CIS 9590 Term Project Guidelines

The overall final term project is broken out into 3 categories:

- An initial status update presentation,
- a working prototype demonstration of your system,
- and a final report.

The 3 term project categories:

1	Initial team presentation (first half of the semester)	15% of grade
2	A working demo of your system (end of the semester)	30 % of grade
3	The final report (handed in when you demo your system)	

** 2 and 3 are due the same day

When creating your idea and term project, make sure it can show all the requirements. You will need to think about and represent the following **requirements**:

- A front-end interface for user input and utilize ease of navigation
- It needs a backend database for storing data and performing transactions such as adding a product or editing a product, profiles etc…
- You must also have the ability to query the backend database for information, like showing product info, user info, and the ability to run reports.
    - You should show how the end user uses the system (orders a product as an example, or makes a reservation)
    - And how a backend administrator or manager uses the system (runs reports, see sales figures, edits products)

Category 1

1) **Initial team presentation requirements:** Team status update presentation (using PowerPoint or your desired presentation software). Your team will have 8 minutes to highlight the below requirements and explain your project and idea to the class (this will be scheduled halfway through the semester).

   NOTE: you do not need a working system at this point, just the below requirements, thought out and presented with slides, you're telling a high level story at this point.

Define your project

- Project Summary and idea, what will you build and what impact should it make
- The Systems Description
    - Principal inputs and their forms (paper, electronic, voice, etc…) - how will a user interact, add data?
    - What's the process to handle data (database to store, user interface, data entry to enter) – how will the systems store and transact the data?
    - What's the output (database updates, reports etc…) – how will the data be displayed to a user and or company user?
- What are the Goals for the System (at least 3)
    - Specifically explain each answer, not just Goal = increase sales, how will you increase sales

System Representation

- Summary of the overall system design, what features will the system have when it is complete, what functions can it perform.
- Menu Hierarchies for your application or website (navigation). Example: Home, About, Services (any sub menu items like products). For an application, Main Menu. Reservations, Inventory, Orders etc… and any sub menus.
- Report Design – what ⊦ type of reports will your systems generate, explain the data it will produce, who can run the report, why, and provide a sample layout of the generated report.

Project & Systems Analysis

- Project Analysis:
    - How much your project will cost – hardware, software, labor etc…
    - Who will work on it, what resources do you need
    - How long will your project take to complete

Category 2

2) **<u>Build out and Demo requirements</u> (due end of semester):** Your team will have 10 minutes. In your demo your application will need show the front-end interface, the backend database and perform transactions, you should show the the below, to meet requirements:

   - Ease of use: UI/UX capabilities, easily navigate and use the application.
   - User Input: enter new data into the system; e.g. an order, a reservation, a new contact
   - Change data: make edits to data in the system; e.g. update an order, or existing contact
   - Query the data: run a report or query showing the data

   Remember when you are demoing, you are telling a story of what your system can do, make sure the audience can see how this works and how it solved your problem.

   Note: You do not need slides for your demo, just present your working prototype and demo the requirements above!

Category 3

3) **<u>Final report requirements</u> (due end of semester at the same time as your demo):** on the day of your demo presentation, you will also hand in (upload) your report to the assignments area. Use the below format to write up your report deliverables.

<u>Note:</u> you would have a lot of this information from your first presentation, but your report should be more detailed, and should have more content than your 1st slides to tell a deeper, more detailed story of your project.

<u>Phase 1: Problem definition object: Define your project.</u>

A. Project Summary
    a. Use no more than one page to describe your project
B. The System Setting
    a. The company and industry for which you will build or upgrade the system
C. Describe the Project Environment
    a. Systems history – Is this a new or existing system and describe the current state, current effectiveness or if new what impact will it bring
    b. Who are the systems users and their functional responsibilities is it for the public or specific business unit, and employee, a manager etc….
D. The Systems Description
    a. Principal inputs and their forms (paper, electronic, voice, etc…)
    b. What's the process to handle data (database to store, user interface, data entry to enter)
    c. What's the output (database updates, reports, books, discs)
E. What are the Goals for the System (at least 3)
    a. Specifically explain each answer, not just Goal = increase sales, how will you increase sales
F. Data Gathering Plan
    a. What have you found out from users about needing a system or an upgrade - How will your team collect data for a system study? Example: What actions went into data gathering: requirements gathering, meetings, surveys? Employee interviews?

Phase 2: System Representation – Design Object: Design the logical model

A. Summary
    a. Quick summary of the overall system design, what features will the system have when it is complete, what functions can it perform.
B. Data Flow Diagrams
    a. Provide context level 0,1 and 2 diagrams – examples will be shared.
C. Menu Hierarchies for your application or website (navigation). Example: Home, About, Services (any sub menu items like products). For an application, Main Menu. Reservations, Inventory, Orders etc… and any sub menus.
D. Report Design – what type of reports will your systems generate, explain the data it will produce, who can run the report, why, and provide a sample layout of the generated report.

Phase 3: Project & Systems Analysis

A. Project Analysis:
    a. How much your project will cost – hardware, software, labor etc…
    b. Who will work on it, what resources do you need
    c. How long will your project take to complete
B. Systems Analysis. Create Use Case Diagrams: describe at least 4-6 use cases of your system. Diagram the relationships between users and systems. As an example, if this was a Restaurant System, what happens when you login, Add a new menu item, create an order for the kitchen staff, create a reservation, check out (user pays bill), update inventory or change inventory items
C. What are the major processes, decision tables, decision trees: example- if I take an order it goes to the kitchen, if I book a reservation it updates the database etc…
D. Database design/schema diagrams
    a. show the layout of the database, table structures, relationships etc….

Phase 4: Build your System / Prototype

A. Summarize what you will demo on your final presentation. Show off your system and the main features…
    a. Show the following features:
        i. Show the navigation, menu or pages, how easily it is to get around your application
        ii. Show user input and a transaction. This could be building a user profile, creating an order, creating doctor's appointments, travel reservations etc…
        iii. Show an edit to that transaction, how you change the profile email address, phone number, or travel dates, or doctor's appointment, a product, as an example
        iv. Run a report, querying the backend database for data, could be sales figures, how many reservations, how many appointments for a given time period

Phase 5: System Implementation

A. Executive Summary on what you learned building your product/application. Explain how project management activities/techniques helped. What surprised you, what didn't? How was it working with the project team, highs/lows, obstacles, and how they were handled?
B. Hardware / Software – list the hardware and software needed for the system, what were your platform decisions, options etc… did you use C# php, .net, etc….
C. Testing / Training – explain your test plan, what did you test, what scenarios, what bugs did you track/fix? For training, how will you roll that out, who will be trained, how long, what are the most important parts to train your users on?
D. Implementation Plan – how will you roll the product out, how long will it take, what methods will you use?
E. Post Launch / Support Plan – who will support the product, how will users get help,
F. Future Modification or features report – what's next?

Appendix to include key artifacts of a project.

A. Gantt chart view of project timeline and tasks
B. Project Charter
C. Meeting Logs
D. Change Logs
E. Issues Risks Logs
F. Variance Report (deviation from original scope)