal will be announced and assigned in Cougar Courses. This deliverable will be in the form of a presentation.

- Preliminary Investigation steps 1, 2, 5 and 6 outlined on page 66 of the Systems Analysis and Design text handout. Step 3 and 4 are not required.
- Present to the class the proposed model as if it was a report to management. More details to follow. (max 5 minutes to present to the class)
- Proposed project resources and budget feasibility should be described. How many people are needed to build the system?

Deliverable #2: Systems Analysis and Design Project Report

The final project report will include the following documents. The project report should be less than 15 pages. Date for the Project Report will be announced and assigned in Cougar Courses.

In your theoretical system design describe each of the following:

- Analyze the current application design
  - Diagram the logical data flows for critical business processes in the new system
  - Document the use cases needed for the project
  - Create a project plan for the new system
- Define the new system application design
  - Document new processes, data, and logical data flows for the new system, include protocols for the major system components
  - Describe any security constraints for the new design
  - Diagram the data flows for critical business processes of the new system

- Design the new system
    - Transform the logical model into a detailed design
    - Database design: You need to show an ER Diagram and appropriate description for all the tables with their attributes. There is no need to implement the database.
    - Object and methods design: You should design the attributes and methods. Document at least 5 methods. Specify the algorithms for these 5 methods using Structured English.
    - Controls: You should identify at least five control mechanisms to prevent/detect possible errors that can occur in the system. This could be in the form of log files, system alerts, etc.
    - Test Plan : Describe how the system will be tested
    - Describe the team base approach and methods planned for development. The method planned should match the project plan in detail.

Choose 1 of the following topics

1. **Housing Management Integration System** – This project is for a building management company wishing to automate many of the interactions between tenant, landlord and apartment management staff. In addition to rent money exchange, the system needs to keep track of the entire services apartment owners offer to their tenants such as maintenance, basic inspection and transfer of tenants.
    - Current system is manual, data entry using Excel and quick books. No ecommerce however the business processes are well defined.
    - Minimum requirements of the new system are: PCI compliant online payment gateway, scheduled maintenance (like painting, landscaping), and security deposit tracking.
    - Optimal features:

2. **Software Company Helpdesk Incident/ticket Tracking System** – The current system has issues. This project includes the analysis of the current system and a study of the feasibility of moving to an alternate new system. Full analysis will need to be done on the old system so that the office understands the differences or that no functionality is lost in the new system.
    - The current system is Helpspot (or another tool could be used here if approved)
    - Minimum requirements for the new system are better reporting, dashboards and advances search capabilities.
    - Optimal features: automated ticket escalation

3. **Campus Parking Management System** – This system is currently hosted by a cloud vendor however the vendor has not kept current with new innovative approaches. The new director of Parking Services is looking for a new system which will incorporate automation and integration to their existing campus systems for ticket payments and license plate recognition (LPR).
    - The current system is a custom home grown application with data feeds to the campus ERP.
    - Minimum requirements for the new system are LPR, mobile payment interface,
    - Optimal features: digital display of available parking spots, parking for special events.

4. **Consolidated Data Warehouse System** – A small to medium accounting company has just been bought by a larger firm. They need to consolidate their data across all systems. They currently have separate systems for HR records and financial information. This project will organize the data into one application for all company reporting. Tools for consolidation and management of the data need to be purchased or created as needed.

- The current system at the smaller firm uses one SQL Server database. The data is well organized however exists in a proprietary schema.
- Minimally, the new system at the larger firm is a data warehouse, refreshed nightly automatically.
- The optimal system has dashboards showing financial data to appropriate managers. This would require an online or mobile option and security.

5. **Propose a System** - Suggest an alternative Project (must be pre-approved). The ideas must be discussed/approved prior to when the deliverable #1 Project Proposal is due.