

Human Resources Event Calendar - Project Plan

SWE 6623 - Group 6

Date: 09/10/2024

Elliott Wideman: Did his share; Communicated and agreed on team roles, and objectives

Jordan Toney: Did her share; Communicated and agreed on the initial project plan.

Ugochuckwu Unigwe: Did his share; Communicated and agreed on objectives and structure.

Steve Seukap: Did his share; Communicated and agreed on project scope and viewpoints.

Noria Soumbou: Dis her share; Communicated and agreed on objectives and processes.

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1. Introduction

1.1 Overview:

Group6 project group is one of the six project groups of the “SWE 6623 Software Engineering” course for Fall 2024, consisting of six students from Kennesaw State University.

The project aims to develop an intranet-based event calendar application that allows its personnel to view and manage events for each month. The application will provide users the ability to add and edit employee events including employee birthdays, anniversaries, vacations and sick leaves.

The development will follow a sequential approach, starting with gathering system requirements, followed by design, development, testing, and final deployment. A prototype will be built during the **development phase** to gather early feedback and refine the final system. This ensures that the end product meets HR personnel's needs for managing employee events efficiently.

The project deadline is December 1st, 2024. There are several intermediate documents which will be created, and which are described in the deliverables section.

2. Roles and Responsibilities

2.1 Team Members (Group 6):

Project Manager: Elliott Wideman

Development Lead: Jordan Toney

UI/UX Designer: Noria Soumbou

Front-End Developer: Prather Mason

Tester: Unigwe Ugochukwu

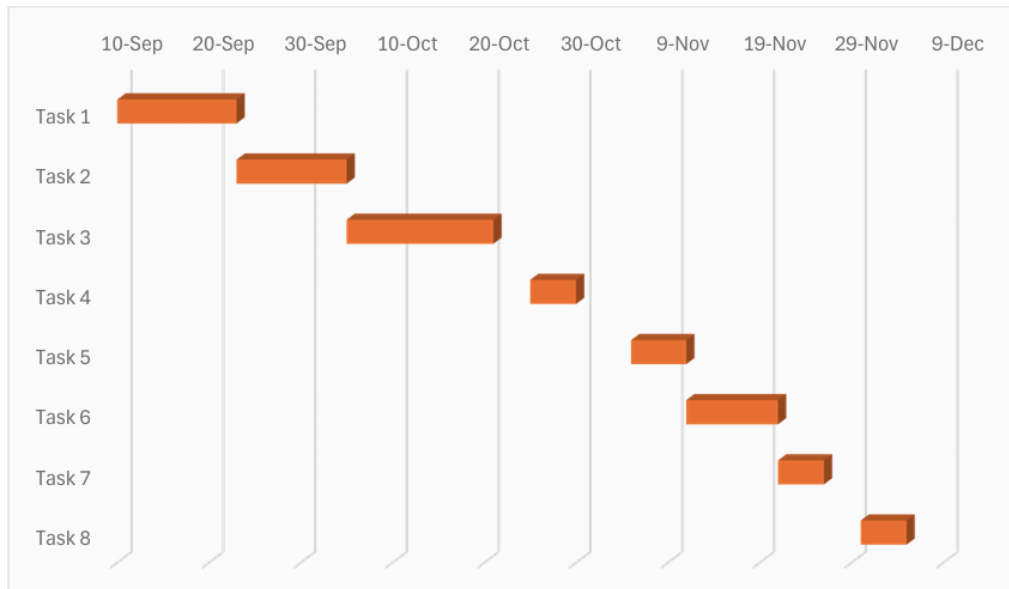
Documentation Specialist: Seukap Dieuyou Steve

2.2 Task Assignments:

- ***Elliott Wideman (Project Manager):***
Coordinate team meetings, manage deliverables, and ensure equal contribution from all members.
- ***Jordan Toney (Development Lead):***
Set up Firebase/Airtable database and API integration using JavaScript, oversee database integration with front-end.
- ***Noria Soumbou (UI/UX Designer):***
Design UI layouts, create wireframes for the calendar and forms, and ensure usability and intuitive design.
- ***Prather Mason (Front-End Developer):***
Implement front-end using HTML, CSS, and JavaScript. Integrate with Firebase/Airtable for data storage and event management.
- ***Unigwe Ugochukwu (Tester):***
Develop test plans, conduct unit and user testing, and track bugs.
- ***Seukap Dieuyou Steve (Documentation Specialist):***
Prepare project documentation, ensure deliverables are completed on time, and assist in creating user guides.

2.3 PERT Chart/Gnatt chart

Task Name	Start Date	End Date	Duration (Days)	Start (ES)	Finish (EF)	Start (LS)	Finish (LF)	Slack
Project Plan Completion	09/10/24	09/21/24	13	0	13	0	13	0
System Requirements Gathering	09/23/24	10/04/24	12	13	25	13	25	0
System Design Completion	10/05/24	10/20/24	16	25	41	25	41	0
Initial Prototype Development	10/25/24	10/29/24	5	41	46	41	46	0
Prototype Testing & Feedback	11/05/24	11/10/24	6	46	52	46	52	0
Final System Development	11/11/24	11/20/24	10	52	62	52	62	0
Final Testing & Bug Fixes	11/21/24	11/25/24	5	62	67	62	67	0
Project Wrap-up & Documentation	11/26/24	11/30/24	5	67	72	67	72	0



Gantt chart

3. Project Timeline

3.1 Key Deliverables and Due Dates:

- Project Plan: Due 09/22/2024
- Requirements Document: Due 10/13/2024
- Design Document: Due 11/03/2024
- Test Document and Code: Due 12/01/2024

3.2 Milestones:

- System Requirements Gathering: 09/23/2024 - 10/4/24
- System Design Completion: 10/05/2024 - 10/20/24
- Initial Prototype Development: 10/25/2024 - 10/29/24
- Prototype Testing and Feedback: 11/05/2024 -11/10/2024
- Final System Development: 11/11/2024 - 11/20/2024
- Final Testing and Bug Fixes: 11/21/2024 - 11/25/24
- Project Wrap-up and Documentation Finalization: 11/30/2024

3.3 Software Process

3.3.1 *WaterFall Model with Prototype:*

- **Phase 1: Requirements:** After the project plan is completed, the team will focus on gathering detailed requirements from stakeholders, ensuring all needs are captured before moving to the design phase.
- **Phase 2: Design;** The system design will be completed based on the requirements gathered. This phase includes architecture, database design, and UI/UX wireframes.
- **Phase 3: Development and Prototyping;** A prototype will be built during development to gather early feedback, allowing the team to validate assumptions and adjust the system as needed.
- **Phase 4: Testing;** Testing will be conducted to ensure the system meets the requirements and is free from defects. Prototype testing will focus on usability and functionality before moving to final development.
- **Phase 5: Final System Development;** The system will be finalized, incorporating feedback from the prototype phase.
- **Phase 6: Wrap-up and Documentation:** The project will be wrapped up with complete documentation for the system and handoff to stakeholders.

4. Project Scope

4.1 Functional Requirements:

User Authentication:

- Firebase Authentication will manage user roles. HR users can add/edit events, while non-HR users have view-only access.

Event Management (HR Users):

- Create, edit, and delete events using Firebase Firestore or Airtable as the database.
- Input event details: description, employee selection, event dates, category, and detailed description.
- Generate reports on employee vacation and sick days using JavaScript verify the data.

Event Viewing (Non-HR Users):

- View events on the calendar with read-only access.
- Filter events by category or date using JavaScript and Firebase/Airtable queries.

Calendar Navigation:

- Users can navigate between months, and the current day is highlighted.

Event Categories:

- Employee Anniversary, Birthday, Company Events, Holidays, Out of Office, Personal Time (Vacation), Training, Visitor, Sick Day.

4.2 Non-Functional Requirements:

Performance:

- The system must handle basic performance needs for 100 concurrent users via Firebase/Airtable with minimal response delays.

Security:

- Firebase Authentication will secure user credentials and ensure role-based access control.

Usability:

- The interface must be intuitive, with a simple design for all employees.

Scalability:

- The system should easily accommodate additional users and events by leveraging Firebase's scalable cloud infrastructure.

Reliability:

- Ensure an uptime of 99% using Firebase Hosting or Netlify.

5. Risk Management

5.1 Risk Identification:

- Delays in Task Completion: Team members may need help with unforeseen issues.
- Scope Creep: Changes or additions may delay the project.
- Technical Challenges: Learning Firebase or Airtable may be a hurdle.

5.2 Mitigation Strategies:

- Regular Check-ins: Weekly team meetings to monitor progress.
- Clear Requirements: Ensure the scope is well-defined and agreed upon.
- Task Dependencies: Identify dependencies to avoid bottlenecks.
- Training Sessions: Organize short sessions for Firebase/Airtable learning.

6. Tools and Technologies

6.1 Technology Stack:

- Front-End:
 - Languages: HTML5, CSS3, JavaScript
 - Libraries: Bootstrap for responsive design
- Back-End (Serverless):
 - Database: Firebase Firestore or Airtable
 - Authentication: Firebase Authentication
- Version Control and Collaboration:
 - Platform: GitHub
- Development Tools:
 - Code Editor: Visual Studio Code, eclipse, command line
 - Project Management: Asana for task management

6.2 Software/Hardware Resources:

- Development Environments:
 - Access to computers with internet for Firebase/Airtable integration.
- Testing Devices:
 - A variety of browsers and devices (mobile, desktop) to test the calendar's responsiveness.
- Cloud Hosting:
 - Firebase Hosting the application, ensuring reliable uptime and fast loading times.
- Collaboration Tools:
 - Slack or Microsoft Teams for team communication and updates.
- Version Control:
 - Github for version control and collaboration, ensuring a centralized code repository.
- Prototyping Tools:
 - Figma for UI/UX design and creating prototypes for early feedback.
- Code Debugging Tools:
 - Chrome Developer Tools and Postman for API testing and debugging.

These additional resources will help our team effectively manage the development, testing, and deployment of the project.

Conclusion

This project plan integrates the Waterfall methodology with a prototyping phase to ensure a structured and efficient development process. The inclusion of a prototype will allow for early feedback, reducing the risk of errors or omission on the final system.

References

1. Firebase API Documentation:

[1] Firebase, "Firebase API Reference," Google, Accessed on: Sep. 19, 2024. [Online]. Available: <https://firebase.google.com/docs/reference/>

2. Airtable API Documentation:

[2] Airtable, "Airtable API Documentation," Accessed on: Sep. 19, 2024. [Online]. Available: <https://airtable.com/developers/web/api/introduction>

3. Bootstrap Documentation:

[3] Bootstrap, "Bootstrap Documentation: Getting Started," Accessed on: Sep. 19, 2024. [Online]. Available: <https://getbootstrap.com/docs/4.1/getting-started/introduction>

4. GitHub Guide Documentation:

[4] GitHub, "GitHub Getting Started Guide," Accessed on: Sep. 19, 2024. [Online]. Available: <https://docs.github.com/en/get-started>

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