

IS 310 Master Assignment Directions

Based on student feedback, you have two options for downloading/viewing each assignment:

1. Use this master assignment file. Every assignment—both individual and group—is detailed below.
 2. Download the specific directions for each assignment. The content is exactly the same as what you will find below.
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1. *Description:* Read Chapters 2-4 from the Senge_2006_5th_Discipline.pdf file. Consider the different systems of which you are a part. Select and respond to 3 of the 7 “learning disabilities” for each of the prompts in the “Deliverable” section. Think critically about how adopting one or more of the *Laws of the Fifth Discipline* could have resulted in a different outcome.
2. *Learning Objective:* Given different organizational scenarios, learner will be able to identify systems, subsystems and corresponding interrelationships.
3. *Resource:* Senge_2006_5th_Discipline.pdf
4. *Group/Individual:* Individual
5. *Uses Client Content?* No
6. *Directions:* Provide the following information for each of the 3 selected disabilities:
 - a. Summarize in your own words (and one sentence) the main premise behind 3 selected learning disabilities described in *Does Your Organization have a Learning Disability* (Chapter 2).
 - b. For each learning disability identified above, provide an example from your own life where, in hindsight, you can see that your actions were aligned with that learning disability.
 - c. Select one of the *Laws of the Fifth Discipline* (Chapter 4) for each of the learning disabilities and examples summarized above. Provide the name of each law you selected for each of the three disabilities you selected. Describe how you could have applied the selected law to facilitate an overall better outcome for each situation.
7. *Deliverable:* One file that will look something like this:
 - i. ***Name of first selected learning disability*** from Chapter 2. Your paraphrased definition/description of that learning disability
 1. **An example of <name of learning disability> in my own life.** Enter here.
 2. **Name of law of fifth discipline** from Chapter 4. Description of how that law would have resulted in a different outcome for you if you’d applied it rather than the learning disability
 - ii. ***Name of second selected learning disability*** from Chapter 2. Your paraphrased definition/description of that learning disability
 1. **An example of <name of learning disability> in my own life.** Enter here.
 2. **Name of law of fifth discipline** from Chapter 4. Description of how that law would have resulted in a different outcome for you if you’d applied it rather than the learning disability
 - iii. ***Same thing for third selected learning disability***

Assignment Name: Client's Current-Process IPOF**Due: 2/12**

1. *Description:* Observe the processes that make your client's organization operate. Consider non-observable business processes.

Your goal here is to fully understand the client's business processes so that when you propose an information system (Systems Service Request assignment), you will know which business process that system will support and how it will add value. *Note:* contents of this assignment will not be included in your final documentation but will provide the foundation for your system design as detailed in both Milestone #1 and Milestone #2.

2. *Learning Objective:*
 - a. Given various organizational scenarios, learner will be able to define given and implied business processes.
 - b. Given typical and unique business processes, learner will be able to describe the input(s), process, output(s) and possible feedback for each.
 3. *Resource:* Lecture/PPTs/In-class Activity
 4. *Group/Individual:* Group
 5. *Uses Client Content?* Yes
 6. *Directions:* Visit the selected client organization. Visit with the staff (if it's not too busy) to clarify your perceptions. Using *Word* (or equivalent) document the following:
 - a. Make a list of all business processes required for this business to operate. (Hint: you might want to refer back to the list of processes your class generated during Week 2.)
 - b. Define the Input, Process, Output and (if applicable) Feedback for each process. (A table might be the most efficient means of communicating this information, but you could also use a data flow diagram or a workflow diagram or graphics.)
 - c. Identify each process as currently performed manually or via some type of automation.
 - d. Identify which processes could be made more efficient or effective using an information system.
 - e. Identify which processes influence other processes.
 - f. Describe the IPOF for each related set of processes.
 7. *Deliverable:* One file (*Word, Excel, PPT* or *Visio*—your choice) that clearly identifies Items a through e above.
 8. *Grading Rubric:* Client_Current_Process_IPOF_Grading_Rubric.xlsx
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Assignment Name: Use Case of Current System

Due: 2/19

1. *Description:* Create a business use-case model to illustrate how **current users** use one of the **current systems** identified in the “Client’s Current-Process IPOF” assignment. (Keep in mind that the client’s system might include manual sub-processes at this point.)

Your goal here is to fully understand the systems supporting your client’s business processes so that when you propose an information system (Systems Service Request assignment), you will be able to demonstrate how the proposed system differs from the current system and how the proposed system might be more efficient or provide more value. *Note:* contents of this assignment might not be included in your final documentation. Many times you will just include the proposed (to be) use case. For example, if the use-case diagram didn’t change, but the implementation of those use cases are now automated.

2. *Learning Objective:* Given typical and unique business processes, learner will be able to describe and diagram how users use the current systems supporting each business process.
 3. *Resource:* Lecture/PPTs/In-class Activity
 4. *Group/Individual:* Group
 5. *Uses Client Content?* Yes
 6. *Directions:* Use *Visio*. Specify the boundary, actors, end-users’ uses of the system, and relationships. Focus on what users do with the current system to obtain value.
 7. *Deliverable:* One *Visio* file of a Business use-case model illustrating one of the client’s current business systems
 8. *Grading Rubric:* Use Case of Current Process Grading Rubric.xlsx
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1. *Description:* Create the Context Level and the Level 0 of a data flow diagram (DFD) to illustrate data flowing into the client's current business systems, being transformed, and then flowing out of the client's current business system.

Your goal here is to fully understand how data moves through the current system and is transformed by that system so that when you propose an information system (Systems Service Request assignment), you will be able to state how improvements via your proposed system integrate with other systems and could provide organization-wide value. Refer back to the IPO(F) assignment to identify the source and destination of data specific to your system.

Note: the contents of this assignment are not part of the Systems Service Request. The current-system DFD is very likely to change significantly before you submit the proposed-system DFD as part of the *Model Requirements* assignment, which is part of your final documentation.

2. *Learning Objective:* Given typical and unique business systems, learner will be able to describe the input(s), processes, and output(s) for each.
 3. *Resource:* Lecture/PPTs/In-class Activity
 4. *Group/Individual:* Group
 5. *Uses Client Content?* Yes
 6. *Directions:* Use the same system you used in the "Use Case of Current System" assignment.
 - a. Create in *Visio* the Context Level of a data flow diagram illustrating a) what data flows into and out of that system; and b) the source(s) and sinks (immediate out-of-system destinations for that data).
 - b. On a separate tab in the same *Visio* file, create the Level 0 diagram illustrating the data stores and major processes that transform the data as well as all the data flows within the system.
 7. *Deliverable:* One *Visio* file illustrating the Context Level and a Level 0 of a data flow diagram representing the inputs/outputs aligned with your system
 8. *Grading Rubric:* Data Flow Diagram of Current System Grading Rubric.xlsx
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1. *Description:* Complete a system service request form justifying your request for your group-selected system. **If approved**, then your group can continue with the system design. *Note:* ensure that your proposed system includes data flowing through a system. A static website or database will not be approved.

Your goal here is to get the Steering Committee (comprising your peer groups and me) to select your project above all the other projects. The contents of this assignment will be integrated into your final documentation as the first part of Milestone #1. You will have access to your peers' feedback of this assignment before you incorporate it into Milestone #1.

2. *Learning Objective:* Given an idea for how an information system could support organizational goals, you will write a persuasive appeal—using an industry-standard format—to persuade decision makers to move forward with your project.
 3. *Resource:* System Service Request Form.pdf
 4. *Group/Individual:* Group
 5. *Uses Client Content?* Yes
 6. *Directions:* Meet as a group after visiting the client. Compare perceptions about observed and inferred business processes. Agree on *one* business process that you believe your group could improve via the design of an information system. Submit a one- or two-page system request form justifying your request for a proposed client system. Make sure you address how your system is aligned with organizational goals. Keep your *SSR solution* and *vendor* independent. Keep in mind that your client is the reader of the document (so no version of “they.”) Do some research to be able to quantify the value of any proposed system for the current business.
 7. *Deliverable:* One *Word* file: System Service Request form. **Note:** Submit this file separately from your project documentation, since we will be evaluating this document as a class during an in-class activity.
 8. *Grading Rubric:* System Service Request Grading Rubric.xlsx
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Assignment Name: Project Status Report and Meeting

Report Due 24 hours before each Project Status Meeting

Project Status Meeting Due within 2-3 days of Milestone 1 and 3 Due Dates

Note: your group must assume responsibility for scheduling each meeting far enough in advance of its corresponding milestone due date to enable you to make the suggested revisions to your deliverable(s). **(Schedule and participate in one project status meeting before each Milestone deliverable.)**

1. *Description:* Work with project manager to ensure high-quality deliverable and full understanding of concepts and skills required.
 2. *IS Learning Goal:* Collaborate effectively in a team environment
 3. *Resource:* Instructor; Project Status Report Template.docx (in D2L)
 4. *Group/Individual:* **ENTIRE** Group
 5. *Uses Client Content?* Yes
 6. *Directions:* Schedule 2 meetings with Instructor (complete early in the semester)
 - a. Upload to D2L at least 24 hours before scheduled meeting a project status report; email Instructor when you have uploaded it to D2L
 - b. Meet *as a full group* with Instructor
 7. *Deliverable:*
 - a. Project Status Report (completed with current project-status information)
 - b. Face-to-face team report on project with Instructor
 8. *Grading Rubric:* none
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Assignment Name: Milestone 1**Due: 3/12**

1. *Description:* This is the first draft of your final project documentation. The system design documentation process is iterative. That is, you will submit an initial version, then come back and revise and extend what you submitted for the next iteration.
 2. *Learning Objective:* Given an information systems analysis or design task within a specified scenario, you will fully document and justify design decisions.
 3. *Resource:* Lecture/PPTs/In-class Activity; Milestone_1_Template.docx
 4. *Group/Individual:* Group
 5. *Uses Client Content?* Yes
 6. *Uses Client Content:* Use the Milestone_1_Template.docx and grading rubrics as a guide. Start building your project documentation.
 7. *Deliverable:* One *Word* file, professionally formatted with a cover page and a Table of Contents. This is the start of your project documentation. This milestone will include the following components. Refer to your grading rubric and the template for details.
 - a. Professional cover page
 - b. Table of Contents
 - c. Introduction
 - d. Positioning
 - i. Problem Statement
 - ii. Product Position Statement
 - e. Stakeholder and User Descriptions
 - i. Stakeholder Summary
 - ii. User Summary
 - iii. User Environment
 - iv. Key Stakeholder or User Needs
 - v. Alternatives and Competition
 - f. Appendices
 - i. Revision History
 - ii. Reference Materials
 - iii. Glossary
 8. *Grading Rubric:* Milestone_1_Grading_Rubric.xlsx
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Assignment Name: Peer Evaluation

Due: 3/12, 3/19, N/NN

1. *Description:* Assess the contribution of each team member other than yourself. This activity is designed to prepare you to make honest end-of-project evaluations of peers so that your organization can best place people where they can develop or enhance their skill set.
 2. *IS Learning Goal:* Collaborate effectively in a team environment
 3. *Resource:* Instructor
 4. *Group/Individual:* Individual
 5. *Uses Client Content?* No
 6. *Directions:*
 - a. Enter the requested data into the blue-highlighted cells on the peer evaluation spreadsheet.
 - b. Make sure you don't give unrealistic all-5s to every group member
 - c. Justify any ranking of 1 or 2 so that, if requested by a team member, anonymous feedback can be provided in an appropriate manner by the Instructor to help a team member contribute more.
 7. *Deliverable:*
 - a. 310_Peer_Eval_Milestone_1.xlsx (for Milestone #1) **or**
 - b. 310_Peer_Eval_Milestone_2.xlsx (for Milestone #2) **or**
 - c. 310_Peer_Eval_Milestone_3.xlsx (for Milestone #3)
 8. *Grading Rubric:* none
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Assignment Name: System Description**Due: 3/19**

1. *Description*: Contents of this submission will be added to your Milestone 1 document, *after* you've revised Milestone 1 per instructor feedback. This assignment covers Sections 3.5 through and including Section 5. The Appendices (Section X) were part of Milestone 1 and will appear at the end of your final submission. You do not need a separate cover sheet and table of contents for this submission.
 2. *Learning Objective*: Given an information systems analysis or design task within a specified scenario, you will fully document and justify design decisions.
 3. *Resource*: Lecture/PPTs/In-class Activity; System_Description_Template.docx
 4. *Group/Individual*: Group
 5. *Uses Client Content?* Yes
 6. *Uses Client Content*: Use the System_Description_Template.docx and grading rubrics as a guide.
 7. *Deliverable*: One *Word* file, professionally formatted. This milestone will include the following components. Refer to your grading rubric and the template for details.
 - a. *Stakeholder and User Descriptions* (main heading was part of Milestone 1)
 - i. Alternatives and Competition
 - b. System Overview
 - i. System Perspective
 - ii. Assumptions, Constraints and Dependencies
 - iii. System Features
 - iv. High-level System Requirements
 - c. Project Risk List
 8. *Grading Rubric*: System_Description_Grading_Rubric.xlsx
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Assignment Name: Use Case for the Proposed System**Due: 4/2**

1. *Description:* Create a *business* use-case diagram to illustrate how your client will interact with your proposed system.
 2. *Learning Objective:* Given typical and unique business processes, you will be able to describe and diagram how users will use an information system that supports a specific business process.
 3. *Resource:* Lecture/PPTs/In-class Activity
 4. *Group/Individual:* Group
 5. *Uses Client Content?* Yes
 6. *Directions:*
 - a. In *Visio*, create a use-case diagram. Specify the boundary, actors, end-users' uses of the system, and relationships. Focus on what users will do with the system to obtain value. Be sure to include any major system use cases that interact directly with the business use cases (e.g., any type of "maintain" use case).
 - b. Copy/paste the use-case diagram to a *Word* file.
 - c. In *Word*, write out the use-case specification for one of the use cases on your use-case diagram.
 7. *Deliverables:*
 - a. Business use-case diagram illustrating the proposed system
 - b. Written use case specification for one business use case within the business use-case diagram
 8. *Grading Rubric:* Use_Case_Proposed_System_Grading_Rubric.xlsx
 9. *Resources:*
 - a. RUP_Use_Case_Specification_Template.docx
 - b. use_case_2.pptx
 - c. http://www.ts.mah.se/RUP/RationalUnifiedProcess/webtmpl/templates/req/rup_ucspec.htm
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Assignment Name: Specify Requirements

Due: 4/9

Note: This assignment has three related components: the elicitation plan; the business, user and functional requirements; the non-functional requirements. This is a group assignment using client content.

Assignment Name: Specify Requirements: Requirements Elicitation Plan

1. *Description:* Describe the plan for eliciting requirements from relevant stakeholders.
2. *Learning Objective:* Given an information systems analysis or design task within a specified scenario, learner will select and use the most appropriate techniques to complete that task.
3. *Resource:* Lecture/PPTs/In-class Activity; Requirements_Analysis_Template.docx
4. *Directions:* Describe your plan for eliciting requirements. Clearly identify which elicitation technique(s) will be used, which stakeholders will be involved, what resources are needed for each elicitation technique identified, and the schedule for which team member is responsible for contacting which stakeholders. **Note:** You don't actually have to do each of the techniques—just say what you would do if you had the time and a budget.
5. *Deliverable:* The Requirements Elicitation Plan sub-component of the *Specify Requirements* assignment.

Assignment Name: Specify Requirements: Business, User and Functional Requirements

1. *Description:* Identify the requirements for one use case from the use-case diagram.
2. *Learning Objective:* Given an information systems analysis or design task within a specified scenario, learner will select and use the most appropriate techniques to complete that task.
3. *Resource:* Lecture/PPTs/In-class Activity; Requirements_Analysis_Template.docx
4. *Directions:* Describe “what” the user expects to obtain or needs from the system. The user requirements should align with the use-case specification actions. Describe what the system needs to do in order for the user to complete specific actions. The indented system requirements statements support the outdented business requirements. Be sure to include the strategy for prioritizing your requirements—both the criteria for ranking and the technique to illustrate the ranking.
5. *Deliverable:* The Business Requirements and the Requirements components of the *Specify Requirements* assignment.

Assignment Name: Specify Requirements: Non-Functional Requirements

1. *Description:* Specify the performance requirements related to operation, revision and transition.
2. *Learning Objective:* Given an information systems analysis or design task within a specified scenario, learner will select and use the most appropriate techniques to complete that task.
3. *Resource:* Lecture/PPTs/In-class Activity; Requirements_Analysis_Template.docx; Miller text
4. *Directions:* Describe “how well” the system must function in the following three categories: operation, revision, and transition. Borrow liberally from the Miller text. You must have at least 3-4 requirements for each subcategory for this first submission. For the final submission (Milestone #2), prepare to expand the non-functional requirements to include all possible performance indicators per each sub-category.
5. *Deliverable:* The Nonfunctional Requirements component of the *Specify Requirements* assignment.
6. *Grading Rubric:* Specify_Requirements_Grading_Rubric.xlsx

Assignment Name: Data Flow Diagram (DFD)

Due: 4/16

This is a group assignment using client content. The resources for all components include lectures, PPTs and in-class activities.

Learning Objective: Given a business process, you will be able to diagram the flow of data as it enters, is transformed, and then leaves the system.

Assignment Name: Data Flow Diagram (DFD)

1. *Description:* Create the Context level and the major components of the Level 0 data flow diagram (DFD) to illustrate data flowing through your proposed system.
2. *Directions:*
 - a. Create in *Visio* the Context level of a data flow diagram to track data input, processing and output for your system.
 - b. On a new tab within the same *Visio* file, create the Level 0 diagram of the data flow diagram. Strive for no more than 7 or so processes. The Level 0 must include all *major* processes and data stores, in addition to corresponding sources/sinks. The components within the Level 0 diagram do not need to be linked via final data flows for this initial submission. Focus on processes, data stores, and major data flows. Enforce balance between Context level and Level 0.
 - i. **Note:** if you submit further levels of decomposition, then I will provide you with ungraded feedback.
 - c. Copy/paste the diagrams from the Context and Level 0 tabs to a *Word* file.
3. *Deliverables:* A *Visio* file with two tabs:
 - a. The Context level of the data flow diagram for your proposed system.
 - b. The Level 0 of the data flow diagram for your proposed system.

Grading Rubric: DFD_Grading_Rubric.xlsx

Assignment Name: ERD and Relational Tables**Due: 4/30**

This is a group assignment using client content. The resources for all components include lectures, PPTs and in-class activities.

Learning Objective: Given a business process utilizing stored data, you will be able to design a third-normal form relational table and illustrate normalization through fictional relational data tables.

Assignment Name: Entity Relationship Diagram (ERD)

1. *Description:* Select one data store from your data flow diagram. Define the underlying entity relationship diagram.
2. *Directions:*
 - a. Create in *Visio* the entities represented by one data store from your data flow diagram.
 - i. For each pair of entities, create a pair of business rules.
 - ii. Add attributes to each entity.
 - iii. Add relationships to connect the entities according to the criteria specified in the business rules.
 - iv. Copy/paste the finished entity relationship diagram to a *Word* file.
 - b. Create in *Excel* or *Word* one table for each entity in the ERD.
 - i. Enter three records to demonstrate understanding of normalization, entity integrity and referential integrity.
 - ii. Copy/paste the tables into the same *Word* files as the ERD.
3. *Deliverables:* One *Word* file with the following three items (at least one of which is copied/pasted from another application):
 - a. The business rules specifying the relationships between entity pairs.
 - b. The entity relationship diagram that visually illustrates the implementation of the business rules.
 - c. A table (in *Word* or *Excel*) for each entity in the ERD. Each table must contain at least 3 records and demonstrate understanding of entity, referential and data integrity.

Grading Rubric: ERD_Tables_Grading_Rubric.xlsx

Assignment Name: Graphic Mockups**Due: 5/12**

This is a group assignment using client content. The resources for all components include lectures, PPTs and in-class activities.

Learning Objective: Given a proposed information system, you will be able to create a graphical, non-functional mockup of the system illustrating system functionality and use.

Assignment Name: Prototype Mockups

1. *Description:* Graphically illustrate the screens an end user would see as they performed the tasks implied for each base use case in the use-case diagram. Provide enough detail to enable an end user to mentally/visually “walk through” the steps to achieve the desired goal.
2. *Directions:*
 - a. Using your choice of software, create graphic mock-ups of the main screens you envision for your system.
 - b. Provide explanatory text for each graphic.
3. *Deliverable:* The Prototype Mock-ups component of the *Milestone 2* assignment.

Grading Rubric: Milestone_2_Grading_Rubric.xlsx

Note: This assignment has three related components: the test plan, the implementation plan, and the training plan. This is a group assignment using client content. Resources for this assignment include lecture, PPTs and in-class activities—and especially the Testing_Implementation.ppt.

Learning Objective: Given a situation where a new or modified information system will be installed, you will be able to create detailed transition plans for testing and implementing the software and training selected stakeholders to use it.

Assignment Name: Milestone #2: Transition Plans: Test Plan

1. *Description:* Create an overall system test plan that includes separate plans for component/unit, integration, systems and acceptance testing for both alpha and beta versions of the system. For the acceptance testing, describe the plan for user, recovery, security, stress and performance testing.
2. *Directions:*
 - a. Create a full test plan with the sub-plans as described above. Make sure you address all criteria specified above.
 - b. Integrate with rest of project documentation.
3. *Deliverable:* The Test Plan component of the Milestone #2 assignment.

Assignment Name: Milestone #2: Transition Plans: Implementation Plan

1. *Description:* Create an overall system implementation plan describing one of the four installation approaches. Make sure you address data conversion, planned system shutdown, and how the implementation will impact regular business processes.
2. *Directions:*
 - a. Create a full implementation plan, being sure to address all criteria specified above.
 - b. Integrate with rest of project documentation.
3. *Deliverable:* The Implementation Plan component of the Milestone #2 assignment.

Assignment Name: Milestone #2: Transition Plans: Training Plan

1. *Description:* Create an overall training plan describing one of the four installation approaches. Make sure you identify who will be trained, who will conduct (or monitor) the training, how the training will be administered, what training materials will developed, and when training will occur.
2. *Directions:*
 - a. Create a full training plan, being sure to address all criteria specified above.
 - b. Integrate with rest of project documentation.
3. *Deliverable:* The Training Plan component of the Milestone #2 assignment.

Grading Rubric: Milestone_2_Grading_Rubric.xlsx

Final Assignment Name: Milestone #2

1. *Description:* This is your final project documentation. All documents submitted as individual components should be integrated into this final document. You should have made all the revisions to the Milestone 1 documentation.
2. *Learning Objective:* Given an information systems analysis or design task within a specified scenario, learner will select and use the most appropriate techniques to complete that task.
3. *Resource:* Lecture/PPTs/In-class Activity
4. *Group/Individual:* Group
5. *Uses Client Content?* Yes
6. *Directions:*
 - a. Pull all your previous submissions into one final project document.
 - b. For anything submitted as an “initial” version, ensure you have expanded that component to represent the full model or illustration of that component.
 - c. Apply professional formatting throughout; update your Table of Contents.
 - d. Go through the Milestone #2 grading rubric. Be critical (because I will be!). Make final changes to anything not perfectly aligned with the grading rubric.
7. *Deliverable:* One *Word* file, professionally formatted with a cover page and a Table of Contents. This is your final project documentation. This milestone will include the following components. Refer to your grading rubric and the template for details.

Note: extra points will be deducted for a) errors identified in previous submissions and not corrected or b) instructor suggestions not implemented (unless otherwise justified).

- a. Professional cover page
- b. Table of Contents
- c. Introduction
- d. Positioning
 - i. Problem Statement
 - ii. Product Position Statement
- e. Stakeholder and User Descriptions
 - i. Stakeholder Summary
 - ii. User Summary
 - iii. User Environment
 - iv. Key Stakeholder or User Needs
 - v. Alternatives and Competition
- f. System Overview
 - i. System Perspective
 - ii. Assumptions, Constraints and Dependencies
 - iii. System Features
 - iv. High-level System Requirements
- g. Project Risk List
- h. Requirements
 - i. Requirements Elicitation Plan
 - ii. Business Requirements
 - iii. User and Functional Requirements

- iv. Nonfunctional Requirements
- v. Common Information
- i. Use-Case Diagram and Specifications
 - i. Business Use-case Diagram
 - ii. Use-case Specifications
- j. Data Flow Diagram
- k. Business Rules and Entity Relationship Diagram
 - i. Business Rules
 - ii. Entity Relationship Diagram
 - iii. Sample Data Tables
- l. Prototype Mock-ups
- m. Transition Plans
 - i. Test Plan
 - ii. Implementation Plan
 - iii. Training Plan
- n. Appendices
 - i. Revision History
 - ii. Reference Materials
 - iii. Glossary

8. *Grading Rubric: Milestone_2_Grading_Rubric.xlsx*