

---

# IT 6423

## IT System Acquisition & Integration



**DR. NAZMUS SAKIB**

Assistant Professor Of Information Technology

**Director of mHealth Lab**

College of Computing and Software Engineering

---

# One Magic Word I Learned in My Orientation ...



**INITIATIVE**

YOU are Important!!! Don't Forget to Take Care of YOU!



# Introduce Yourself!

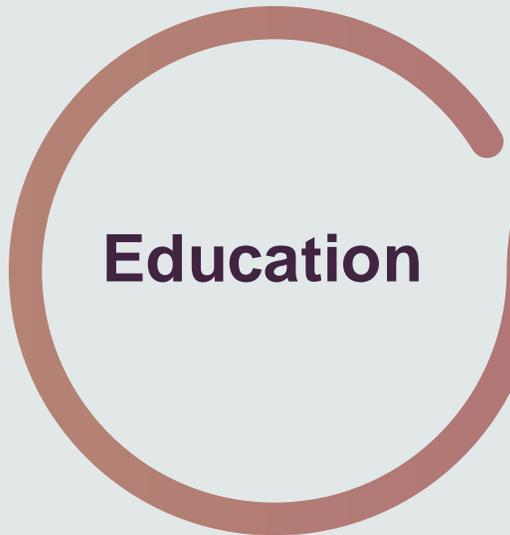
- Name?
- Where are you from?
- Undergraduate Background?
- Tell me a bit about your interests and career goals
- Any hobby?

---

# IT Provides Value

---

1



Healthcare

3



Finance

2

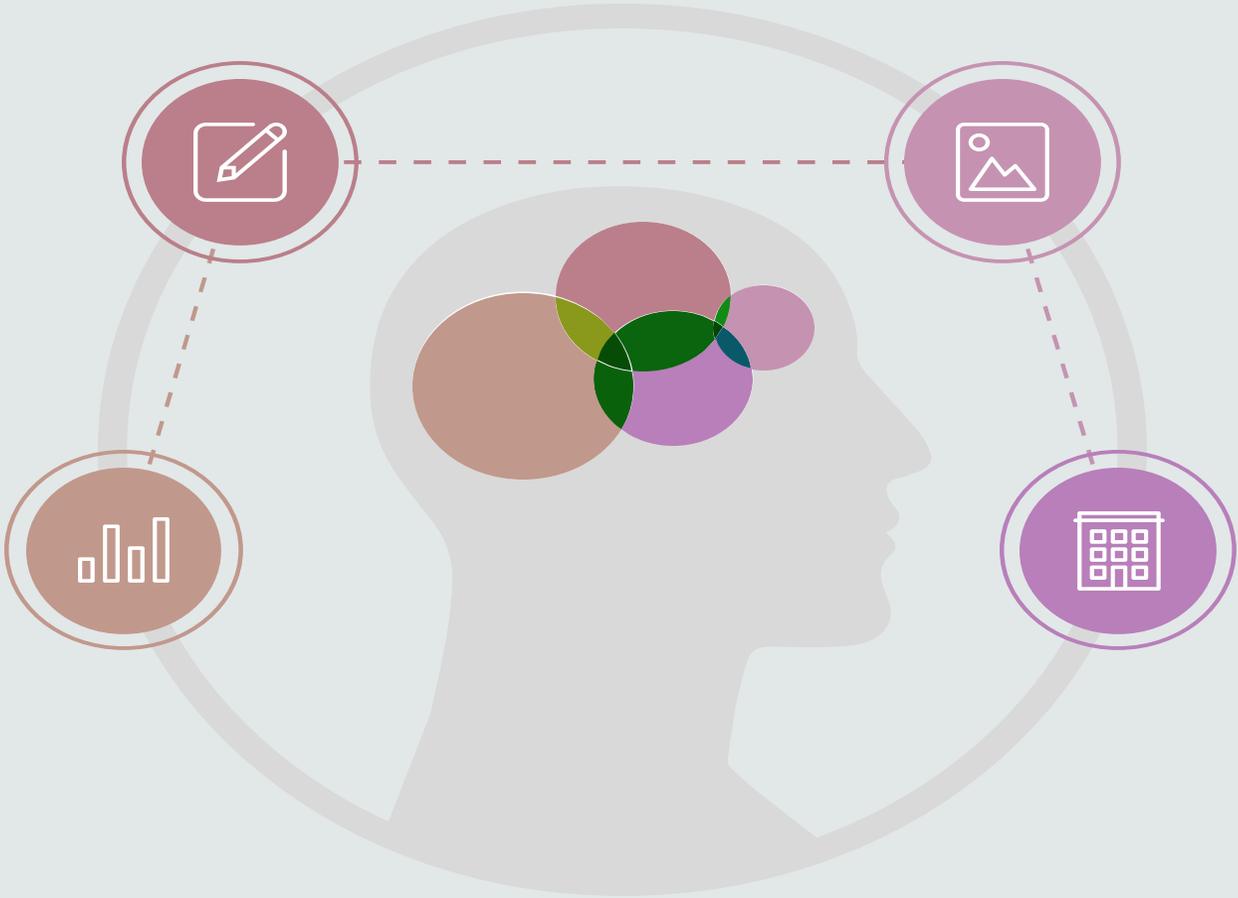
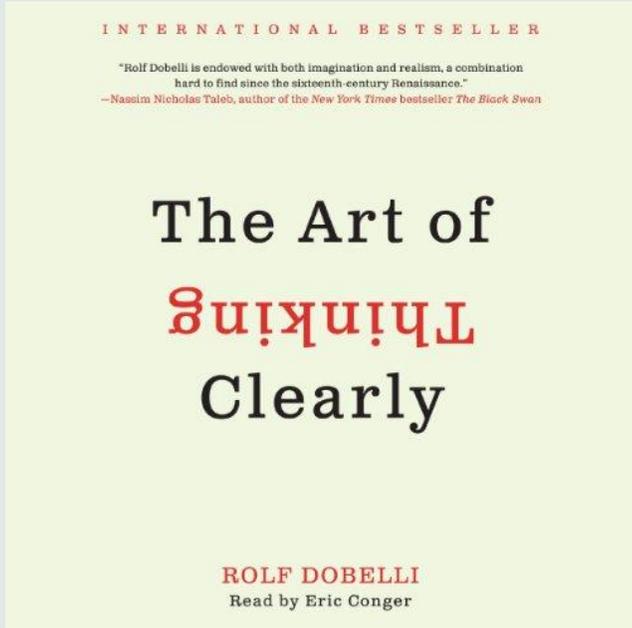
4



---

# Why You Should Visit Cemeteries– *Survivorship Bias*

---



---

# IT Sourcing Strategy

---

**Build it**



**Buy it**

---

---

# HW1 Part A Questions: 25 Points Total

---

- HW 1 requires a ~10-12-minute individual presentation (in ~8-10 slides only). The student will prepare slides answering the following questions. The student **MUST** submit both slides and a video record of the presentation to the D2L submission window. The student **MUST** be visible (presenting) in the video.
  - The grading will consider the following aspects of the discussion with the respective weight.
    - Technical Rigor and Merit of the Discussion (70%)
    - Oral Presentation Quality (15%)
    - Professional Slides Formatting (15%)
-

---

# HW1 Questions: Question 1

---

## Context and Question: (7 Points)

The Wikipedia page on "Strategy" (<https://en.wikipedia.org/wiki/Strategy>) is the main article in the Wikipedia Series on "Strategy." Go to these pages in the Strategy Series and complete the development of a list of the top ten words or concepts the IT professional should know, along with their definitions of strategy and IT. Add seven terms/concepts to those there already. You might need to link around inside and outside of the Strategy Series net to complete.

1. Strategy- "A high-level plan to achieve one or more goals under conditions of uncertainty....." [1]
  2. IT Strategy .....
  3. Business Value .....
  4. Etc.....
-

---

# HW1 Questions: Question 2

---

## Context and Question: (8 Points)

The Wikipedia page on "Business Model" ([https://en.wikipedia.org/wiki/Business\\_model](https://en.wikipedia.org/wiki/Business_model)) describes that part of business strategy describing the rationale of how an organization creates, delivers, and captures value. This article describes the advent of a "liquid business model" where IT provides a platform that contributes value to the success of many modern business models. Using EDUCAUSE's "Top 10 Technologies" from each of the previous years covered in the Readings Readme for LM1 (See Week 2 contents), choose an IT technology from each of the years below and briefly describe the characteristics requested.

---

# HW1 Questions: Question 2 (Contd.)

Year	EDUCAUSE Technology	Example Value (to KSU Online Education) You might change this reference business model	Implications, Applications, Connections, etc.	Comments, e.g., risk, advantages, disadvantages, restrictions
2014	Virtual desktops or virtual PC apps (number 9 that year) [4]	Anywhere access (removes the same place restrictions)	Virtual libraries and laboratories. Allows provisioning of more services for distance learning.	+ Reduces need to travel/commute - Makes license and copyright management more complex
2015				
2016				
2017				
2018				
2019				
2020				

---

# HW1 Questions: Question 3

---

## Context and Question: (10 Points)

What are the different strategies and approaches to sourcing an IT system and which one(s) should be used when? Do some web research on contemporary sourcing strategies, write an annotated and descriptive list of at least four sourcing strategies, and include both Make and Buy in that list. Include Definition/Description, Pros and Cons, Situations of Primary Use, and Comments (on) of each strategy for IT systems acquisition and integration.

Hint:

## Build

**Definition/Description:** Building the IT system or application within the organization ... [7]

**Pros:** 1) Large amount of control; 2) Security and confidentiality; 3) ...

**Cons:** 1) Difficult to spread risk; 2) Might miss some significant options; 3) ...

**Situations of primary use:** When sensitive company information must be kept confidential ...

**Comments:** Buyer's Cost Model/Seller's Revenue Model/or anything worth mentioning.....

---

# Group Formulation & Project Intent

Team	Topic/Intent	Team	Topic
Group 1		Group 11	Cyber Security Challenges of Healthcare Data
Group 2	Cyber Security Challenges of Healthcare Data	Group 12	Aging- Alzheimer's and Dementia related issues
Group 3	<b>Healthy Aging– Healthy eating, nutrition, diet, and exercise</b>	Group 13	Healthy Aging- Healthy eating, nutrition, diet, and exercise
Group 4	Green and Sustainable Supply Chain- can we reduce the carbon emissions and waste in the supply chain steps	Group 14	
Group 5	Cyber Security Challenges of Healthcare Data	Group 15	
Group 6	Cyber Security Challenges Surrounding Supply Chains		
Group 7	Disparities in online social platforms		
Group 8	Healthy Aging- Healthy eating, nutrition, diet, and exercise		
Group 9	Cyber Security Challenges Surrounding Supply Chains		
Group 10	International Higher Education Administration		

# Group Formulation and Intent Submission

- Students are highly encouraged to conduct research in the most **influential and impactful domain** for IT Systems & Data Science Applications as follows.

		Subdomains		
Domain	Healthcare Informatics & mHealth	<b>Aging– Alzheimer’s and Dementia related issues ***</b>	Mental and emotional health (Prevention, Intervention, Stigma management)	Cyber Security Challenges of Healthcare Data
		Healthy Aging– Healthy eating, nutrition, diet, and exercise	Mental and emotional health (Mental Health Disparities)	
	Education	International Higher Education Admission (Stakeholder– International Students)	International Higher Education Admission (Stakeholder– US Universities)	
	Computational Social Science	Disparities in online social platforms	Determining the social influence of an individual in the online social platforms	
	Supply Chain Management	Cyber Security Challenges Surrounding Supply Chains	Green and Sustainable Supply Chain– can we reduce the carbon emissions and waste in the supply chain steps	

---

**“In the beginner’s mind there are many possibilities, but in the expert’s mind there are few.”**

---



---

# IT System Development Life Cycle (SDLC)

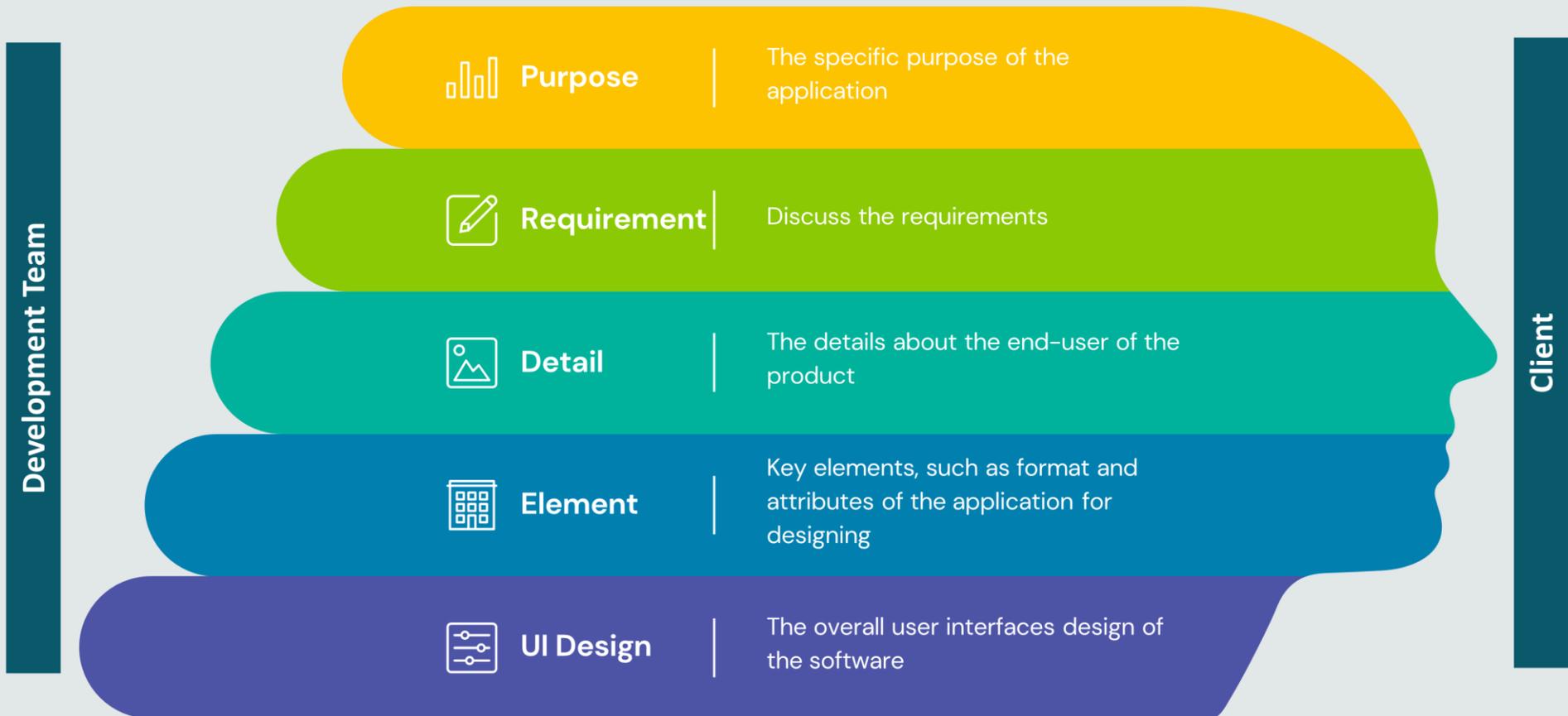
---



---

# Planning

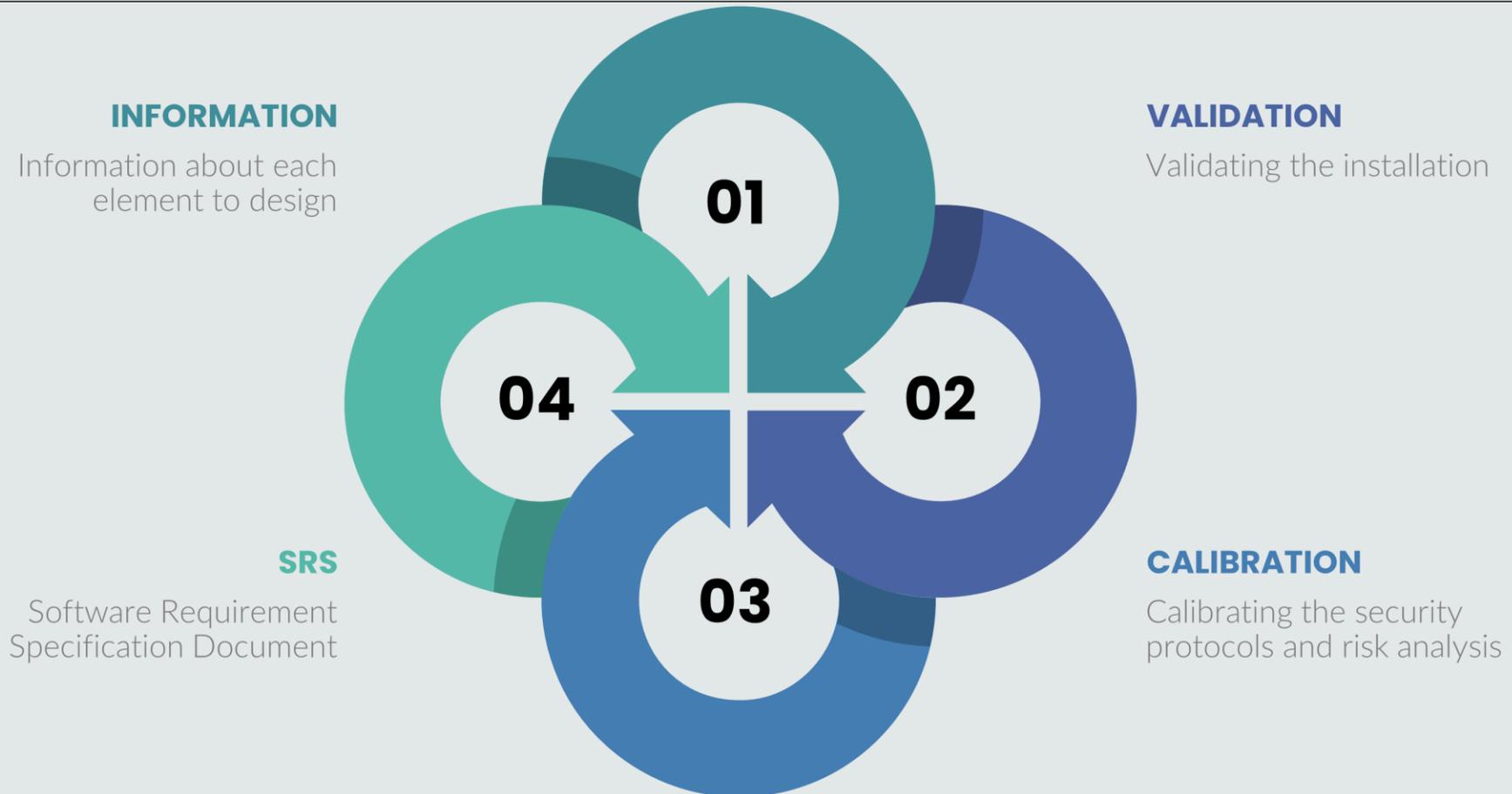
---



---

# Requirement Analysis

---



---

# Design

---

Devise the system design following SRS

**Devise**

Design Document Specification

**DDS Document**

Check feasibility with clients' requirements

**Feasibility**

Share with stakeholders and analysts for review

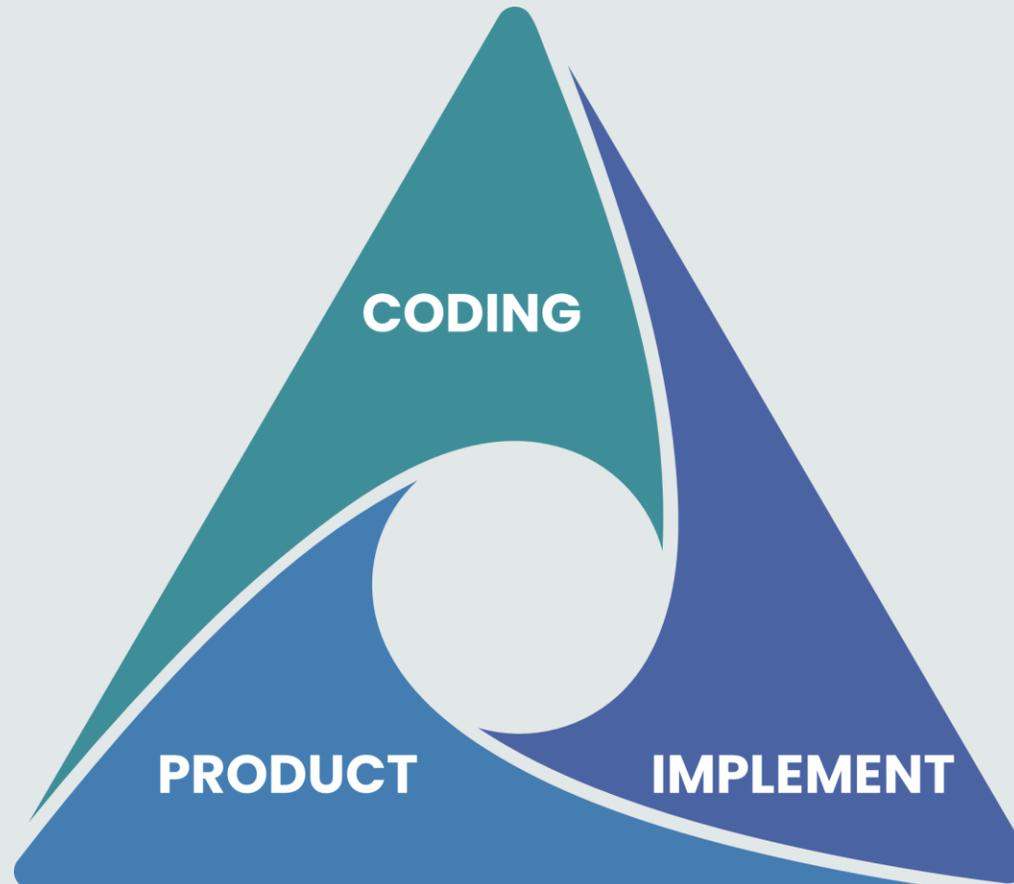
**Review**



---

# Implementation/Coding

---



**Developers start writing the code using the language**

**Actual Implementation of the Software Product**

**Development tools like compilers or debuggers to implement the code**

---

---

# Testing

---

Deployed in multiple test environments to check the functioning



Testing team may find errors or bugs



Continued till the system proven stable



---

# Deployment

---



---

# SDLC Models

---

Waterfall Model

01

04

Spiral Model

Incremental Model

02

05

V-Model

Iterative Model

03

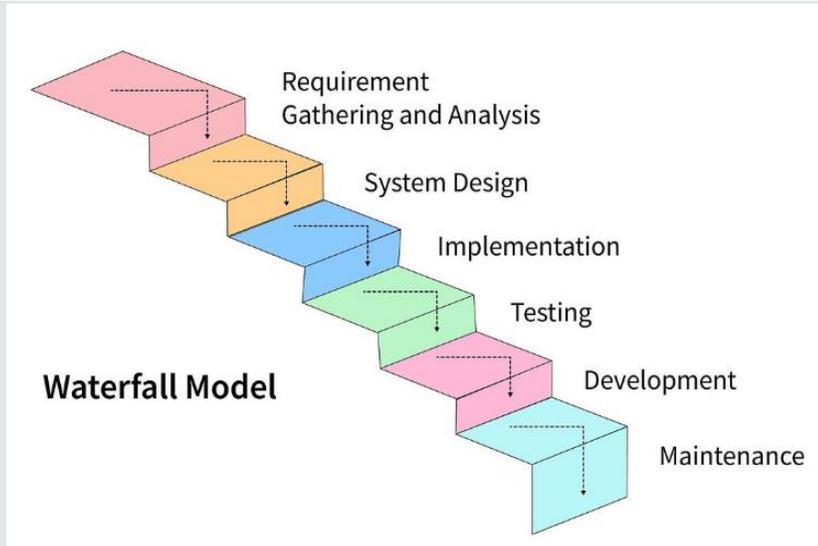
06

**Agile Model**

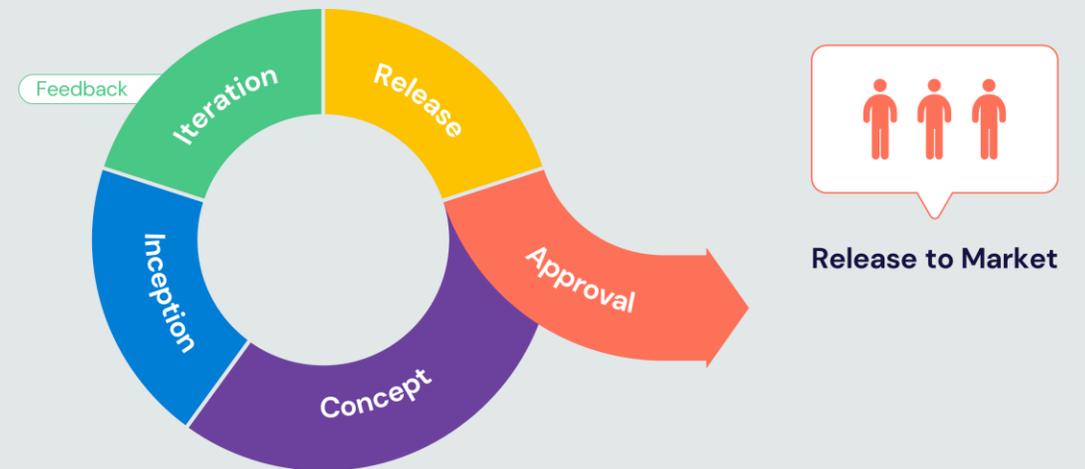
---



# Waterfall Model Vs. Agile Model



**Vs.**  **Software Development**



---

# Comparing SDLC Models

Team	Topic	Team	Topic
Row 1	Definition+2 Pros of Waterfall Model 2 Cons of Waterfall Model	Row 4	Definition+3 Pros of Agile Model 3 Cons of Agile Model
Row 2	Definition+2 Pros of Incremental Model 2 Cons of Incremental Model Definition+2 Pros of Spiral Model 2 Cons of Spiral Model		
Row 3	Definition+2 Pros of V-Model 2 Cons of V-Model		
Row 5	Definition+2 Pros of Iterative Model 2 Cons of Iterative Model		

---

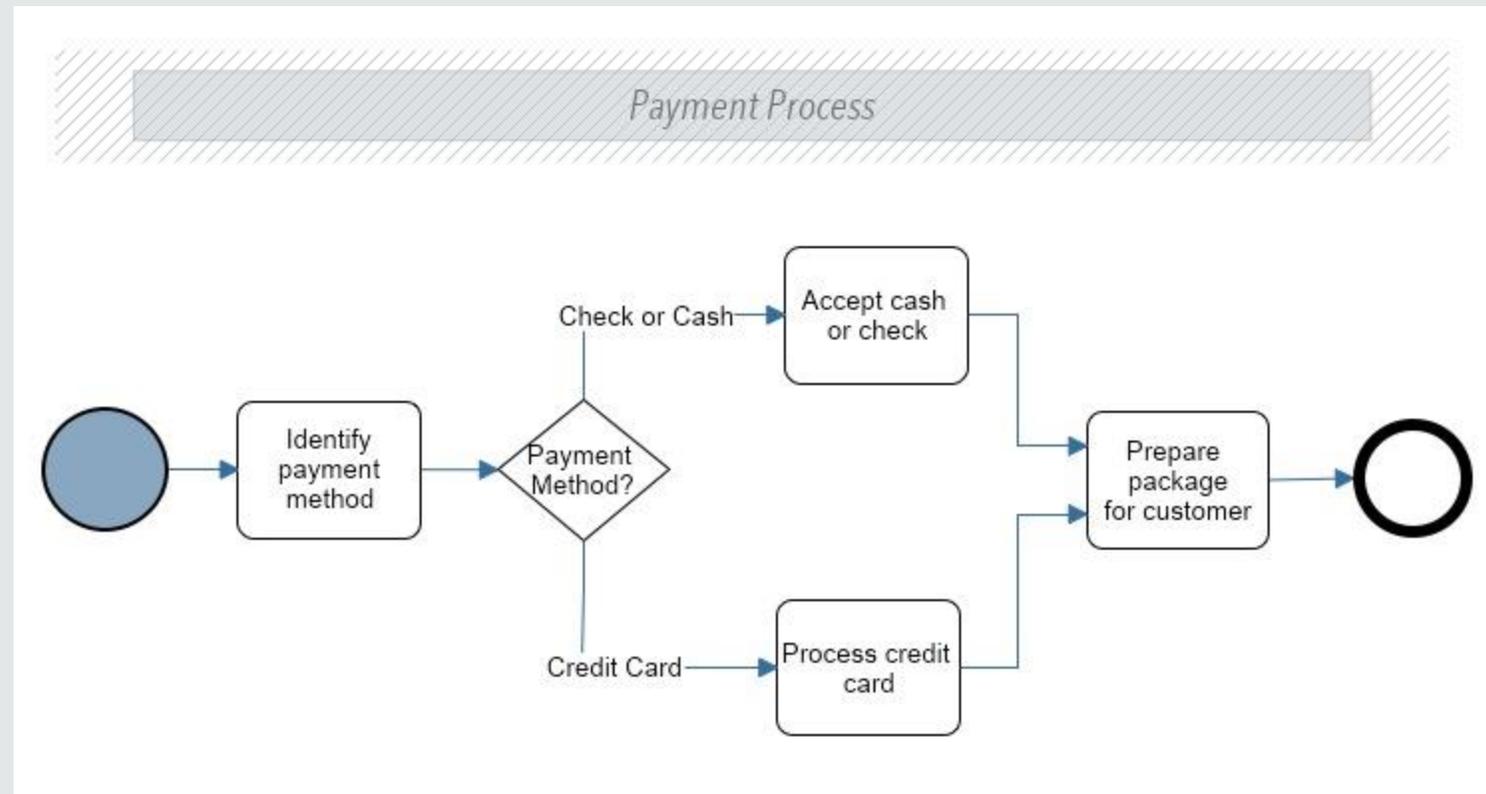
---

# Comparing SDLC Models

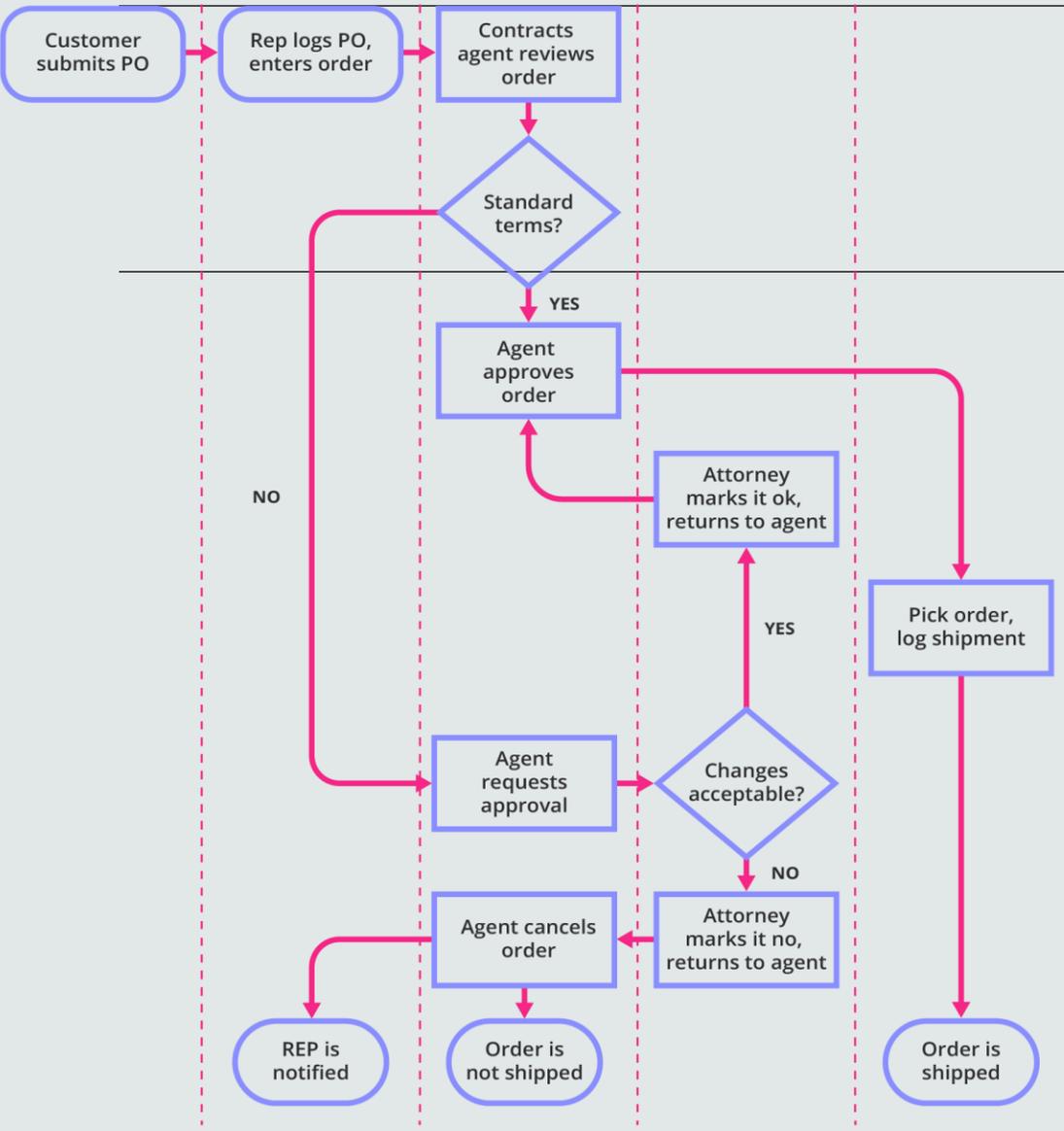
Team	Topic	Team	Topic
Group 1		Group 11	Definition+2 Pros of Iterative Model 2 Cons of Iterative Model
Group 2	Definition+2 Pros of Waterfall Model	Group 12	Definition+2 Pros of Agile Model
Group 3	2 Cons of Waterfall Model	Group 13	2 Cons of Agile Model
Group 4		Group 14	
Group 5	Definition+2 Pros of Incremental Model	Group 15	
Group 6	2 Cons of Incremental Model		
Group 7	Definition+2 Pros of Spiral Model		
Group 8	2 Cons of Spiral Model		
Group 9	Definition+2 Pros of V-Model		
Group 10	2 Cons of V-Model		

---

# Business Process Modeling (BPMN)



# BPMN (Contd.)



- Event Logs
- Process Mining
- Control Flow
- Data Flow
- Performance Metrics
- Resource Utilization
- Simulations → Optimization on steps within process

---

# Request for Proposal (RFP)

---



---

## Documents Distributed to Potential Vendors to Identify Critical Project Elements

---

Defined IT System Addressed

Critical Business Processes

Vendor Qualification Information

Business Need

Assessment Overviews

Schedules

Response Procedure

Terms and Conditions

Applicable Standards & Regulations

Contact Information

Requirements: (Typical categories)

- Functional Requirements
  - Technical Requirements
  - Financial Requirements
  - Service Requirements
  - System Requirements
  - Security Requirements
  - Organizational Requirements
  - Integration Requirements
  - Implementation Requirements
  - Training and Support Requirements
-

---

# Internal (not made public) Documents

---

Alignment with Strategic  
and Operational Plans

Procurement Team  
Organization

Project Plans

- Implementation Plan
- Integration Plan
- Rollout Plan
- Support and Training Plan

Scoring Metrics and  
Procedures

Vendor Qualifications  
and Past Performance

Business Case

Briefing Slides

Financial and ROI Analysis

Approval Chain

---

---

# FAQs and Communication Templates

---

FAQs

Emails

Letters

Memos

---

---

# Briefing Slides and Materials

---

## Problem

What is the specific problem we solve



## Product

What IT system we propose



## Features

What are the salient features



## Impact

What are the impact using these features

---

---

# HW2 Questions PART A: 25 Points Total

---

- HW 2 requires a ~10-12-minute individual presentation (in ~8-12 slides only). The student will prepare slides answering the following questions. The student **MUST** submit both slides and a video record of the presentation to the D2L submission window. The student **MUST** be visible (presenting) in the video.
  - The grading will consider the following aspects of the discussion with the respective weight.
    - Technical Rigor and Merit of the Discussion (70%)
    - Oral Presentation Quality (15%)
    - Professional Slides Formatting (15%)
-

---

# HW2 Questions: Question 1

---

## Context and Question: (7 Points)

Review and analyze systems and SALC terms and concepts in relationship to IT. Wikipedia in [https://en.wikipedia.org/wiki/Systems\\_engineering](https://en.wikipedia.org/wiki/Systems_engineering) defines systems engineering as an interdisciplinary field that “focuses on how to design and manage systems over their life cycles.” We will use this as a point of departure for understanding the IT SALC. Please complete the development of a list of the top ten words or concepts the IT professional should know along with their definitions about the IT SALC. Add five terms/concepts to those there already and briefly discuss them.

1. System .....
  2. IT System .....
  3. Systems Engineering .....
  4. IT SALC .....
  5. Requirement .....
  6. ....
-

---

# HW2 Questions: Question 2

---

## Context and Question: (8 Points)

In 2 slides, compare and contrast between the following typically used IT system acquisition life cycles (SALCs). (Hint: use a table.) Don't forget to cite your references!

- Agile versus Waterfall
  - DAU versus ISO versus DOAS.
-

---

# HW2 Questions: Question 3

---

## Context and Question: (10 Points)

What is an RFP? Discuss the relevant 5 WH questions about RFP in the context of the System Acquisition Life Cycle. Your creativity and rigor in designing questions will also be evaluated! The purpose of this question is to ensure that you have some clarity about the RFP before we start.

---

---

# Group Research Assignment & Presentation: Phase 1

---

- The project groups will conduct guided research under the supervision of the instructor. If you have any questions or confusion, please reach out to the instructor.
  - Assignment 1 (elaborate written discussion) should be submitted by October 05, 2024 (Saturday) 11 PM ET. Each student is required to submit the Group Assignment to facilitate grading purposes (The report will be the **same** for group members).
  - Presentation 1 will involve a 10-minute Group presentation (~7-8 slides). Presentation 1 Slide should be submitted by October 05, 2024 (Saturday) 11 PM ET. All students from each group will present. Each student is required to submit the Presentation to facilitate grading purposes (Slides will be the **same** for each group).
  - For **Online** Groups, Presentation 1 window will require both (1) presentation slides and (2) video recording of the presentation to submit. Both students must be visible presenting in the recording.
  - For **Hybrid** Groups, Presentation 1 window will require the presentation slides only. Oral presentations will be in the class on October 03 and October 10, 2024 (in-person).
-

---

# Food for Brainstorming!

---

- When considering the system requirements, problem statement, and objective of the project, it is key to put yourself in the shoes of the client organization.
- When considering the features and sub-features of the proposed IT system, it is valuable to envision how users interact with them and the benefits they derive.
- Engage your mind with the USER hat for clarity. Remember, we will dive into UI design in the later phase of the semester!



\*This image is created by using GAI tools for better readability.

---

---

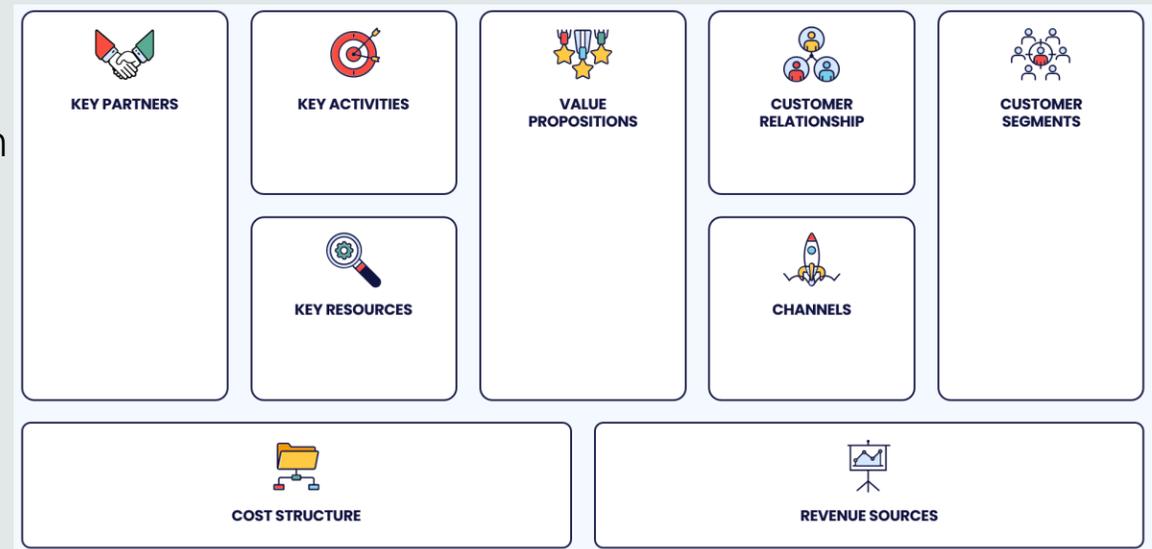
# Group Research Assignment & Presentation: Phase 1

---

Answer the following questions based on your group research progress. Submit all the answers in one pdf file.

**Question 1:** What motivates you to conduct research in this critical intersection? Discuss the significance of three perspectives. **[EWC: 500 words]**

- (a) Intensity (significance) of the problem
- (b) Need for the proposed solution
- (c) Commercialization potential (from client perspective)



---

# Group Research Assignment & Presentation: Phase 1

---

**Question 2:** What are the probable problem statement and objectives of the project? [EWC: ~150-200 words]



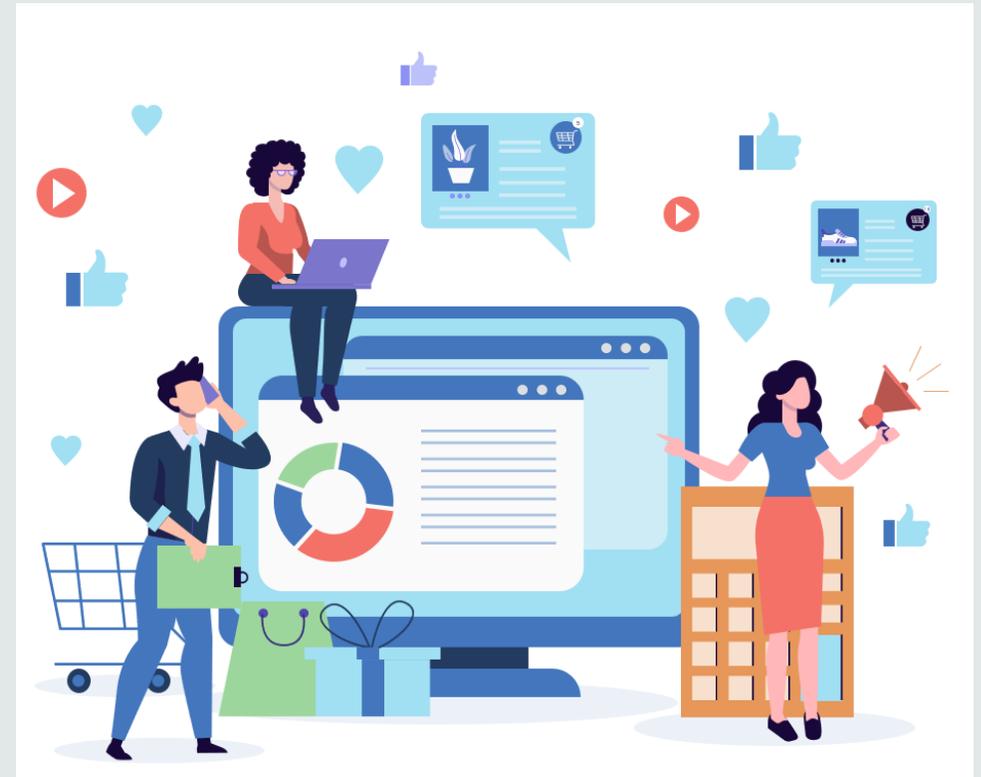
---

# Group Research Assignment & Presentation: Phase 1

---

**Question 3:** Provide a probable interpretation of the stakeholders (Who they are and what their roles are) involved in this particular ecosystem (project space)?

[EWC: ~300 words]



---

# Further Food for Brainstorming!

**You will require this skill in Phase 4, its great to learn it now. It's easy but super handy. It will help you shape and envision your project.**

---

Resources:

[Learn UI Design in Figma | Figma](#)

[How to Create Your First UI Design App - Figma Tutorial | Cprime Blogs](#)

[world's shortest Figma course \(youtube.com\)](#)

[Figma UI Design Tutorial: Get Started in Just 24 Minutes! \(youtube.com\)](#)

*\*Students should have premium access with KSU credentials.*

---

---

# Further Food for Brainstorming!

**You will require this skill in Phase 4, its great to learn it now. It's easy but super handy. It will help you shape and envision your project.**

---

Resources:

[5 Key UI Design Principles– And How To Use Them | Figma](#)

[The 6 Key Principles of UI Design | Maze](#)

[Figma: The Collaborative Interface Design Tool](#)

[12 Best Features of Figma for UI UX Designers - GUVI Blogs](#)

*\*Students should have premium access with KSU credentials.*

---

---

# Phase 1 Presentation Schedule (Hybrid Section)

---

October 03, 2024	October 10, 2024
Group 01	Group 02
Group 03	Group 04
Group 05	Group 06
Group 07	Group 08
	Group 09

The in-person class scheduled for September 26 will be canceled to allow students time for preparation before we proceed to the Group Research Activities phase.

---

---

# Group Research Assignment & Presentation: Phase 2

---

- The project groups will conduct guided research under the supervision of the instructor. If you have any questions or confusion, please reach out to the instructor.
- Assignment 2 should be submitted by October 19, 2024 (Saturday) 11 PM ET. Each student is required to submit the Group Assignment to facilitate grading purposes (The report will be the **same** for group members). The assignment will require a detailed write-up of the Phase 2 questions, which we will later use to develop the RFP.
- Presentation 2 will involve a 10-minute Group presentation (~7-8 slides). Presentation 2 Slide should be submitted by October 19, 2024 (Saturday) 11 PM ET. All students from each group will present. Each student is required to submit the Presentation to facilitate grading purposes (Slides will be the **same** for each group).
- For **Online** Groups, Presentation 2 window will require both (1) presentation slides and (2) video recording of the presentation to submit. Both students must be visible presenting in the recording.
- For **Hybrid** Groups, Presentation 2 window will require the presentation slides only. Oral presentations will be in the class on October 17 and October 24, 2024.

---

# Phase 2 Questions

---

## 1. Briefing slides and materials

- A. What are the specific problems you are solving through this proposed IT system? Be as specific as possible. [EWC: ~300 words]
- B. Name your IT System and rationalize the naming. [EWC: ~100 words]
- C. What are the features and sub-features you are offering in this IT system (application)? Explain their functionalities. [EWC: ~600 words]
- D. Discuss the impact of this proposed IT system towards addressing the problems you discussed earlier. Explain how the IT system's functionalities are interconnected to address the problem you specified. [EWC: ~300 words]



---

# Phase 2 Questions

---

## 2. Discuss the Financial and ROI analysis for your proposed IT system.

[EWC: ~400 words]

- **Identifying costs**
  - ✓ Initial Investments
  - ✓ Ongoing Costs (Maintenance, Operational, and Staffing)
- **Estimating Benefits**
  - ✓ Tangible Benefits
  - ✓ Intangible Benefits
- **ROI Calculation (Timeframe: 5 years)**
- **Risk Assessment**



---

# Phase 2 Presentation Schedule (Hybrid Section)

---

October 17, 2024	October 24, 2024
Group 02	Group 01
Group 04	Group 03
Group 06	Group 05
Group 08	Group 07
Group 09	

---

# Phase 4 Questions

---

1. What are the specific measurable needs (requirements) centered around the proposed solution and how do you plan to manage them effectively? Discuss the following requirements. (**three specific requirements for each of these elements**). [EWC: 1000 words]
  - i. Functional requirements
  - ii. Technical requirements
  - iii. Financial requirements
  - iv. Service requirements
  - v. System requirements
  - vi. Security requirements
  - vii. Organizational requirements
  - viii. Integration requirements
  - ix. Implementation requirements
  - x. Training and support requirements



---

# Phase 4 Questions

---

2. How does this proposed IT system (your proposed solution) align with the strategic and operational plans of the client organization (your imaginary company)?

[EWC: 250 words]



---

# Phase 4 Questions

---

3. Explain the Approval Chain of the RFP for your proposed IT system. [EWC: 300 words]





---

# Phase 2 Presentation Schedule

---

March 21, 2024	March 28, 2024
Group 08	Group 01
Group 09	Group 02
Group 10	Group 03
Group 11	Group 04
Group 12	Group 05
Group 13	Group 06
Group 14	Group 07
Group 15	

---

---

# Group Research Assignment & Presentation: Phase 3

---

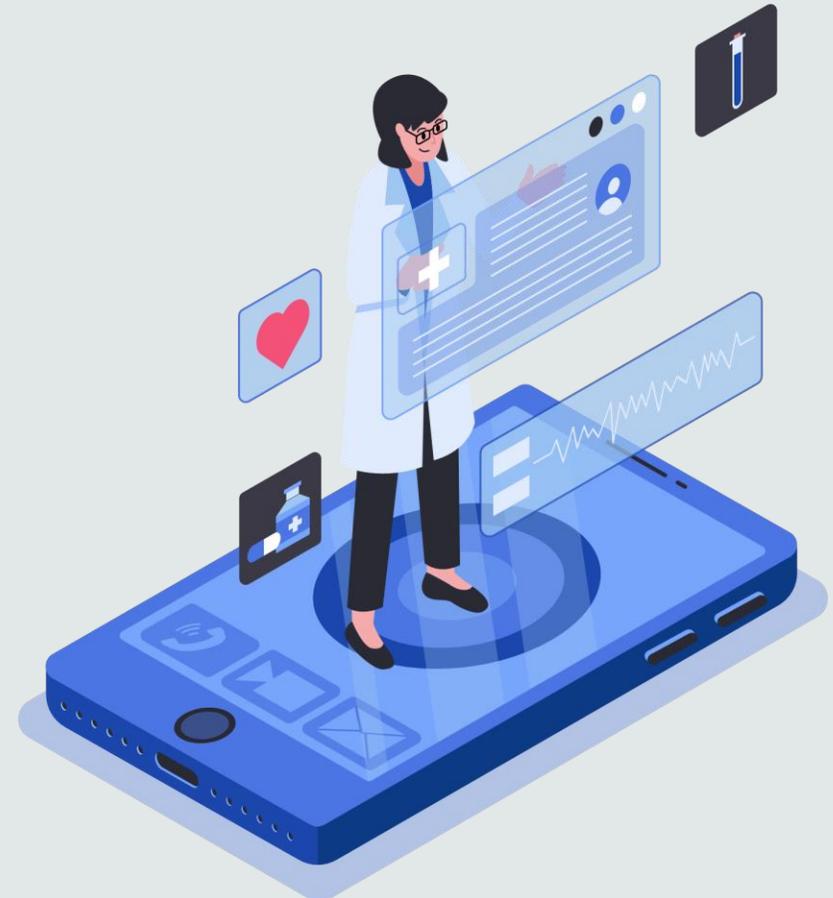
- The project groups will conduct guided research under the supervision of the instructor. If you have any questions or confusion, please reach out to the instructor.
- Assignment 3 should be submitted by November 02, 2024 (Saturday) 11 PM ET. Each student is required to submit the Group Assignment to facilitate grading purposes (The report will be the **same** for group members). The assignment will require a detailed write-up of the Phase 3 questions, which we will later use to develop the RFP.
- Presentation 3 will involve a 10-minute Group presentation (~7-8 slides). Presentation 3 Slide should be submitted by November 02, 2024 (Saturday) 11 PM ET. All students from each group will present. Each student is required to submit the Presentation to facilitate grading purposes (Slides will be the **same** for each group).
- For **Online** Groups, Presentation 3 window will require both (1) presentation slides and (2) video recording of the presentation to submit. Both students must be visible presenting in the recording.
- For **Hybrid** Groups, Presentation 3 window will require the presentation slides only. Oral presentations will be in the class on October 31 and November 07, 2024.

---

# Phase 3 Questions

---

1. Based on your answer to Phase 2's 1 (c) and (d), design the schematic framework/System Architecture for your proposed IT system. Briefly discuss the schematic framework. **[EWC: ~300 words]**



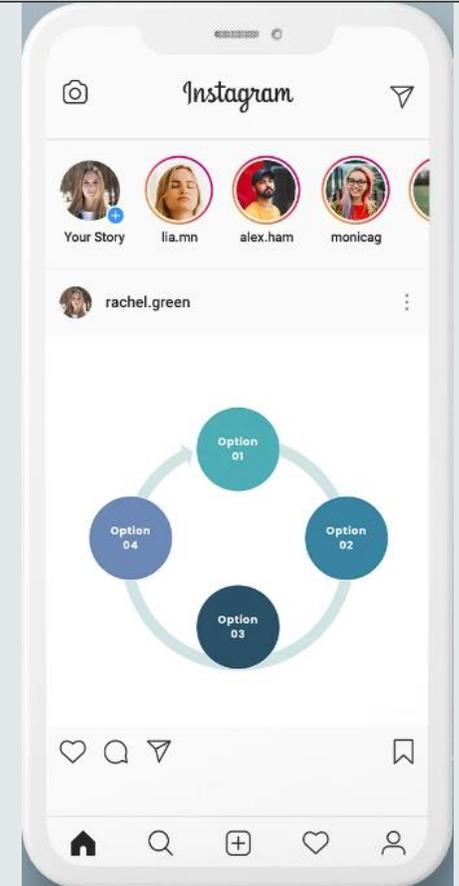
---

# Phase 3 Questions

---

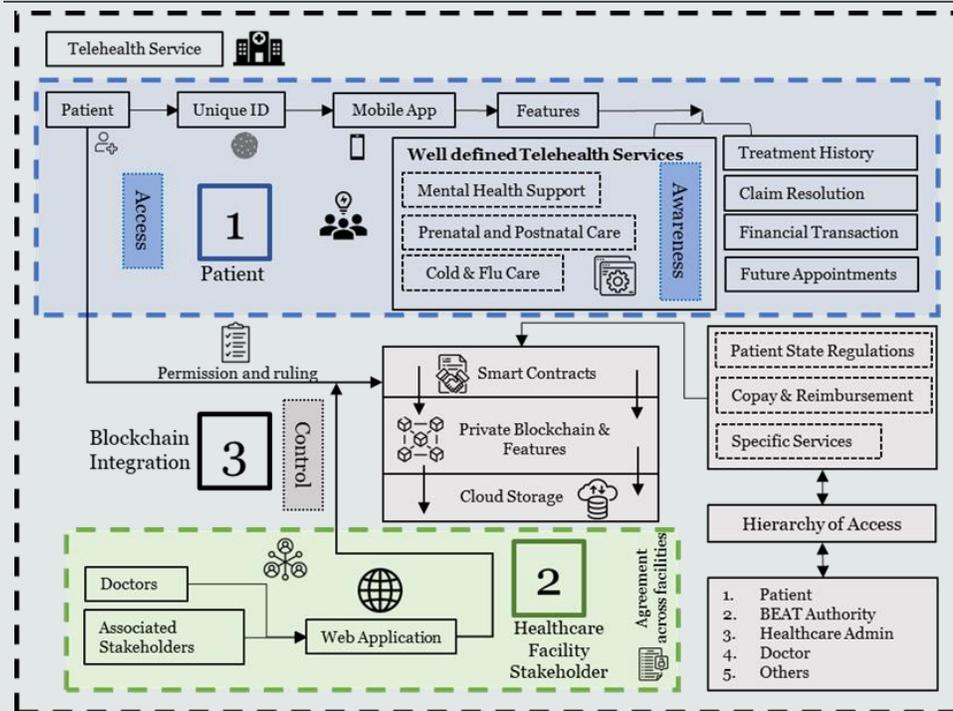
2. Design the UI(s) of **any one particular feature** and **its associated sub-features** for your proposed system using Figma or any other professional UI design tool. Discuss the user interaction with the interface. **[EWC: ~300 words]**

**NB:** You do NOT need to design UIs for all features and sub-features. you need to design for one feature and its associated sub-features. Discussing this with steps will really be great and required for full points.



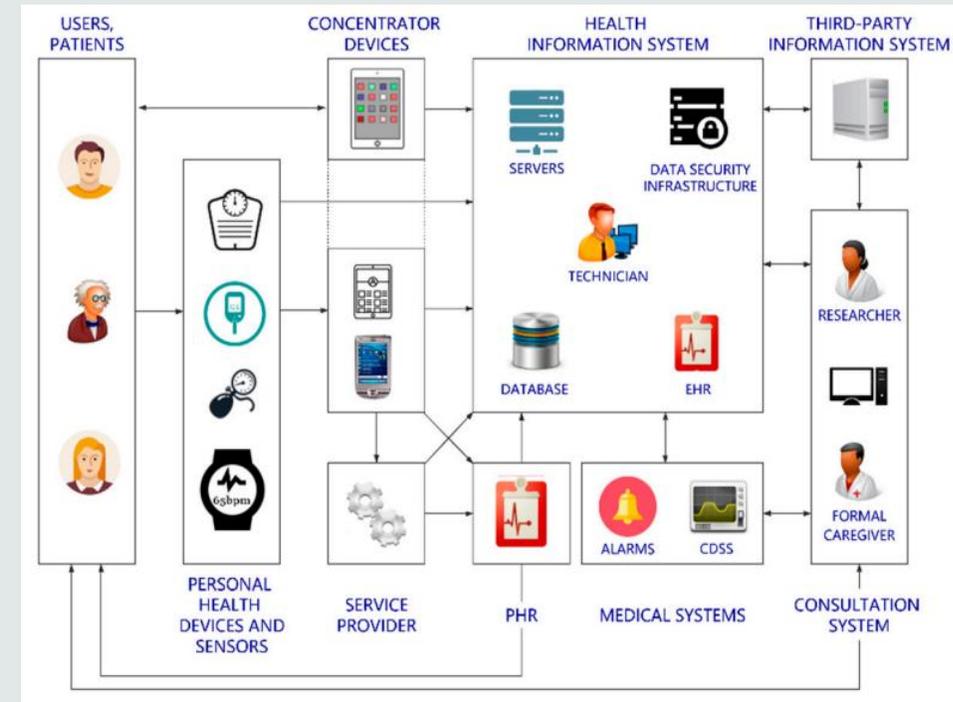
# Phase 3 Samples/Guideline

Based on your answer to Phase 2's 1 (c) and (d), design the schematic framework for your proposed IT system. Briefly discuss the schematic framework. [EWC: ~250 words]



Sample 1

Source: Anik, F. I., Sakib, N., Shahriar, H., Xie, Y., Nahiyar, H. A., & Ahamed, S. I. (2023). Unraveling a blockchain-based framework towards patient empowerment: A scoping review envisioning future smart health technologies. *Smart Health*, 29, 100401.



Sample 2

Source: Trigo, J. D., Rubio, Ó. J., Martínez-Espronedada, M., Alesanco, Á., García, J., & Serrano-Arriezu, L. (2020). Building standardized and secure mobile health services based on social media. *Electronics*, 9(12), 2208.

\*This is just a sample; students are encouraged to practice their freedom of innovation and interpretive thinking to design a more rigorous and relevant schematic framework.

---

# Phase 3 Samples/Guideline

Design the UI(s) of any one particular feature and its associated sub-features for your proposed system using Figma or any other professional UI design tool. Discuss the user interaction with the interface.

---

Resources:

[5 Key UI Design Principles– And How To Use Them | Figma](#)

[The 6 Key Principles of UI Design | Maze](#)

[Figma: The Collaborative Interface Design Tool](#)

[12 Best Features of Figma for UI UX Designers - GUVI Blogs](#)

---

---

# Phase 3 Samples/Guideline

Design the UI(s) of any one particular feature and its associated sub-features for your proposed system using Figma or any other professional UI design tool. Discuss the user interaction with the interface.

---

Resources:

[Learn UI Design in Figma | Figma](#)

[How to Create Your First UI Design App - Figma Tutorial | Cprime Blogs](#)

[world's shortest Figma course \(youtube.com\)](#)

[Figma UI Design Tutorial: Get Started in Just 24 Minutes! \(youtube.com\)](#)

---

# Phase 3 Samples/Guideline

Design the UI(s) of any one particular feature and its associated sub-features for your proposed system using Figma or any other professional UI design tool. Discuss the user interaction with the interface.

The image displays five sequential mobile app screens, numbered 1 through 5, connected by a dotted line. Each screen is a screenshot of an iPhone interface.

- Screen 1:** A survey initialization screen with a speech bubble icon, the text "Your opinion in only 2 minutes.", and buttons for "Remind Me Later" and "Take the Survey".
- Screen 2:** A survey question: "What type of activity do you prefer for your child?" with radio button options for "Indoor", "Outdoor", and "Both Indoor and Outdoor".
- Screen 3:** A survey question: "In which category of activity does your child show more interest? (Select multiple if needed)". It lists categories like "Creative", "Active", "Relaxation", "Educational", and "Entertainment", with checkboxes for selection.
- Screen 4:** A personalized suggestion screen showing "Today's Activity" (Educational Building Blocks and Puzzles), "Your Accomplishments" (Overall Progress 53%), and "More ways to Learn" (Website Links, PDF files, Video).
- Screen 5:** A cumulative list of activities including "Sensory Play", "Nursery Rhymes", "Reading and Listening", "Arts and Crafts", "Playing with Clay or Playdough", "Storytelling", "Tummy Time", and "Baby Yoga". A red box highlights the "I have done it!" button.

Below each screen is a numbered label and a descriptive paragraph:

- 1 Survey Initializing Screen**  
Survey initializing screen with three options to understand child's needs and parents interests
- 2 Survey Questionnaire**  
Users will be presented with a set of 9 carefully selected questions
- 3 Personalized Suggestion**  
The application will display the most fitted activity name to engage in for that day
- 4 Basic Instruction**  
Tapping on the suggested activity will provide basic instructions along with the 'I have done it!' button
- 5 Cumulative List of Activities**  
Users can go through the entire list of activities by tapping on the activity advocator icon/see all button

*\*ScreenSafeFuture: A Parent-empathetic and Practical mHealth Application for Toddlers' Cognitive and Emotional Development*

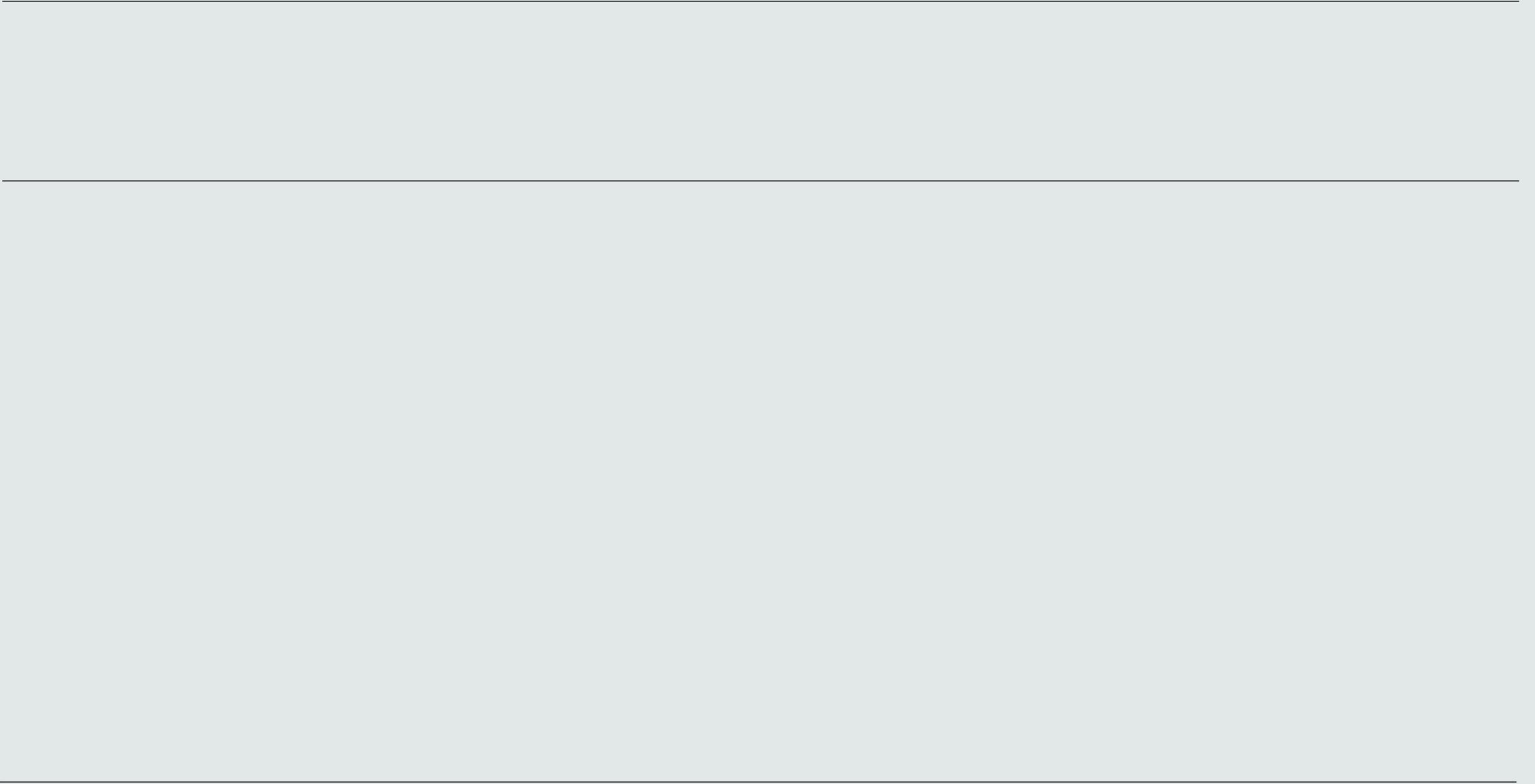
\*This is just a sample; students are encouraged to practice their freedom of innovation and interpretive thinking to design a more rigorous and relevant UI for your project.

---

# Phase 3 Presentation Schedule (Hybrid Section)

---

October 31, 2024	November 07, 2024
Group 01	Group 02
Group 03	Group 04
Group 05	Group 06
Group 07	Group 08
	Group 09



---

# Group Research Assignment & Presentation: Phase 4

---

- The project groups will conduct guided research under the supervision of the instructor. If you have any questions or confusion, please reach out to the instructor.
- Assignment 4 should be submitted by November 16, 2024 (Saturday) 11 PM ET. Each student is required to submit the Group Assignment to facilitate grading purposes (The report will be the **same** for group members). The assignment will require a detailed write-up of the Phase 4 questions, which we will later use to develop the RFP.
- Presentation 4 will involve an 8-minute Group presentation (~7-8 slides). Presentation 4 Slide should be submitted by November 16, 2024 (Saturday) 11 PM ET. All students from each group will present. Each student is required to submit the Presentation to facilitate grading purposes (Slides will be the **same** for each group).
- For **Online** Groups, Presentation 4 window will require both (1) presentation slides and (2) video recording of the presentation to submit. Both students must be visible presenting in the recording.
- For **Hybrid** Groups, Presentation 4 window will require the presentation slides only. Oral presentations will be in the class on November 14 and November 21, 2024.

---

# Phase 4 Questions

---

1. What are the specific measurable needs (requirements) centered around the proposed solution (software system) and how do you plan to manage them effectively? Discuss the following requirements. (**three specific requirements for each of these elements**). [EWC: 1000 words (roughly 100 words per element; roughly 33 words per requirements)]
  - i. Functional requirements
  - ii. Technical requirements
  - iii. Financial requirements
  - iv. Service requirements
  - v. System requirements
  - vi. Security requirements
  - vii. Organizational requirements
  - viii. Integration requirements
  - ix. Implementation requirements
  - x. Training and support requirements



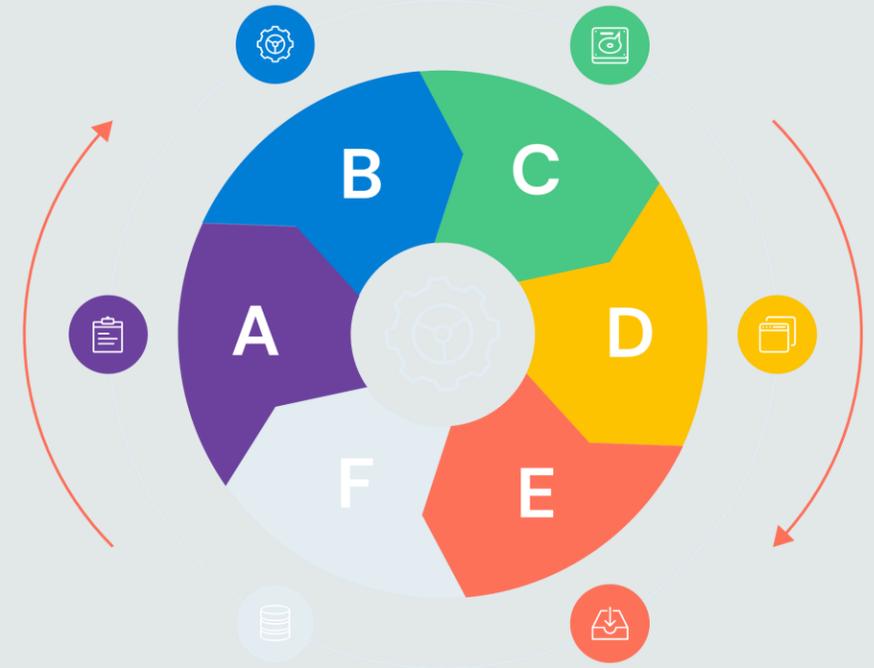
---

# Phase 4 Questions

---

2. Discuss the Usability and Efficacy Assessment Plan of your proposed IT system. **[EWC: ~500 words]**

- Usability Assessment Plan must include a formal method.
- Efficacy Assessment Plan must include 3 Milestones to satisfy.



---

# Phase 4 Questions

---

3. Explain the Approval Chain of the RFP for your proposed IT system. [EWC: 200 words]



---

# Phase 4 Samples/Guideline

---

1. What are the specific measurable needs (requirements) centered around the proposed solution and how do you plan to manage them effectively? Discuss the following requirements. (**three specific requirements for each of these elements**). [EWC: 1000 words (roughly 100 words per element; roughly 33 words per requirements)]

## **Example: (for one element...)**

### System Requirements

- **Performance:** The system shall maintain a response time of under 2 seconds for common operations, even under heavy load..... (Specify even more with the context of your problem)
  - **Scalability:** The system shall be able to handle increasing data volumes and user numbers without performance degradation..... (Specify even more with the context of your problem)
  - **Reliability:** The system shall have an uptime of at least 99.9% with mechanisms for data backup and disaster recovery..... (Specify even more with the context of your problem)
-

---

# Phase 4 Samples/Guideline

---

2. Discuss the Usability and Efficacy Assessment Plan of your proposed IT system.
  - Usability Assessment Plan must include a formal method.

For example:

- System Usability Scale (SUS)
- Multi-blind Delphi Method

---

# Phase 4 Samples/Guideline

---

2. Discuss the Usability and Efficacy Assessment Plan of your proposed IT system.

- Efficacy Assessment Plan must include 3 Milestones to satisfy.

For example (What perspective you can cover for this part of the question, here are some foods for brainstorming...):

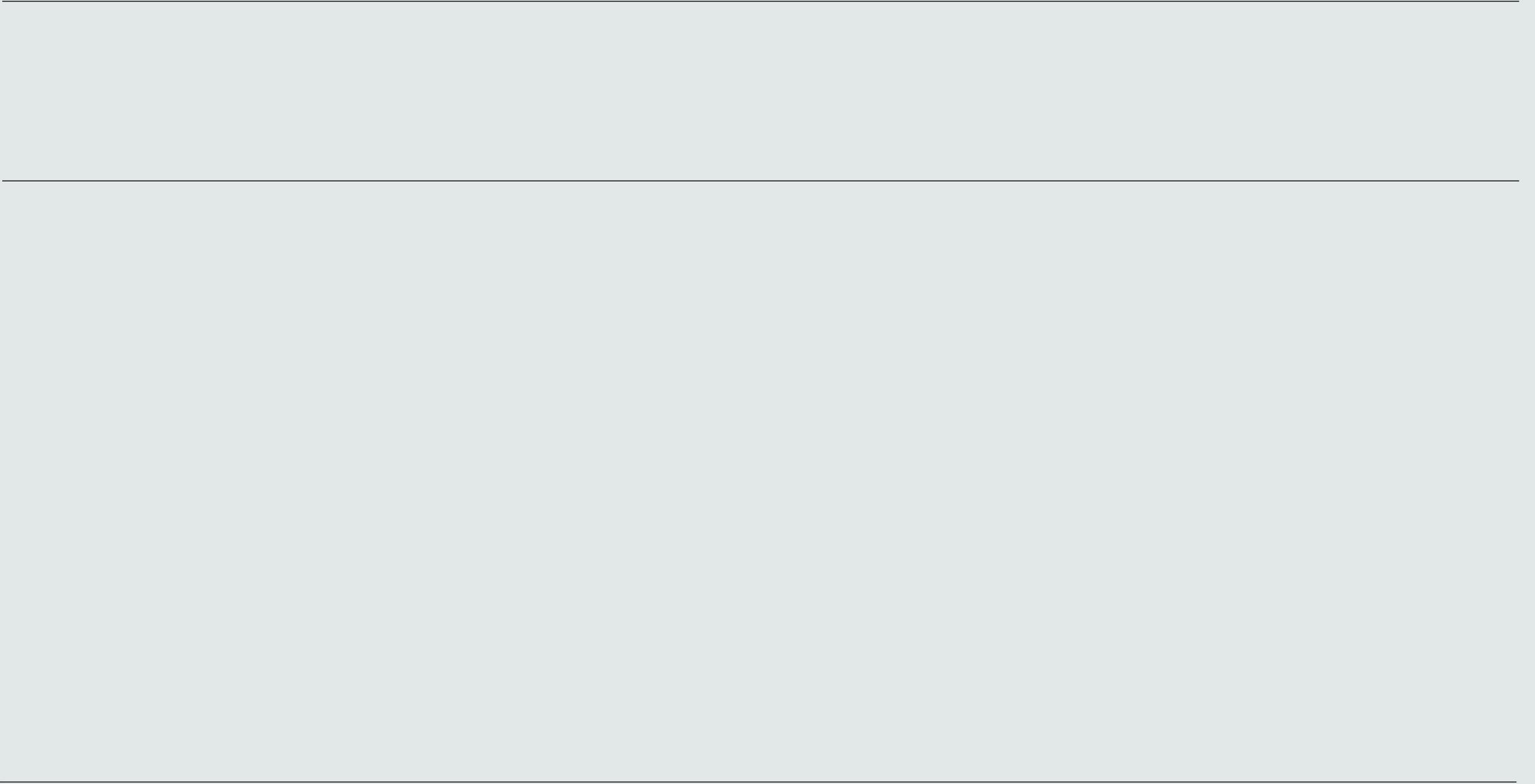
- How efficiently users can complete a well-defined task within this system
- If it is a ML classification problem, what are the accuracy, specificity, sensitivity milestones you need to achieve (or, you require developers to meet)
- Scalability: Assess the system's performance under different load condition
- Compliance with HIPAA or GDPR
- Comparative Evaluation/Benchmarking

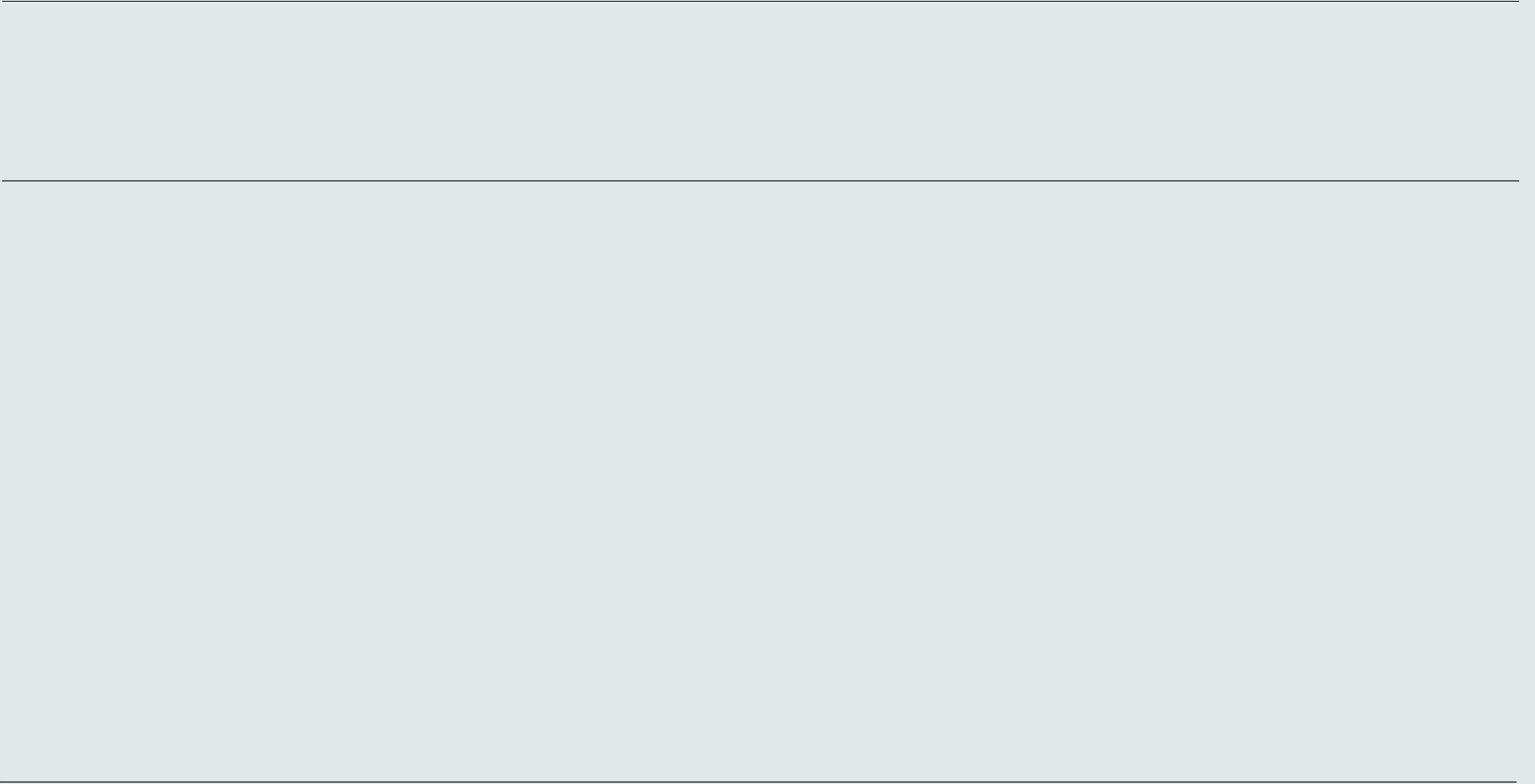
---

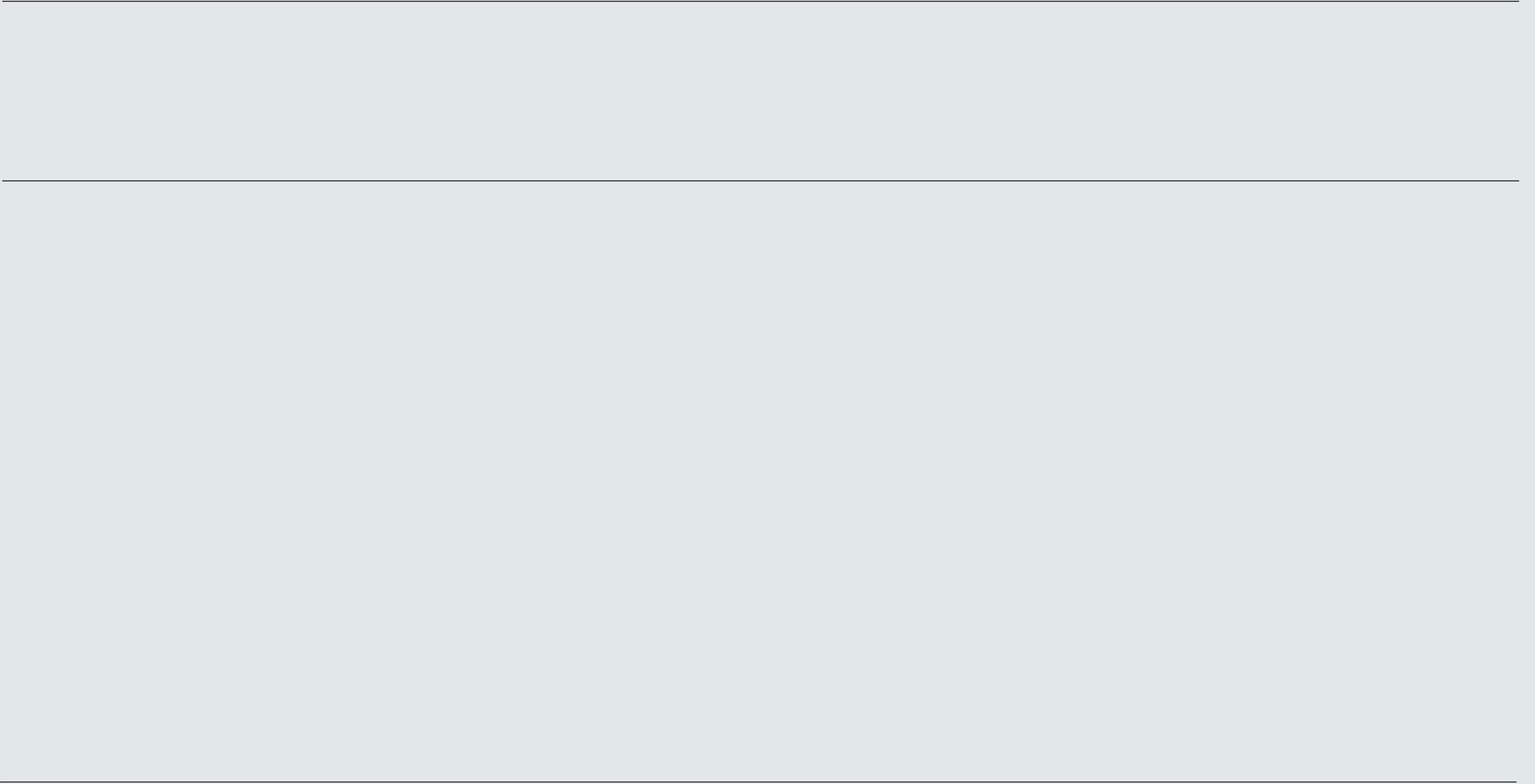
# Phase 3 Presentation Schedule (Hybrid Section)

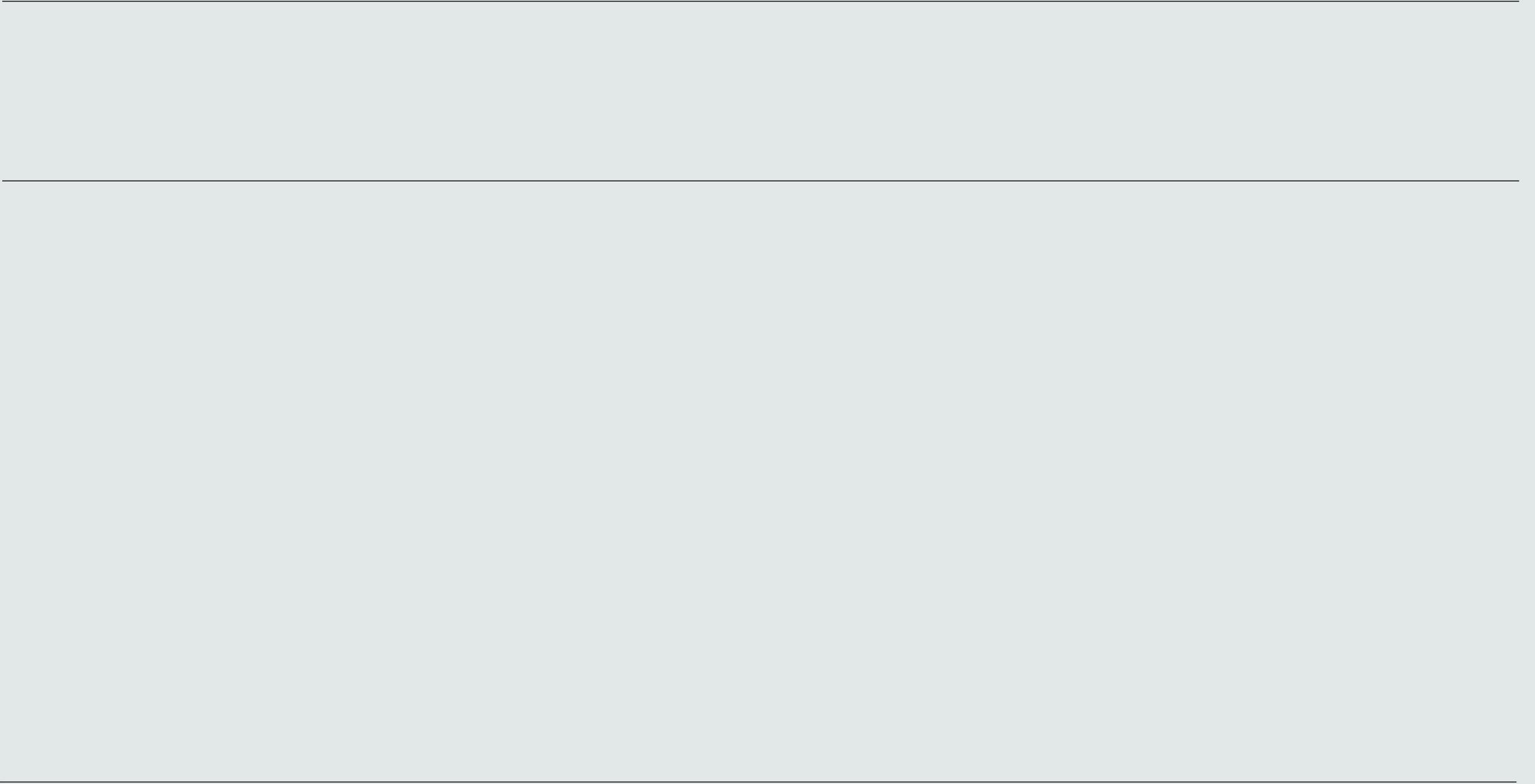
---

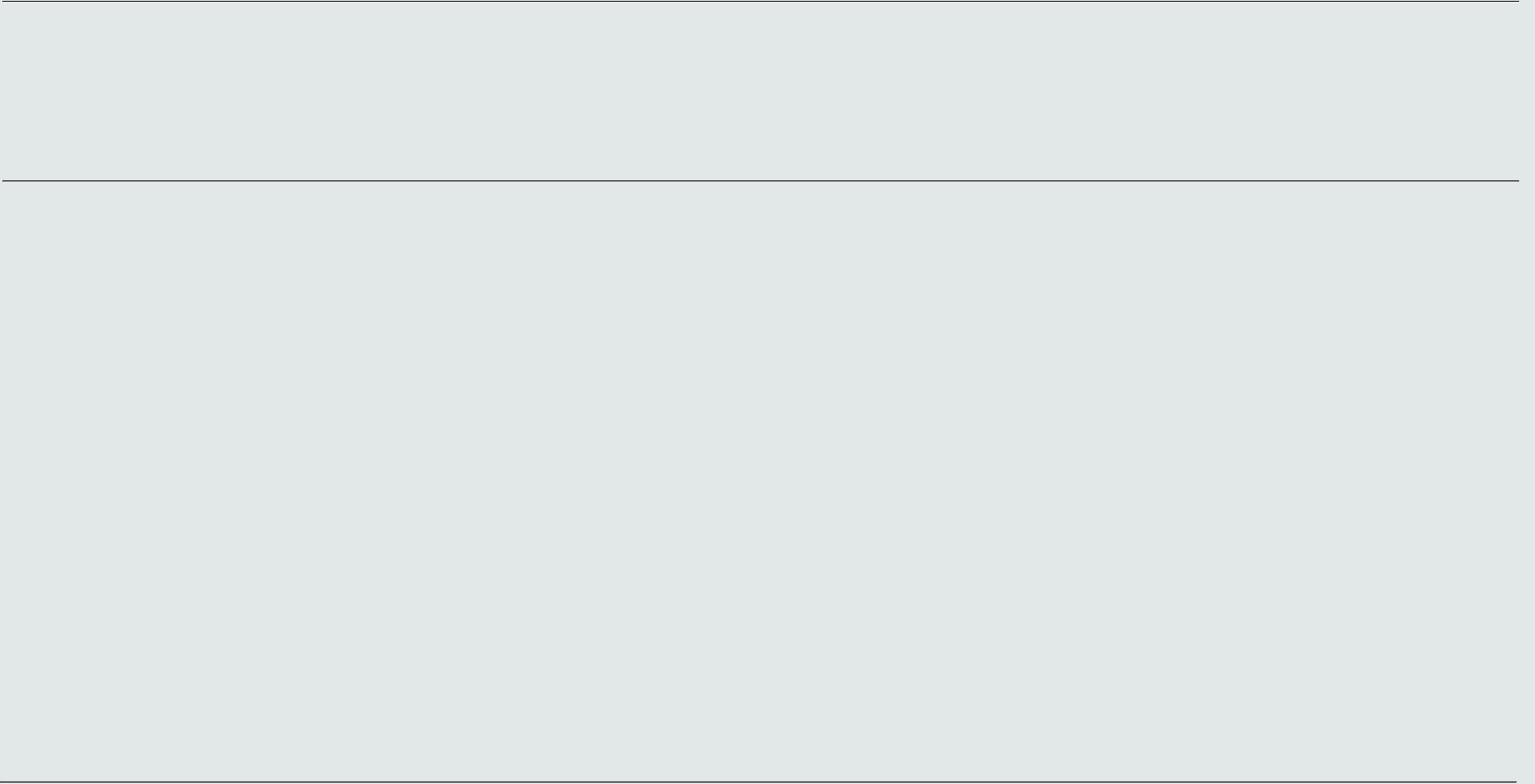
November 14, 2024	November 21, 2024
Group 02	Group 01
Group 04	Group 03
Group 06	Group 05
Group 08	Group 07
Group 09	











---

# Group Research Assignment & Presentation: Phase 3

---

- The project groups will conduct guided research under the supervision of the instructor. If you have any questions or confusion, please reach out to the instructor.
  - Assignment 3 should be submitted by April 12, 2024 (Friday) 11 PM ET.
  - Each student is required to submit the Group Assignment to facilitate grading purposes (The report will be the same for group members).
  - Presentation 3 will involve a 7-minute Group presentation (~8 slides).
  - Both students from each group will present. Each student is required to submit the Presentation to facilitate grading purposes (Slides will be the same for group members).
  - Presentation 3 Slide should be submitted by April 12, 2024 (Friday) 11 PM ET.
  - For Hybrid Groups, presentations will be in the class on April 04 and April 11, 2024 (in-person).
-

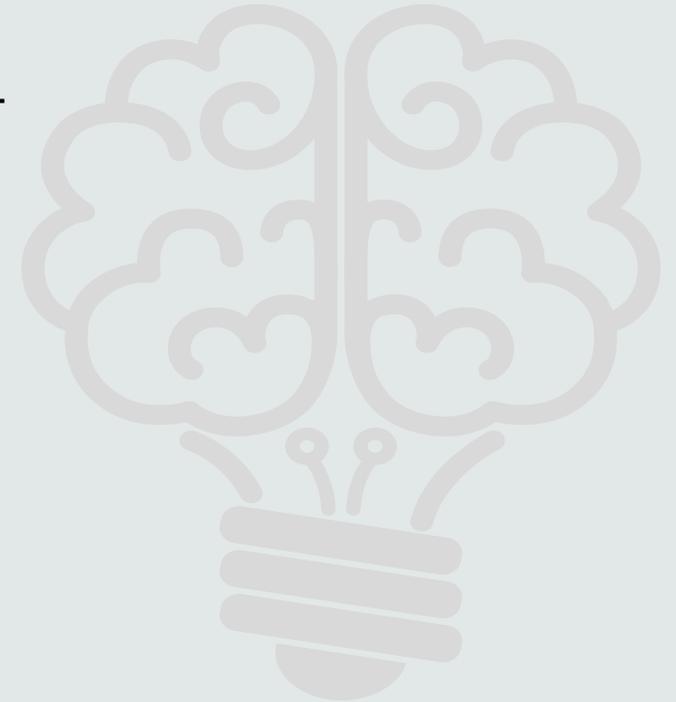
---

# Phase 3 Questions

---

## 1. Briefing slides and materials

- A. What are the specific problems you are solving through this proposed IT system? Be as specific as possible. [EWC: ~300 words]
- B. Name your IT System and rationalize the naming. [EWC: ~100 words]
- C. What are the features and sub-features you are offering in this IT system (application)? Explain their functionalities. [EWC: ~600 words]
- D. Discuss the impact of this proposed IT system towards addressing the problems you discussed earlier. Explain how the IT system's functionalities are interconnected to address the problem you specified. [EWC: ~300 words]



---

# Phase 3 Questions

---

## 2. Discuss the Financial and ROI analysis for your proposed IT system.

[EWC: ~250 words]

- **Identifying costs**
  - ✓ Initial Investments
  - ✓ Ongoing Costs (Maintenance, Operational, and Staffing)
- **Estimating Benefits**
  - ✓ Tangible Benefits
  - ✓ Intangible Benefits
- **ROI Calculation (Timeframe: 5 years)**
- **Risk Assessment**



---

# Phase 3 Presentation Schedule

---

April 04, 2024	April 11, 2024
Group 01	Group 08
Group 02	Group 09
Group 03	Group 10
Group 04	Group 11
Group 05	Group 12
Group 06	Group 13
Group 07	Group 14
	Group 15

---

---

# Group Research Assignment & Presentation: Phase 4

---

- The project groups will conduct guided research under the supervision of the instructor. If you have any questions or confusion, please reach out to the instructor.
  - Assignment 4 should be submitted by April 26, 2024 (Friday) 11 PM ET.
  - Each student is required to submit the Group Assignment to facilitate grading purposes (The report will be the same for group members).
  - Presentation 4 will involve a ~10-12-minute Group presentation (~7-8 slides).
  - Both students from each group will present. Each student is required to submit the Presentation to facilitate grading purposes (Slides will be the same for group members).
  - Presentation 4 Slides and Recorded Presentation Video should be submitted by April 26, 2024 (Friday) 11 PM ET. There will be NO in-person presentation in Phase 4.
-

---

# Group Research Assignment & Presentation: Phase 4 & 5 Combo

---

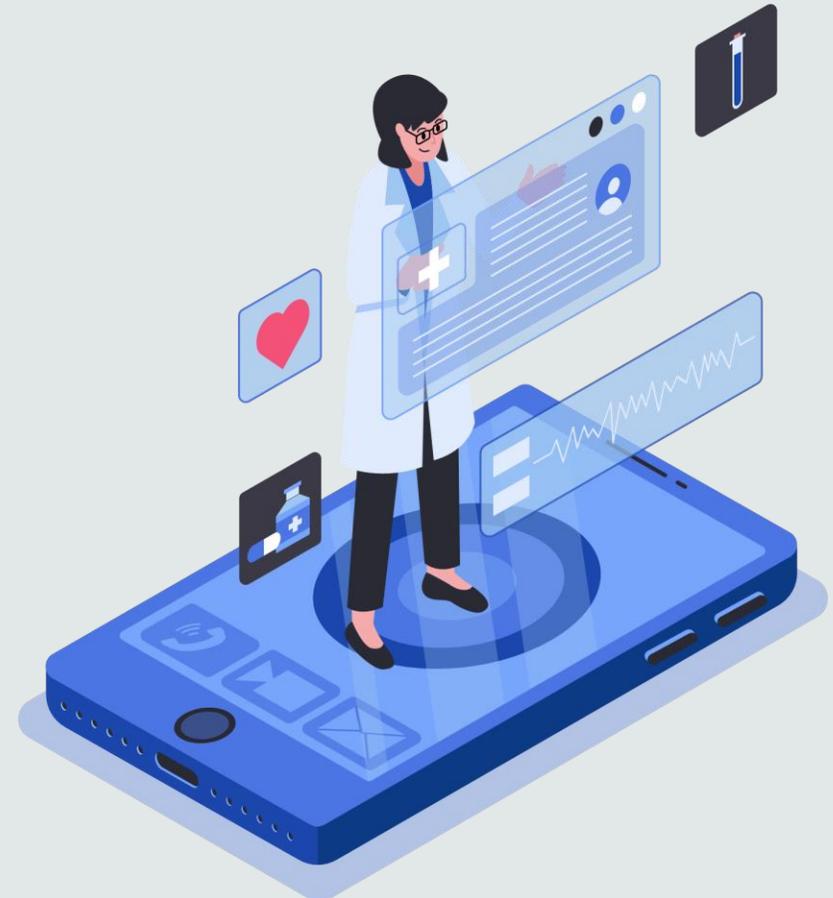
- The project groups will conduct guided research under the supervision of the instructor. If you have any questions or confusion, please reach out to the instructor.
  - Assignment should be submitted by July 15, 2024 (Monday) 11 PM ET. Each student is required to submit the Group Assignment to facilitate grading purposes (The report will be the **same** for group members). The assignment will require a detailed write-up of the Phase 3 questions, which we will later use to develop the RFP.
  - Presentation will involve a 15-minute Group presentation (~12 slides). Presentation Slide should be submitted by July 15, 2024 (Monday) 11 PM ET. All students from each group will present. Each student is required to submit the Presentation to facilitate grading purposes (Slides will be the **same** for group members).
  - For **Online** Groups, Presentation window will require both (1) presentation slides and (2) video recording of the presentation to submit. Both students must be visible presenting in the recording.
  - For **Hybrid** Groups, Presentation window will require the presentation slides only. Oral presentations will be in the class on July 16, 2024 (in-person).
-

---

# Phase 3 Questions

---

1. Based on your answer to Phase 3's 1 (c) and (d), design the schematic framework/System Architecture for your proposed IT system. Briefly discuss the schematic framework. **[EWC: ~300 words]**



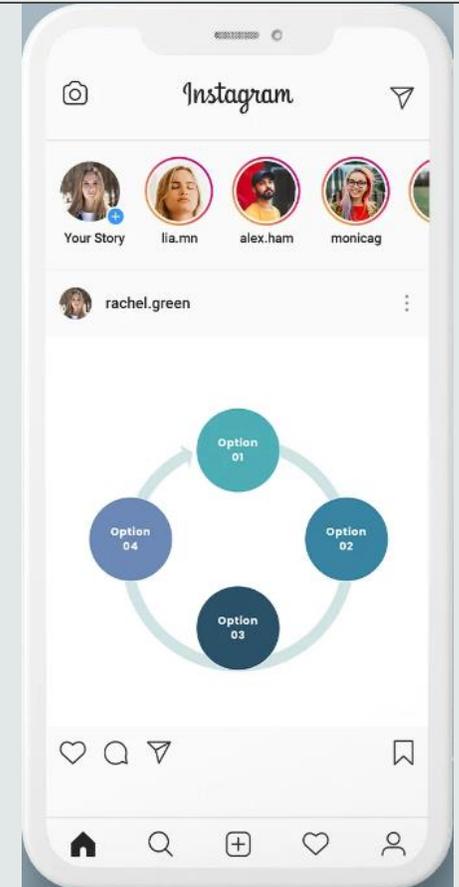
---

# Phase 3 Questions

---

2. Design the UI(s) of **any one particular feature** and **its associated sub-features** for your proposed system using Figma or any other professional UI design tool. Discuss the user interaction with the interface. **[EWC: ~300 words]**

**NB:** You do NOT need to design UIs for all features and sub-features. you need to design for one feature and its associated sub-features. Discussing this with steps will really be great and required for full points.



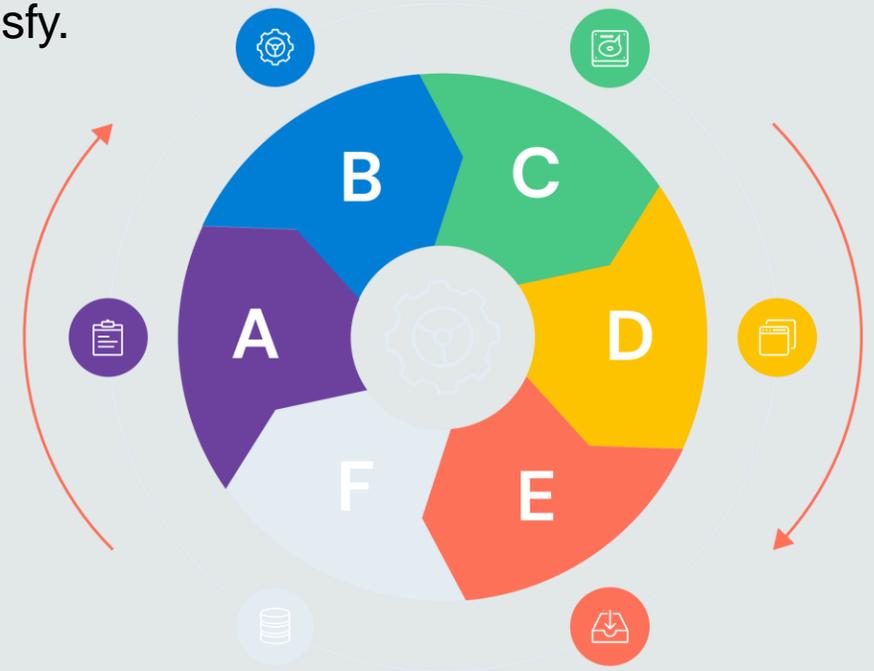
---

# Phase 5 Questions

---

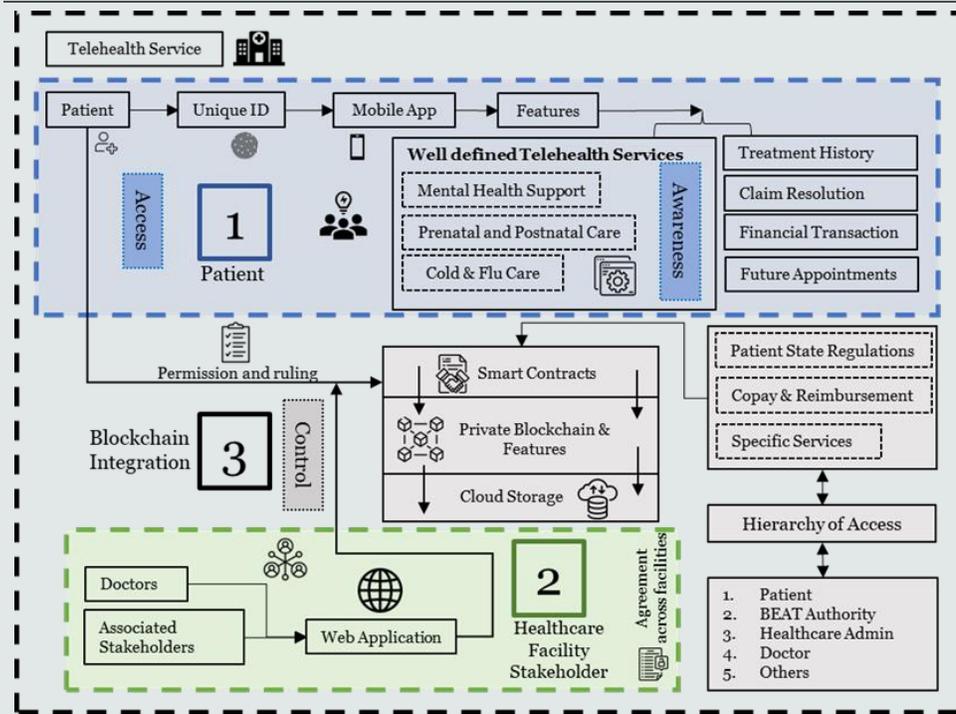
3. Discuss the Usability and Efficacy Assessment Plan of your proposed IT system. **[EWC: ~500 words]**

- Usability Assessment Plan must include a formal method.
- Efficacy Assessment Plan must include 3 Milestones to satisfy.



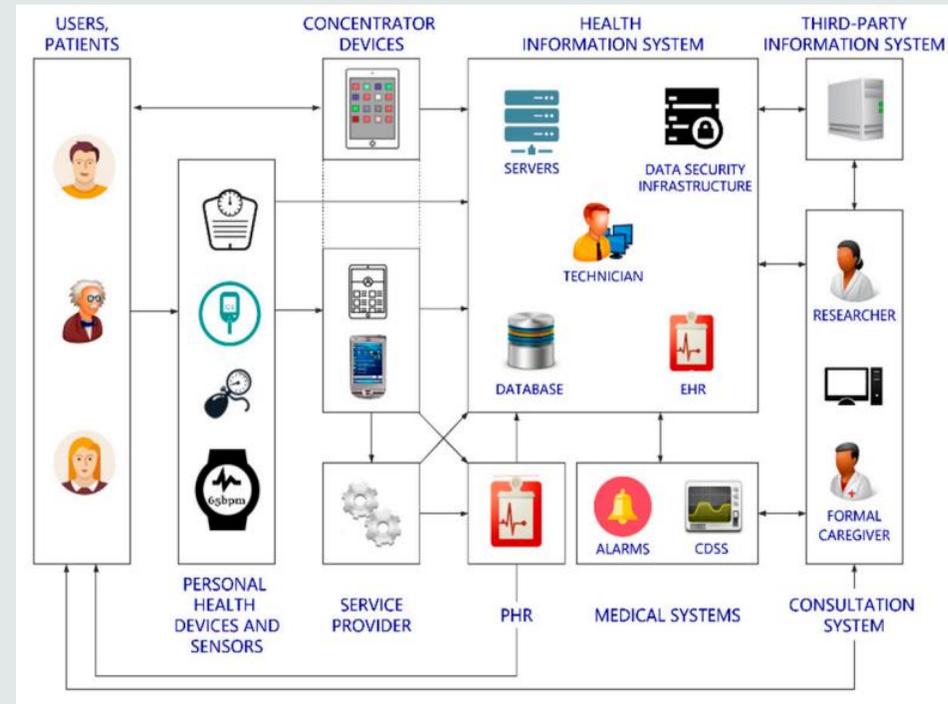
# Phase 4 & 5 Combo Samples/Guideline

Based on your answer to Phase 3's 1 (c) and (d), design the schematic framework for your proposed IT system. Briefly discuss the schematic framework. [EWC: ~250 words]



Sample 1

Source: Anik, F. I., Sakib, N., Shahriar, H., Xie, Y., Nahiyani, H. A., & Ahamed, S. I. (2023). Unraveling a blockchain-based framework towards patient empowerment: A scoping review envisioning future smart health technologies. *Smart Health*, 29, 100401.



Sample 2

Source: Trigo, J. D., Rubio, Ó. J., Martínez-Espronedada, M., Alesanco, Á., García, J., & Serrano-Arriezu, L. (2020). Building standardized and secure mobile health services based on social media. *Electronics*, 9(12), 2208.

---

# Phase 4 & 5 Combo Samples/Guideline

Design the UI(s) of any one particular feature and its associated sub-features for your proposed system using Figma or any other professional UI design tool. Discuss the user interaction with the interface.

---

Resources:

[5 Key UI Design Principles– And How To Use Them | Figma](#)

[The 6 Key Principles of UI Design | Maze](#)

[Figma: The Collaborative Interface Design Tool](#)

[12 Best Features of Figma for UI UX Designers - GUVI Blogs](#)

---

---

# Phase 4 & 5 Combo Samples/Guideline

Design the UI(s) of any one particular feature and its associated sub-features for your proposed system using Figma or any other professional UI design tool. Discuss the user interaction with the interface.

---

Resources:

[Learn UI Design in Figma | Figma](#)

[How to Create Your First UI Design App - Figma Tutorial | Cprime Blogs](#)

[world's shortest Figma course \(youtube.com\)](#)

[Figma UI Design Tutorial: Get Started in Just 24 Minutes! \(youtube.com\)](#)

---

---

# Phase 4 & 5 Combo Samples/Guideline

---

3. Discuss the Usability and Efficacy Assessment Plan of your proposed IT system.
  - Usability Assessment Plan must include a formal method.

For example:

- System Usability Scale (SUS)
  - Multi-blind Delphi Method
-

---

# Phase 4 & 5 Combo Samples/Guideline

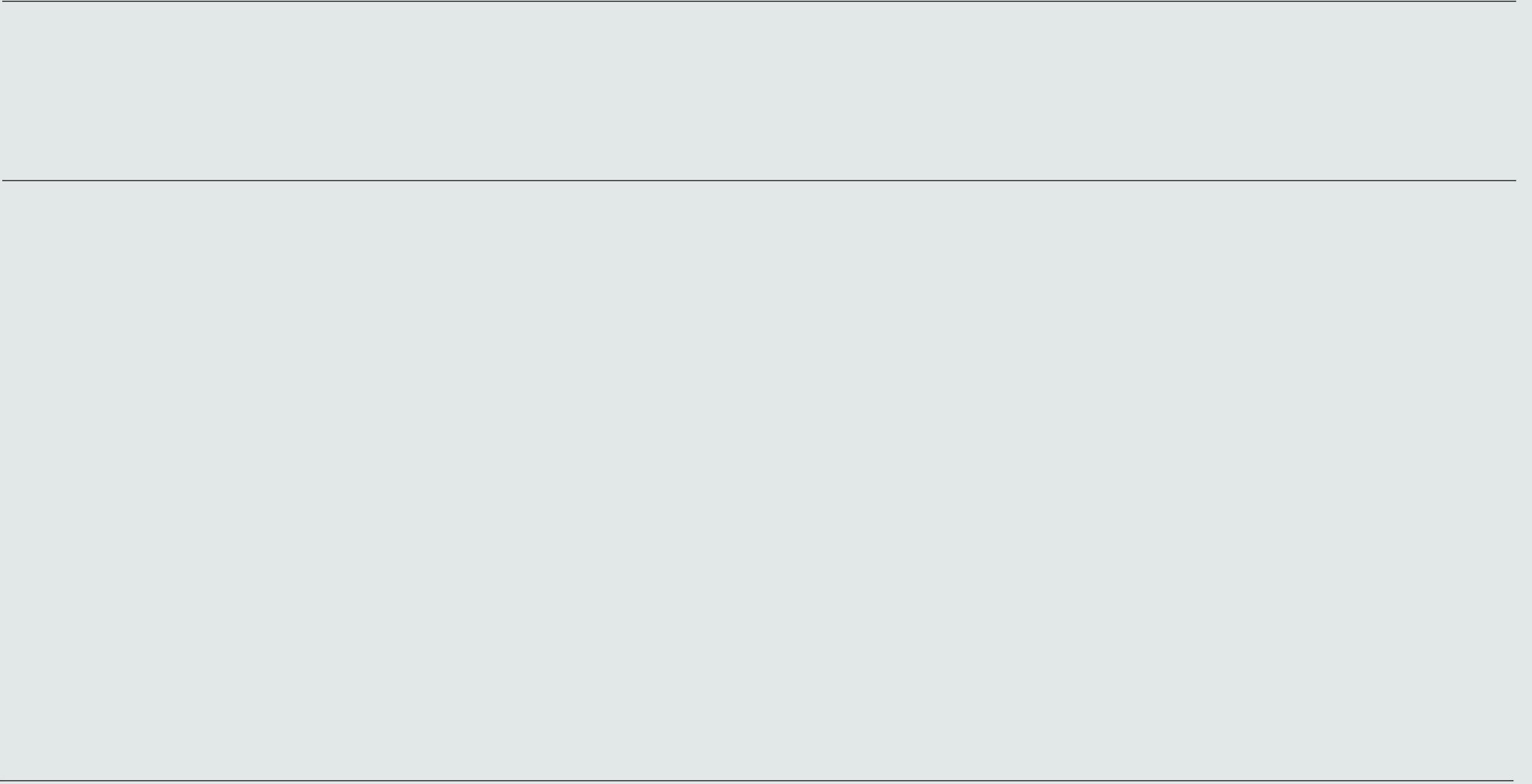
---

3. Discuss the Usability and Efficacy Assessment Plan of your proposed IT system.

- Efficacy Assessment Plan must include 3 Milestones to satisfy.

For example (What perspective you can cover for this part of the question):

- How efficiently users can complete a well-defined task within this system
  - If it is a ML classification problem, what are the accuracy, specificity, sensitivity milestones you need to achieve (or, you require developers to meet)
  - Scalability: Assess the system's performance under different load condition
  - Compliance with HIPAA or GDPR
  - Comparative Evaluation/Benchmarking
-



# Before we start!

Since it is our last class this semester, the pizzas are a small treat from me!

Grab your slice of pizza, find a seat, and shh!!!!!!!!!!!!!!  
We still need to discuss Phase 5 expectations!!!

Sorry to the online students.



\*AI-generated

---

# What's Next?

---

- To be honest, if you complete Assignments 1-4, you did all the hard work required for the RFP for your proposed project.
  - At this point, the required task is super simple-- (i) Answer a few non-technical questions (regarding your *imaginary* start-up/company/client organization on behalf of whom you are preparing this RFP) and (ii) Reorganize/Reuse the Assignment works (1-4) based on the RFP guideline.
  - And there is NO presentation required for the last phase— the only required item is a professionally formatted RFP based on your proposed Project in a one single PDF.
-

---

# Group Research Assignment: Phase 5 (FINAL)

---

- The project groups will conduct guided research under the supervision of the instructor. If you have any questions or confusion, please reach out to the instructor.
  - Assignment 5 should be submitted by December 06, 2024 (Friday) 11 PM ET.
  - Each student is required to submit the Group Assignment to facilitate grading purposes (The report will be the same for group members).
  - No presentation is required for Phase 6. Students need to submit a **complete RFP package** as an Assignment report. All should be in a single PDF file, including briefing slides (using any merge pdf tool).
  - Students will prepare an RFP package combining (reusing) their works from **Assignments 1-4**. The RFP package requirement has been provided. For group assignment 5, students particularly need to work on the red-colored texts/requirements/questions in the RFP package requirement document.
-

---

# Group Research Assignment: Phase 5 (FINAL)

---

- For your convenience, the **unique** phase 5 expectations are given in the next slide.
  - These are all non-technical requirements/items. They are identified in **red colored** text in the RFP checklist.
  - The RFP checklist will also guide you on which part of the task you tackled in each assignment phase.
-

---

# Phase 5 Unique Expectations (Non-technical Items)

---

1. What qualifications and bonding information are necessary to obtain from the vendor?
  2. Applicable Standards and Regulations
  3. Schedules (Provide a one-year schedule to specify deliverables)
  4. Response Procedure
  5. Contact Information
  6. Project plans in brief, e.g.,
    - Implementation plan
    - Integration plan
    - Rollout plan
    - Support and Training plan
  7. Vendor qualifications and past performance
  8. FAQs (Include 7-8 FAQs related to the proposed IT System from your client organization)
  9. References and Acknowledgements
-

---

# Improvement is a Continuous Process!

---

If there is something you particularly enjoy about this class and my way of teaching and you would like me to continue in the upcoming semesters, please share your thoughts. Your feedback will enhance the learning experience for future students.

Also, If you find this class, my teaching style, or my words encouraging for your studies and career, feel free to share your thoughts using this link: [Thank-A-Teacher](#). It would be really inspiring for me!

**LINK:** [Thank-A-Teacher - Center for Excellence in Teaching and Learning \(kennesaw.edu\)](#)

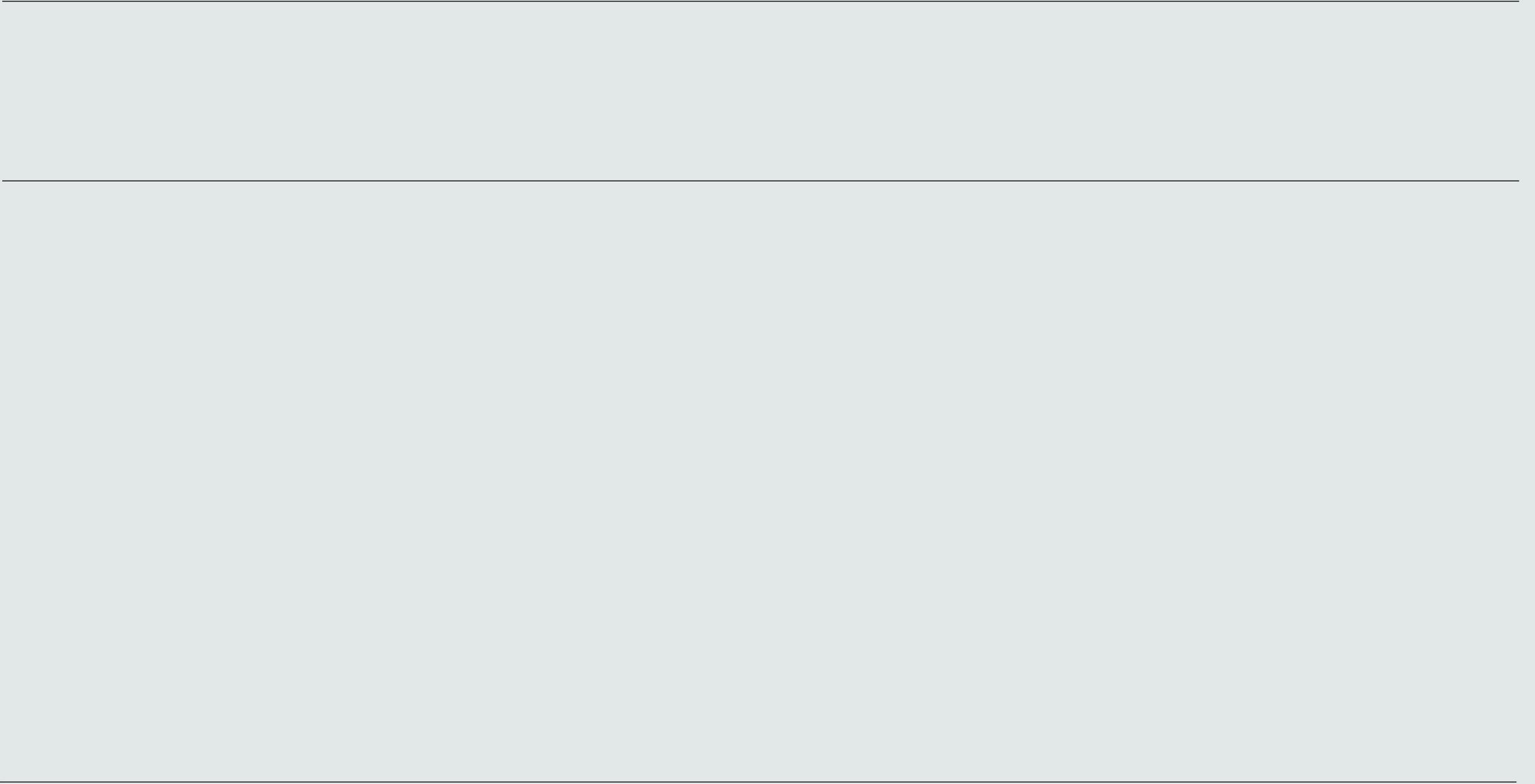
---

---

---

**Best Wishes!!!**

---



# Last Class

My voice is broken due to a severe cold and fever. I cannot speak properly! Sorry for that!!!

But I really wanted NOT to miss/cancel the last class.

Let's do the first silent instructor's class in your lifetime



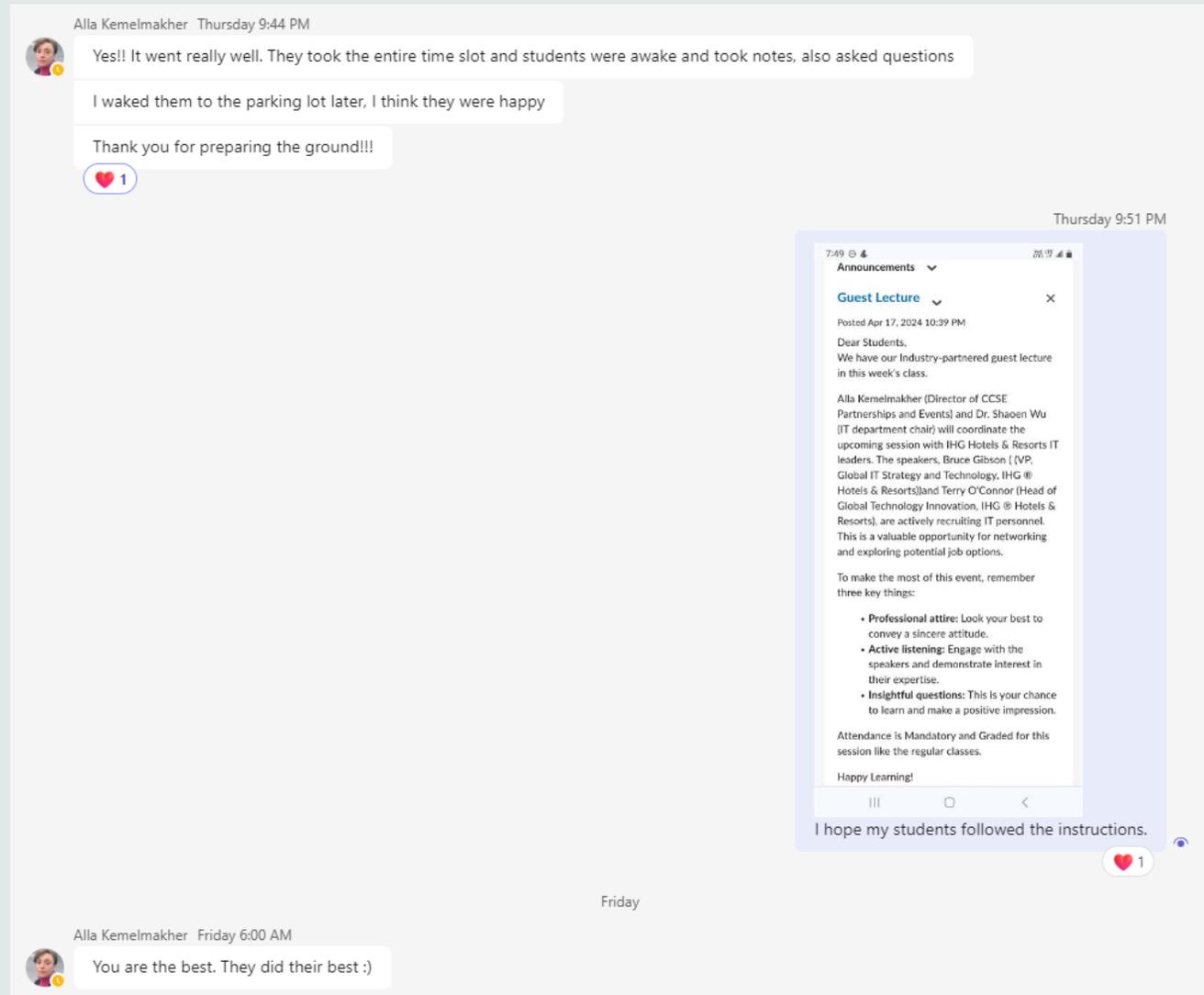
\*AI-generated

# Last Week's Event

I had to take urgent leave and travel to Bangladesh for four days last week to attend to a family medical emergency, so I couldn't make it to the event in the previous class.

However, Alla, Director of CCSE Partnerships and Events, speaks very highly about how you all interact with the industry partner.

They are all very impressed.  
Thank you all; you did a fantastic job!



---

# Improvement is a Continuous Process!

---

I got a small amount of funding to work on this class this summer and improve the class structure, organization, teaching material, and learning outcomes.

Please share your actionable suggestions with me to improve the class. Let's keep the suggestion anonymous!

- *Example: Instructor's opinion– “ Reducing the time to contextualize to start working on RFP may be helpful so that students can get more time to work on the RFP (which is the key learning outcome of the class). SDLC concepts may be discussed in other classes (IT service delivery), and we can remove them from the IT 6423 syllabus. In that place, we can add another phase in group research, where students will design UI for their product's features and subfeatures using UI design tools (like Figma). This is a necessary skill as well as it will give them more clarity on their proposed IT system.”*
-