**Individual Contributions due on December 3, 2023 at 11:59PM**

**Weight:** 20%

**Marks:** /50

# Project: Phase 3 – Final Design and Project Timeline

## Introduction

You have reached the third checkpoint in creating a software design for your external client. At this point, your instructor has provided you with formal feedback on the first two phases of your design. In Phase 3, you will implement that feedback and continue to develop your design by adding new requirements.

It is important to note that this is an *iterative process*. You should **not** expect to write this document without regular revisions. It’s important that your team discusses the system and its processes while continuing to revise the document. As you work through this process, you’ll discover new ideas and concepts.

While some class time will be allocated to work on this project, most of the work will be done outside of the classroom. Your instructor will periodically review your work as you progress and will provide guidance. You have approximately three weeks to complete this phase of the project. Refer to Brightspace for exact due dates.

## Equipment and Materials

For this project, you will need:

* Diagramming software such as Software Ideas Modeler (SIM)
* Word processing software such as MS Word
* UI design program such as Adobe XD

## Instructions

1. Read through the detailed instructions and marking criteria contained in this document.
2. Using your submission from Phase 2 as a starting point, work with your team to implement your instructor’s feedback. Reach out to your instructor as needed for clarification.
3. Develop your existing design document by expanding and adding sections, as outlined in the *Documentation Requirements* section.
4. Submit your completed preliminary analysis document to Brightspace by the posted due date.
5. Demonstrate your small system prototype to your instructor.

## Documentation Requirements

To analyze and design a system, it is vital to understand the processes of that system. Your design document is a model of the system processes and how the system will be built. Your design document already contains the following sections:

* Statement of the project and project sponsor
* Use case diagrams and use case descriptions in extended format
* Revised class diagram
* Preliminary user interface design
* Data storage and persistence
* Entity diagram
* System architecture and patterns
* Team constitution

In this phase, add the following sections:

#### Sequence Diagrams (Sha)

* With your instructor’s guidance, create four Sequence Diagrams from the use cases chosen by Arta. Detailed.
* Use Cases
  + **Customer**
    - **Book Cleaning Appointment**
    - **Write a Review**
  + **Cleaner**
    - **Add or Change availability**
    - **Cancel Booking Appointment**
  + **Manager**
    - **Add Employees**

#### Activity Diagrams and/or State Machine Diagrams (Saj and Nav = one diagram each)

* Create one Activity Diagram and one State Machine Diagram OR two Activity Diagrams OR two State Machine Diagrams, as required by your instructor. Detailed.

**Small System Prototype** (Lance) (Link: [JKL Cleaning Services Mock Up – Figma](https://www.figma.com/file/GiJf0aHpdBFUQye7C3uou9/JKL-Cleaning-Services-Mock-Up?type=design&node-id=0-1&mode=design&t=fGU2xHoQQzOcZGat-0)) / give EDIT access to everyone

* Referring to your proposed system architecture, create the necessary packages and classes that correspond to your design. The classes you implement should list their attributes and the methods as described in your Class Diagram. (Code or figma)

**Note:** You only need to include the method signatures (skeleton code). Except for the small prototype (see below), the methods do not need to be fully completed.

* Prototype the login sequence and one other non-trivial use case that you have described in your document. Discuss with your instructor what must function for the demonstration.
* Demonstrate your prototype to your instructor and include the source code as a separate submission with your design document.
* Figma: add “View Bookings”, have separate tables for “Past Bookings” and “Upcoming Bookings”
* Customer - Add or Change availability
  + Pages to create
    - Availability
    - Calendar
    - Edit Time
    - Confirmation page

A screenshot of a computer

Description automatically generated

* Presentation (3 mins each | Total 15 mins)
  + Introduction (1) Sehajbir
  + Customer Booking (2 people) Lance and Sha
  + Employee Change Availability (1) Pawan
  + Manager view availability/cancel client's appointment (1) Nav

(Manager page = talk briefly about the view and change availability, focus demonstrating client’s appointment)

#### Work Breakdown Structure and Gantt Chart (Pawan)

* A successful project requires effective time management. You will be provided with a course schedule for PROJ 309: Capstone Project, including presentations, code reviews and deadlines for submission. Use this information to guide the creation of your project work breakdown structure and Gantt chart. (Agile Gantt chart
* The Work Breakdown Structure and Gantt chart must identify progress and milestones throughout the semester. It must indicate what each team member is responsible for.
* Review your class diagram and prototype and estimate the number of lines of code (LOC) for your project.
  + There are 10 weeks or 2.5 months to complete this project, which means your total Person Months (pm) is Team Size \* 2.5.
  + Based on this, calculate how productive, in LOC/pm, your team must be to complete this project on time.
  + Reconcile this with the PNR equation from Chapter 25 and supplemental material to calculate the Effort in Person Months.

### Submission Requirements

* Formatting and Completeness: Your document must continue to conform to the formatting guidelines outlined in Phase 1. Spelling and grammar errors will result in grade deductions, and there are significant penalties for missing or incomplete elements.
* Diagrams and Descriptions: These must comply with the UML guidelines from the course textbook and class examples. Marks will be deducted for errors.
* Consistency: Ensure consistency between the descriptions and all diagrams.
  + Example: Your Sequence, Activity and State Machine Diagrams must reference classes and methods listed in your Class Diagram.

Your submission should include:

* Your completed final design and project timeline document submitted as a single **.docx** or **.pdf** file
* A zipped folder containing the small system prototype files

Only one submission is required per group. The submission must be received by the due date posted in Brightspace.

## Marking Criteria

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Categories** | **0 Marks** | **10 Marks** | **15 Marks** | **Marks** |
| **Revised Use Case Diagram and Use Case Descriptions (Extended Format)** | Incomplete or missing information. Use Case Descriptions are not in the Extended Format. | Minor errors. Missing some documentation or Use Case Descriptions missing information. | Use Case Diagram and Use Case Descriptions are complete and in the correct format. | /15 |
| **Preliminary User Interface Design** | Does not conform to UI/UX guidelines. Incomplete or missing UI components. | Minor errors or missing descriptions from the use cases. | Accurate examples of described workflow. Corresponds to correct UI/UX guidelines. | /15 |
| **Categories** | **0 Marks** | **15 Marks** | **20 Marks** | **Marks** |
| **System Prototype** | Inadequate research conducted. ERD does not correctly list the corresponding entity classes in the class diagram. | One or two missing elements. Minor errors listing entity relationships. | ERD is accurate and consistent with system information. | /20 |
| **Total** | | | | **/50** |