

SE 4485: Software Engineering Project

Spring 2024

Project Management Plan

Group Number	3
Project Title	Storybook POC Continuation with Chromatic and Storybook GPT
Sponsoring Company	ARGO
Sponsor(s)	Ponchai Reainthong, Kevin Roa, Raisa Gonzalez, Mark Bentson
Group Members	<ol style="list-style-type: none">1. Lillie McMaster2. Lauren Nguyenphu3. Alina Khan4. Hamdiya Abdulhafiz5. Iman Sheriff6. Timothy Naumov

ABSTRACT

This document contains a brief summary of Group 3's plan to work with ARGO on their Storybook POC Continuation with Chromatic and Storybook GPT. This project management plan outlines the collaboration between Group 3, a team of six Software Engineering Seniors at the University of Texas at Dallas, and ARGO for the Spring 2024 semester. The objective is to extend a GPT Component library for Storybook and Figma components. The project spans from January 26th to the final presentations on May 6th, culminating in a Proof of Concept for Storybook GPT for ARGO.

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Introduction

In this document, we will outline the project management plan between group 3 and ARGO for the University of Texas at Dallas's Software Engineering Project Class. The document's purpose is to outline organization, life cycles, schedules, and activities of the project assigned. This document serves as an introduction to the semester-long project.

The project will take place in the Spring 2024 semester. Therefore, the scope of the project is to be from January 26th through the final presentations on May 6th.

The product is a continuation of creating a GPT Component library for Storybook and Figma components. The project scope ends with a library of stories, created with GPT and with the company issues in mind, as a Proof of Concept for the use of Storybook GPT in ARGO. Scenario for using the product may look like: a user uses the created GPT to create Storybook Stories/Components, which are components of the Storybook application.

The structure of the document is as follows: Project organization, Lifecycle model used, Risk analysis, Software and hardware resource requirements, Deliverables and schedules, Monitoring, reporting, and controlling mechanisms, Professional standards, Evidence the document has been placed under configuration management, Engineering standards and multiple constraints, and Additional references.

Project Organization

The project team is composed of 6 Software Engineering Seniors attending the University of Texas at Dallas. The group leader is Lillie McMaster, determined by luck. The other five teammates are Alina Khan, Lauren Nguyenphu, Iman Sheriff, Hamdiya Abdulhafiz, and Timothy Naumov.

We have several ARGO team members on our side during this project. Ponchai Reainthong will be the leader we report to most often. We will also be teamed with Raisa Gonzalez, and Kevin Roa. Also, we are given the contacts of Mark Bentsen and Micheal Hube to email with any additional questions as they are raised. The positions and contact information of each member is listed below. For questions and communications, Ponchai asked us to email him, Kevin, and Raisa all attached in the email.

Name	Position	Email	Phone #
Ponchai Reainthong	UX Director	ponchai.reainthon@argodata.com	972-866-3568
Kevin Roa	UX Engineer I	kevin.Roa@argodata.com	972-866-3470
Raisa Gonzalez	UX Program manager	Raisa.Gonzalez@argodata.com	--
Mark Bentsen	QA Manager	mark.bentsen@argodata.com	972-275-7240
Micheal Hube	UX Designer	michaelhub@argodata.com	--
Lillie McMaster	Group 3 Lead	lnm190001@utdallas.edu	682-213-0134
Lauren Nguyenphu	Group 3 Member	Lan190005@utdallas.edu	469-408-9620
Alina Khan	Group 3 Member	Alina.Khan@UTDallas.edu	310-863-0411

Hamdiya Abdulhafiz	Group 3 Member	hxa180025@utdallas.edu	469-422-9863
Iman Sheriff	Group 3 Member	ims190002@utdallas.edu	206-376-1311
Timothy Naumov	Group 3 Member	timothy.naumov@utdallas.edu	469-605-6677

Table 1. Group Members and Sponsors

Life Cycle Model Used

Agile (Scrum)

- We will focus on developing the project in manageable increments. Each increment will aim to deliver a component or functionality of the project.
- Each sprint will have a 1-2 week timeframe and will include a set of deliverables. These will be planned out during our weekly meetings to effectively break down our milestones.
 - Sprint Planning: At the start of each sprint, we will review the project backlog and select tasks for the current sprint. We will then allocate these tasks to each team member.
 - Sprint Execution: During the sprint, each member will work on their allocated tasks. Progress will be updated during team meetings.
 - Sprint Review and Feedback: At the end of each sprint, we will conduct sprint reviews. This will involve presenting deliverables and progress, collecting and discussing feedback from ARGO, and adjusting the plan for the next sprint based on this feedback.
- 2-3 weekly meetings:
 - Tuesday/Thursday: Group meeting via Discord/On Campus
 - Discuss current sprint progress and individual updates
 - Friday: Meeting with ARGO via MS Teams/ARGO Conference Room
 - Conduct sprint reviews, share progress, and collect feedback
- We will collect feedback and integrate it into the subsequent sprints to continuously improve our processes and outputs.

Rationale: We chose an agile approach due to its adaptability and responsiveness to changing requirements. An iterative development will allow for regular feedback incorporation to ensure that we consistently align our work with expectations and project goals. As our project facilitates creativity among our team, this approach will allow us to innovate while maintaining a structured framework to meet our goals.

Risk Analysis

Risk	Severity	Likelihood	Reduction Strategy
Team member illness	Medium	High - cold, flu, and covid are prevalent in the late winter and early spring.	Communicate with the team and adjust the schedule if needed. Maintain and document all code in case any work needs to be handed off.
Team member academic commitments	Medium	Medium - team members may have other projects, conferences, interviews, etc.	Communicate with the team and adjust the schedule if needed. Maintain and document all code in case any work needs to be handed off.
Team dynamics	High	Low - with the reduction strategy in place, our team is set up to work well together.	Meetings are held twice a week to ensure the team is working well and towards the established goal. Work will be delegated by the team lead. Will reach out to the TAs if needed.
Dependency on shared and paid resources	High	Low - permissions and accesses granted to a shared email for entire team.	Will contact team at ARGO if any issues arise.
Errors with infrastructure technology	Medium	Low - technologies being used have redundancy and backup systems in place to mitigate any unforeseen errors	Keep up with documentation and requirements regarding technologies used.
Merge conflicts	Medium	Medium	Utilize branches to separate workload, regularly pull changes from the main branch to ensure code is up to date. Decompose coding objectives into small and focused tasks, leading to more frequent commits with fewer changes in each.

Table 2. Risk Analysis

Software and Hardware Resource Requirements

The Software Requirements include:

- React
- TypeScript
- HTML
- CSS
- React MUI
- Node JS
- NPM
- Git (GitHub)
- Chromatic
- ChatGPT

- API

The Hardware Requirements include:

- Computer

The rationale behind the software and hardware requirements is that these are the requirements that were discussed with ARGO during our first kick-off meeting.

Deliverables and Schedules

The primary activities of this project will involve contributing to the existing component library order to improve various aspects of the development process as well as keeping up with course assignments to facilitate the development of the project. Outside of the development of new components and improving the package deployment process, our team will explore how we could create a custom GPT to document components in Storybook. Below is a list of possible deliverables for this project:

- Automate new version numbers with automatic release process using semantic-release
<https://github.com/semantic-release/semantic-release>
- Use TS props-parsing to automatically show components customization in Storybook.
- Explore the use of chromatic for component testing and review processes.
- Create custom GPT for storybook story generation.
- Develop new components from MUI:
<https://mui.com/material-ui/all-components/>

Deliverable	Dependencies	Estimated Time	Allocation of people	Rationale
Project Management Plan	Project overview from Argo kickoff	1 week	6	We clarified expectations and went over the project overview at the Argo kickoff.
Requirements Documentation	Project Management Plan	5 business days	6	After finalizing the project management plan, we need to define what we will accomplish this semester.
Architecture Documentation	Requirements Documentation	5 business days	6	We need to make some important decisions regarding the architecture of the component library
Detailed Design Document	Architecture Documentation	7 business days	6	A detailed design document would require us to evaluate our requirements closely and determine the

				appropriate design.
Test Plan	Detailed Design Document	5 business days	6	As we get closer to the final presentations, we need a collection of tests to demonstrate our work.
Final Project Demonstration	Test Plan	7 business days	6	After completing all deliverables and course assignments, we create a live demonstration of our features and improvements.
Final Project Report	Test Plan	7 business days	6	Along with the final project demonstration, we will create a report to document the completed project.

Table 3. Deliverables Schedule

Monitoring, Reporting, and Controlling Mechanisms

Our team decided to use Notion to document tasks and generate reports for progress tracking. Through Notion projects, we can manage tasks and monitor our progress with a roadmap. Throughout the semester, the roadmap will progress as we contribute new features to the repository. Additionally, we will create burndown charts which will be used to track our progress over time. This will indicate how much work has been done and how much is left to do.

Professional Standards

Scholastic Dishonesty:

Team members are expected to uphold academic integrity by avoiding any form of scholastic dishonesty such as plagiarism, cheating, or copying others' work. However, if a team is to leverage outside resources or utilize any tools to help them complete their work they should ensure that they credit/cite the work appropriately. Refer to Appendix A for more details.

Rationale: Scholastic dishonesty undermines the team's credibility, and these were the terms discussed with ARGO's sponsors regarding the companies on scholastic dishonesty and plagiarism.

Meeting Schedule:

Team members should actively participate in scheduled meetings and be punctual at all meetings. They should also come prepared with necessary materials, questions, updates or completed sections. If a team member has an extenuating circumstance that prevents them from being present at any meeting, they should inform the group and project sponsors as soon as possible (preferably 24 hours in advance). The

team member should also ensure that they take the necessary actions so that they are able to catch up with their work. Refer to Appendix A for more details.

The schedule is as follows:

Tuesdays	10:00 AM - 12:00 PM	Informal Team Standup
Thursdays	11:00 AM - 12:00 PM	Required Team Standup
Fridays	1:00 PM - 2:00 PM	Required Sponsor Meeting

Rationale: Meetings are set in advance and are crucial for the team to collaborate, communicate, and make important decisions. Therefore, all team members should attend to make sure everyone is on the same page regarding important topics.

Quality Expectations for Tasks and Deliverables:

Team members are required to produce high-quality work that meets the specified criteria and expectations. Refer to Appendix A for more details.

Rationale: Producing quality work is important in order to achieve the team's objectives and maintaining a positive reputation with our sponsors. High-quality deliverables reflect professionalism, competence, and dedication to the project.

Evidence the Document Has Been Placed Under Configuration Management

The configuration management tool will be Notion. Each project document given by UTD Professors and TA's as well as components and deliverables to ARGO will be delivered through this platform. Meeting notes and attendances will be taken here as well.

UTD Group 3 x Storyb... / ☒ Tasks Edited 6m ago U T

Tasks

By project Board All tasks + Filter Sort ⚡ 🔍 ...

Status ▾ Assignee ▾ Due ▾ Project ▾ + Add filter

▼ PMP 5

Aa Tasks	Status	Assignee	Due	Priority	Summary AI
Review with Team	Not started	Lillie McMaster	February 1, 2024		
Diya finish Sections	In progress	H hamdiya.abdulha	January 31, 2024	High	
Fix Risk Analysis Section	In progress	A Alina Khan	February 1, 2024 11	High	In the risk analysis s
Fix Schedule Section	Not started	T Tim			
TURN IN	In progress	Lillie McMaster	February 2, 2024	High	

+ New

COMPLETE 0/5

▼ Deliverable Component #1 2

Aa Tasks	Status	Assignee	Due	Priority	Summary AI
Requirements Elicitation	Not started	U UTD Group 3	February 2, 2024	Medium	
Initial Team Meeting	Not started	Lillie McMaster	February 1, 2024		

+ New

COMPLETE 0/2

▼ Requirements Documentation 2

Aa Tasks	Status	Assignee	Due	Priority	Summary AI
Plan and Assign Tasks	Not started	Lillie McMaster	February 5, 2024	Medium	This document outl
TURN IN	Not started	Lillie McMaster	February 23, 2024		

+ New

COMPLETE 0/2

Figure 1. UTD Group 3 x Storybook POC Notion Screen shot #1

UTD Group 3 x Storyb... / ☐ Docs Edited 2h ago Share ⌚

Docs

Recently edited Table by category All Mine + Filter Sort ⚡ 🔍 ... New ▾

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Project Management Plan	January 31, 2024 10:03 AM U
GitHub(s)	January 31, 2024 10:02 AM U
Drive	January 31, 2024 10:01 AM U

+ New

Figure 2. UTD Group 3 x Storybook POC Notion Screen shot #2

Version In	Version Out	Changes	Reviewed By	Notion Task Numbers
n/a	0.0	Document Creation based on Template	Lillie McMaster and Alina Khan	UG3-1
0.0	1.0	Initial Completion Of headers	All Group Members	
1.0	2.0	Feedback Provided by ARGO Team	All Group Members	
2.0	3.0	Configuration MGT and Engineering Standards Updates	Lillie McMaster and Iman Sheriff	
3.0	4.0	Changes based on ABET Accreditation Feedback	All Group members	UG3-80

Table 4. Configuration Management

Engineering Standards and Multiple Constraints

- IEEE Std 1058-1998: Software Project Management Plans [[pdf](#)]
- PMBOK® Guide: Project Management Body of Knowledge [[pdf](#)]
- IEEE Std 12207: Software Life Cycle Processes [[pdf](#)]
- IEEE Std 15939: Measurement Process [[pdf](#)]
- ISO/IEC/IEEE Std 29148-2018: Systems and Software Engineering
 - Life Cycle Processes
 - Requirements Engineering [[pdf](#)]

Additional References

- Larson, E. and Gray, C., 2014. *Project Management: The Managerial Process*. McGraw Hill
- Humphrey, W.S. and Thomas, W.R., 2010. *Reflections on Management: How to Manage Your Software Projects, Your Teams, Your Boss, and Yourself*. Pearson Education
- Northeastern University: 12 Steps to Develop a Project Management Plan by Shayna Joubert
<https://graduate.northeastern.edu/resources/developing-project-management-plan/>

Appendix A.

The following provides a professional standards guideline for the teams. This guideline may be tailored. **The professional standards must be agreed upon by each member in the team.**

Guideline:

On the first occurrence of unacceptable behavior, determine the circumstances involved, resolve the problem, and document the event in the meeting minutes.

On a second occurrence, notify the instructor of the problem. A meeting will be set up to evaluate the situation and resolve the problem.

On a third occurrence, again notify the instructor of the problem. A meeting will be set up to evaluate the situation and resolve the problem. At this point, the team will have the *option* of removing the team member. If removed, then the team member receives a prorated grade based on the number of weeks they have participated in the group.

Examples of unacceptable behavior may include not delivering on time, delivering poor quality work, missing team meetings, being unprepared for team meetings, disrespectful or rude behavior, etc. Reasons such as “too busy” or “I forgot”, or “my dog ate my design model” are unacceptable.

Valid reasons that must be considered include those listed for obtaining an incomplete standing in a course (illness, death in the family, travel for business or academic reasons, etc.)

Appendix B.

Session notes and Discussion Q/A During the 1/26 Sponsorship Meeting

Can you provide a brief overview of the product? (including purpose, capabilities, scenarios for using the product, etc.)

- Scenario for using the product: User uses the created GPT to create Storybook Stories/Components. Stories are components of the storybook. (Accordion.stories a specific use case for the stories)

Configuration Management question: What configuration management tool will be utilized for this project, and could you provide details on any procedures, systems, or tools put in place to manage and control document configuration?

- Mark mentioned Microsoft projects. We just need a backlog tool, and Kevin mentioned Notion. Free Azure devops. I think we should use Azure.

Professional Standards questions: Would you mind explaining what ARGO's stance is on scholastic dishonesty, and could you please provide a description of the expected behavior in this regard? It would be helpful for us to understand the guidelines and ethical principles that team members are expected to adhere to.

- Mark sent further information on ARGO's standard on AI. See email from 1/26.

Could you please describe the level of quality that is considered acceptable? Are there any specific criteria or benchmarks that team members should meet when completing their assignments? Could you please outline the expected behavior related to attending meetings/punctuality, being prepared, and actively contributing to discussions?

- Quality to be defined by students.

Introductions

Raisia: UX Program manager.

Ponchai: UX Director. Two years in April.

Kevin: Hired 7-8 months ago, hitting one year in May. Was a senior in SE last spring 2023.

Mark: head of QA.

Daniel: Taking pictures. Head of Video.

Glen: owner on Marks team.

Mike / Micheal: UX designer. Works closely with Kevin.

Project Scope: Venn diagram, code x design x documentations. Middle: design system. Between design and code are components.

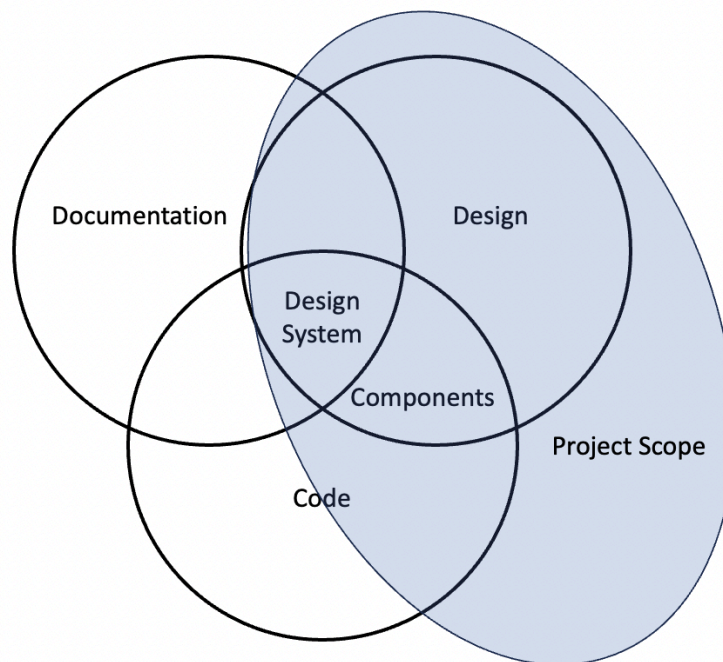


Figure 3. Venn Diagram

Tech stack: React, Typescript, HTML/ CSS. React MUI, NodeJS, NPM, Git, GitHub, Chromatic (Design and Development) . ChatGPT and APIs.

Development :

- component library (pattern asset library)
- Publishing

- Storybook

Phase I: Github.com/UTD-ARGO

- Check the read me on storybook repo.
- Overview: Stocks site. All using the same component library. Once you have the centralized component, you can deploy it simpler.
- Storybook GPT x Components created by team members. Go in and start creating storybook stories with generative parameters.
- Experiment with the GPT to see what we can do. There is a Github library where someone started with it
- Use Storybook GPT To create controls for a Chromatic website.
- In order to deploy automatically, create a release. Change the version in package.json everytime.

Would there be an expectation of assignments, or is it open ended?

- Answer: no boundaries. Ponchai wants us to be creative. Choose what components, at least 3 components extended. When it comes to presentations, show the GPT generation. Show how we created it, what's created, and the 3 UIs. Quick videos.
- End of the project looks like: The team lives demos to show the work.
- Endgoal: similar to polaris.shopify.com /// designsystem.argodata.com

Storybook GPT: Is this something we have access to?

Appendix C.

Social Contract of Responsibility

In this project, group members will agree to communicate above else. As projects are delegated by the group leader, I promise to communicate my understanding or misunderstanding of the assignments. I promise to communicate my availability, as soon as it is presented to pose a problem. I also promise to respect others for communicating their availability, misunderstandings, and qualms. I promise to help my team members when I can.