Tamanna Gaur

Chinmay Deore

Aniruddah Paul

Nayem Khan

Group 2 Documentation

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Introduction

The Gift Finder website project is a collaborative effort from our team, focusing on creating a personalized and user-friendly platform that helps individuals find the perfect gift. With roles divided among documentation, front-end development, back-end development, and research, each team member contributed their expertise to ensure the project's success. The front-end features a dynamic and responsive design, incorporating CSS animations for a festive theme, and JavaScript for interactive elements like sharing quiz results. Meanwhile, the back-end is built using Django, ensuring secure user authentication and the sending of welcome emails. Together, the front-end and back-end work seamlessly to offer users a smooth experience across multiple devices.

The core feature of the Gift Finder website is its dynamic quiz system, which generates personalized gift recommendations based on user inputs. By answering a series of questions, users receive tailored suggestions from stores like Amazon, Walmart, and Target. The website also includes search filters, email notifications, and a secure login system to enhance user experience. Although we initially planned to integrate APIs for real-time product recommendations, feedback led us to adapt the project by developing a search filter solution. The website's scalability, hosted on Circumeo, ensures that it remains reliable and flexible for future enhancements.

Team Roles and Responsibilities

- Tamanna Gaur: Documentation
- Aniruddah Paul: Front end Development

- Chinmay Deore: Back end development, Circumeo setup
- Nayem Khan: Research, Front end development

Application

Front End

The front end of our Gift Finder website is designed with simplicity and responsiveness in mind to ensure seamless user interaction. Built using HTML, CSS, and JavaScript, the interface provides a visually engaging experience. We used CSS animations to create a dynamic and festive theme, including floating gift boxes and twinkling sparkles to capture attention and enhance usability.

We utilized JavaScript for key interactive features, allowing users to share quiz results via social apps, email, or messages. JavaScript also handles button interactions and dynamic updates, ensuring smooth transitions between quiz sections and result displays. The CSS framework ensures responsiveness, making the website accessible across multiple devices and screen sizes.

Navigation is intuitive, with a consistent layout across pages like Home, About Us, Login, Sign-Up, and Quiz Results. Dropdown menus and buttons improve usability, and feedback from peer reviews prompted refinements in navigation flow and design. The website is hosted on Circumeo deployment, offering scalability and reliability for real-world use.

Backend

The backend of the Gift Finder website is built using Django, a robust Python framework known for its scalability and security. Django's built-in modules, including django.contrib.auth, are used to manage user authentication and secure registration, ensuring password hashing and validation.

Django’s django.core.mail module sends welcome emails upon user registration, enhancing user engagement. The backend also uses django.contrib.messages to deliver real-time feedback for user actions, such as successful logins or registration errors.

Features of the Website

1. **Dynamic Quiz System**
    - Users complete a quiz to generate personalized gift recommendations.
    - Then the code processes text inputs and matches responses to products based on relevance.
2. **Interactive Animations and Design**
    - CSS animations for floating gift boxes and sparkles create a festive look.
    - Responsive design adapts seamlessly to different screen sizes.
    - Offers fallback options for unsupported browsers.
3. **Email Notifications**
    - Welcome emails sent upon registration enhance user engagement.
4. **User Authentication**
    - Secure login and registration using Django’s built-in forms.
    - Custom forms for improved flexibility.
5. **Search Filter Implementation**
    - Search tabs dynamically filter results from Fake Store API based on quiz answers.

6. **Hosting and Scalability**
    - Deployment through Circumeo
    - Ensures scalability and reliable performance.

Peer Review Feedback

Our peer reviewer suggested a few changes such as:

1) Expand quiz options to cover more people and activities.
2) Implement API integration for better functionality.
3) Limit the number of filters and consider removing the relationship filter.
4) Add a question to the quiz based on people's personalities.
5) Ensure the navigation bar is consistent across all pages.
6) Remove the username from appearing between the home page and the rest of the navigation bar titles.
7) Add Single-Factor Authentication (SFA) or Two-Factor Authentication (2FA) for security

“The website idea was wonderful but the quiz options were limited to very few people and activities, since API's weren't used the implementation of using the search bar was great but not all filters should be added as some of the filters such as the relationship one gives typical gifts based on title instead of giving gifts ideas based on hobbies. Another question could be added based on people's personality which would create a better filter than relationship to person. The navigation bar doesn't seem to stay the same when on different pages such as when the review page is not accessible and vice versa. The username also shows up between the home page in the navigation bar and the rest of the page titles. In terms of security a SFA or 2FAshould be added.

The look of the website is great, the little animation is really cute. The review us page and about us page also look great.”

Quality Policy

Our quality policy emphasizes functionality, usability, and security. Password hashing, secure email communication, and Django’s authentication modules ensure data protection. Scalability was prioritized through modular coding, allowing future enhancements without major structural changes.

We adhered to software development principles, incorporating feedback to refine the user experience continuously. Our hosting platform Circumeo ensures reliability and flexibility, meeting modern deployment standards.

- **Customization Index**: The Customization Index is embedded into the project by focusing on the level of personalization offered to users, especially in the quiz and gift recommendation system. The more user input affects the gift suggestions, the more personalized the experience. By gathering diverse and specific user responses, the system tailors recommendations based on individual preferences, increasing the level of customization.
- **Structural Complexity**: The website's architecture and interaction between components contribute to its structural complexity. This is reflected in how different modules such as the quiz system, search filters, and gift recommendations work together. A more complex design involves numerous interconnected elements, ensuring the website's scalability while maintaining a manageable structure.

- **System Complexity**: The logic and operations behind the website define its system complexity. This includes backend processes and decision-making elements, such as the handling of conditional branches and reliance on external APIs. The more dynamic and conditional the actions based on user input, the more complex the system becomes, adding depth to its functionality.
- **Morphology Metrics**: These metrics are included by examining the flexibility and variety of responses that the system can handle, particularly in how the quiz adapts to user inputs. Based on user responses, the system generates numerous potential outcomes, offering a wide array of gift recommendations. This flexibility ensures the system accommodates a diverse range of user interactions.
- **Interface Metrics**: The design of the website directly influences its usability, focusing on intuitive navigation, clear instructions, and an aesthetically pleasing layout. A well-designed interface makes it easy for users to interact with dynamic elements, such as the quiz or filtering options, and encourages engagement through positive feedback and user testing.
- **Graphic Design (Aesthetic Metrics)**: Graphic design is integral to the project, enhancing the visual appeal of the website. By incorporating colors, images, and animations, the website creates a visually engaging experience. This aesthetic design supports usability by ensuring that key features are easy to access and interact with, contributing to a more enjoyable user journey.
- **Content Metrics**: Content is crucial in guiding users through the website, especially in providing quiz questions and product descriptions that are relevant and clear. By focusing on content quality and clarity, the website helps users make informed decisions.

Well-crafted content aligns with the website's objectives and ensures users receive valuable information as they move through the gift selection process.

- **Source Code Metrics (Halstead)**: The project's codebase is assessed for its complexity using Halstead's metrics, which measure the operations and operands involved. This evaluation ensures the code is efficient, maintainable, and scalable. A simpler codebase is more manageable for future updates and easier to debug, ensuring the website's long-term stability.
- **Goal-Driven Metrics**: The project's success is measured by how well it meets its goals, such as delivering relevant gift suggestions and providing a smooth user experience. These metrics evaluate the effectiveness of website features in supporting the objectives and how engaged users are with the platform. By balancing functionality with user engagement, the website ensures a seamless delivery of personalized results, achieving its intended outcomes.

Conclusion

The Gift Finder website successfully combines interactive design, and robust backend functionality to deliver a seamless and engaging experience. With a focus on personalization through quizzes and product matching, the project demonstrates scalability and adaptability for future enhancements. Continuous feedback and updates have shaped the website into a reliable, user-friendly platform ready for real-world use.

SPRINT MEETING RECORDS

Sprint 1 - 12/07/24

ForestView Rep: Jason Myers (Instructor)

Scrum Master: Tamanna Gaur

Date: 12-07-24

Time: 12:00 PM EST

Attendees: Chinmay Deore, Tamanna Gaur, Aniruddah Paul, Nayem Khan

Achievements:

- Initiated the idea of the gift finder website.
- Defined the concept: A quiz that customizes gift suggestions, displaying 20-50 items.

Product Backlog:

- Develop a gift finder website with a quiz to recommend gifts.

Sprint Goals:

- Outline the project idea.
- Create an activity diagram and start requirements and control plan based on that.

Team Availability:

- Tamanna Gaur: Documentation
- Chinmay Deore: Back-end development
- Nayem Khan: Front-end development
- Aniruddah Paul: Front-end development

Backlog Items:

- Initiate project idea

Retrospective:

- We've come up with the idea of a website that helps people find gifts especially during the holiday season when people aren't sure who to get what. This website will ask you a few basic questions about the person who they are to you, their age, your price range, one of their hobbies, the store you would prefer to shop at and give you a page of all the gifts you could get them.
- We are going to start working on creating the base setup for the project and doing some research on how to execute this idea. Nayem will be doing research into what we'll need to execute this project, creating a base plan, creating the control plan, and Tamanna will create a list of questions and answers for the quiz, and work on the activity diagram.

Sprint 2 - 12/11/24

ForestView Rep: Jason Myers (Instructor)

Scrum Master: Tamanna Gaur

Date: 12-11-24

Time: 7:00 PM EST

Attendees: Chinmay Deore, Tamanna Gaur, Aniruddah Paul, Nayem Khan

Achievements:

- Developed a plan of action for the website.
- Finishing creating the initial activity diagram
- Finished creating the initial control plan.

Product Backlog:

- Develop documentation for the project.

Sprint Goals:

- Complete stakeholders diagram, base set up((home page, about us page, login, and sign-up page), and requirements document.

Team Availability:

- Tamanna Gaur: Back-end development, documentation
- Chinmay Deore: Back-end development
- Nayem Khan: Front-end development
- Aniruddah Paul: Front-end development

Backlog Items:

- Documentation

Retrospective:

- We have finished part of the documentation activity plan, control plan, and are working to create the base setup for the website. Tamanna is working on the base setup for the website. Nayem will work to finish the requirements documents along with Aniruddah.

Sprint 3 - 12/13/24

ForestView Rep: Jason Myers (Instructor)

Scrum Master: Tamanna Gaur

Date: 12-13-24

Time: 8:00 PM EST

Attendees: Chinmay Deore, Tamanna Gaur, Aniruddah Paul, Nayem Khan

Achievements:

- base code for the website finished(home page, about us page, login, and sign-up page).
- Added a welcome email feature.

Product Backlog:

- Develop base code and implement a welcome email feature.

Sprint Goals:

- Research on implementation of Amazon, Walmart, and Target APIs.
- Implement a welcome email feature.

Team Availability:

- Tamanna Gaur: Back-end development, documentation
- Chinmay Deore: Back-end development
- Nayem Khan: Front-end development

- Aniruddah Paul: Front-end development

Backlog Items:

- Base code and welcome email feature (Completed).
- API integration (Pending).

Retrospective:

- Chinmay will be researching on how to implement the API for the online stores applying for permission for any stores that require it.

Sprint 4 - 12/19/24

ForestView Rep: Jason Myers (Instructor)

Scrum Master: Tamanna Gaur

Date: 12-19-24

Time: 5:00 PM EST

Attendees: Chinmay Deore, Tamanna Gaur, Aniruddah Paul, Nayem Khan

Achievements:

- Prepared the project presentation.

Product Backlog:

- Prepare and finalize the project presentation.

Sprint Goals:

- Create and finalize the presentation.
- Find out what we can do without api implementation.

Team Availability:

- Tamanna Gaur: Back-end development, documentation
- Chinmay Deore: Back-end development
- Nayem Khan: Front-end development
- Aniruddah Paul: Front-end development

Backlog Items:

- Presentation preparation completed.

Retrospective:

- As we were not able to figure out how to implement the API's and did not receive any response on the permissions from the companies on if we're allowed to use it we need to figure out a way to implement the project without the API's.

Sprint Meeting Minutes - 12/21/24

ForestView Rep: Jason Myers (Instructor)

Scrum Master: Tamanna Gaur

Date: 12-20-24

Time: 10:00 AM EST

Last Sprint: 12-19-24

Attendees: Chinmay Deore, Tamanna Gaur, Aniruddah Paul, Nayem Khan

Achievements:

- Presentation and backup code ready.

Product Backlog:

- Await API permissions and plan for development without APIs.

Sprint Goals:

- Figure out alternatives for API usage.
- Rehearse for presentation.

Team Availability:

- Tamanna Gaur: Back-end development, documentation
- Chinmay Deore: Back-end development
- Nayem Khan: Front-end development
- Aniruddah Paul: Front-end development

Backlog Items:

- API permissions (Pending).

Retrospective:

- Reviewed alternatives and plan what we can do for the presentation without API's.

Sprint Meeting Minutes - 12/22/24

ForestView Rep: Jason Myers (Instructor)

Scrum Master: Tamanna Gaur

Date: 12-22-24

Time: 8:30 PM EST

Last Sprint: 12-20-24

Attendees: Chinmay Deore, Tamanna Gaur, Aniruddah Paul, Nayem Khan

Achievements:

- Presented the project.
- Received feedback from ForestView Rep.

Product Backlog:

- Adjust projects based on feedback and plan without APIs.

Sprint Goals:

- Add more options in the interest question and who present is for the section.
- Implement the change of having the quiz submit button just open up to a website page with filters in the search bar.

Team Availability:

- Tamanna Gaur: Back-end development, documentation
- Chinmay Deore: Back-end development

- Nayem Khan: Front-end development
- Aniruddah Paul: Front-end development

Backlog Items:

- Feedback review and implementation (In progress).

Retrospective:

- Reviewed feedback and planned adjustments. Chinmay and Aniruddah will be working on implementing our new plan which includes having the results of the quiz essentially print out into the search bar of the store the user selects.

Sprint Meeting Minutes - 12/23/24

ForestView Rep: Jason Myers (Instructor)

Scrum Master: Tamanna Gaur

Date: 12-23-24

Time: 6:00 PM EST

Last Sprint: 12-22-24

Attendees: Chinmay Deore, Tamanna Gaur, Aniruddah Paul, Nayem Khan

Achievements:

- Began implementing project without APIs.
- Developed a solution using the search tab to filter results.

Product Backlog:

- Implement project without APIs.
- Develop search tab filter solution.

Sprint Goals:

- Present website to peer reviewer.

Team Availability:

- Tamanna Gaur: Back-end development, documentation
- Chinmay Deore: Back-end development
- Nayem Khan: Front-end development
- Aniruddah Paul: Front-end development

Backlog Items:

- Development without APIs (finished).
- Search tab filter solution (finished).

Retrospective:

- After reviewing the feedback, we've planned the necessary adjustments. Chinmay and Aniruddah finished implementation of our new strategy, which includes integrating the quiz results directly into the search bar of the chosen store. This improvement is designed to enhance user experience by streamlining the search process based on quiz outcomes. Tamanna will be presenting the project to the peer reviewer and taking notes on the feedback and updating the team on it.

Sprint Meeting Minutes - 12/28/24

ForestView Rep: Jason Myers (Instructor)

Scrum Master: Tamanna Gaur

Date: 12-28-24

Time: 11:00 AM EST

Last Sprint: 12-23-24

Attendees: Chinmay Deore, Tamanna Gaur, Aniruddah Paul, Nayem Khan

Achievements:

- Received feedback
- Updated the website according to peer feedback.
- Redid documentation (control plan, activity diagram, requirements document).

Product Backlog:

- Implement feedback and update documentation.

Sprint Goals:

- Update website as per feedback.
- Redo and organize documentation.

Team Availability:

- Tamanna Gaur: Back-end development, documentation
- Chinmay Deore: Back-end development
- Nayem Khan: Front-end development

- Aniruddah Paul: Front-end development

Backlog Items:

- Website updates (Completed).
- Documentation (Completed).

Retrospective:

- Tamanna, Chinmay and Aniruddah have discussed the changes that need to be made to the website and Aniruddhah will be implementing them to the website based on the peer reviewer's feedback.
- Tamanna will also be working on updating the documentation with help from Nayem.

Sprint Meeting Minutes - 12/29/24

ForestView Rep: Jason Myers (Instructor)

Scrum Master: Tamanna Gaur

Date: 12-29-24

Time: 10:00 AM EST

Last Sprint: 12-28-24

Attendees: Chinmay Deore, Tamanna Gaur, Aniruddah Paul, Nayem Khan

Achievements:

- Contacted ForestView Rep to set up new presentation time.

Product Backlog:

- Finalize the project and set up a new presentation.

Sprint Goals:

- Prepare for the next presentation.

Team Availability:

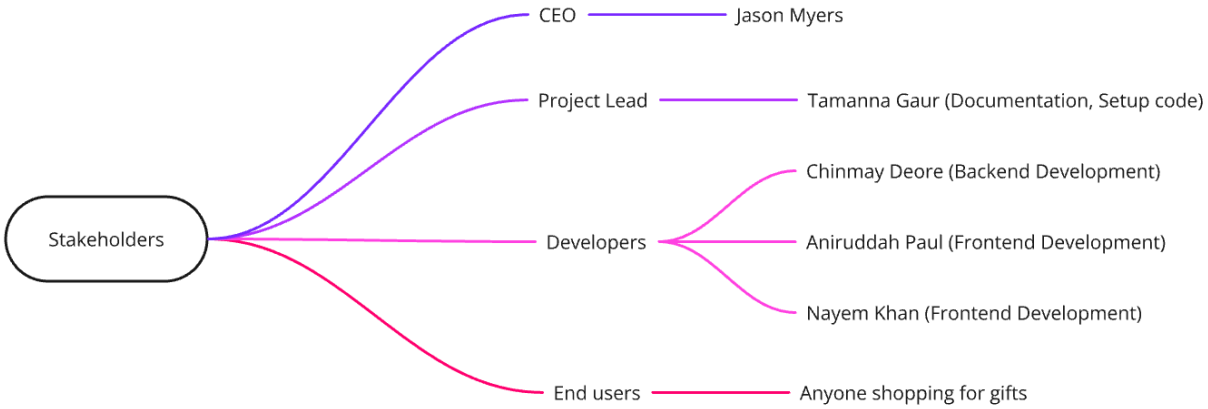
- Tamanna Gaur: Back-end development, documentation
- Chinmay Deore: Back-end development
- Nayem Khan: Front-end development
- Aniruddah Paul: Front-end development

Retrospective:

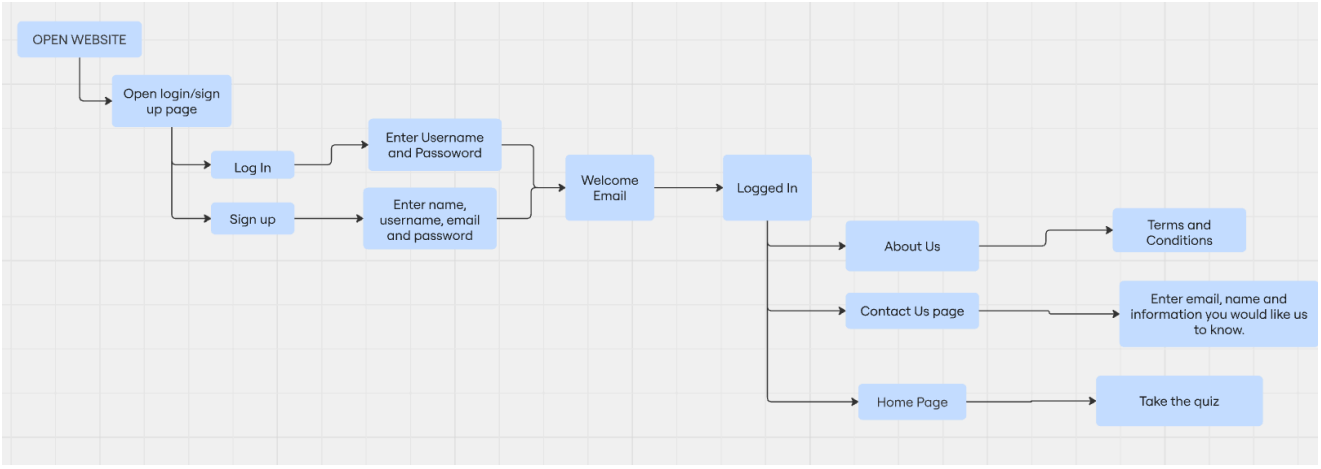
- Now that the code has been uploaded to Circuito and the website is running, we are going to be finalizing the group website, which has access to the jet hub links for the first second and third projects Tamanna will be handling that and we need to do a my presentation before we present in front of the professor.

STAKEHOLDERS

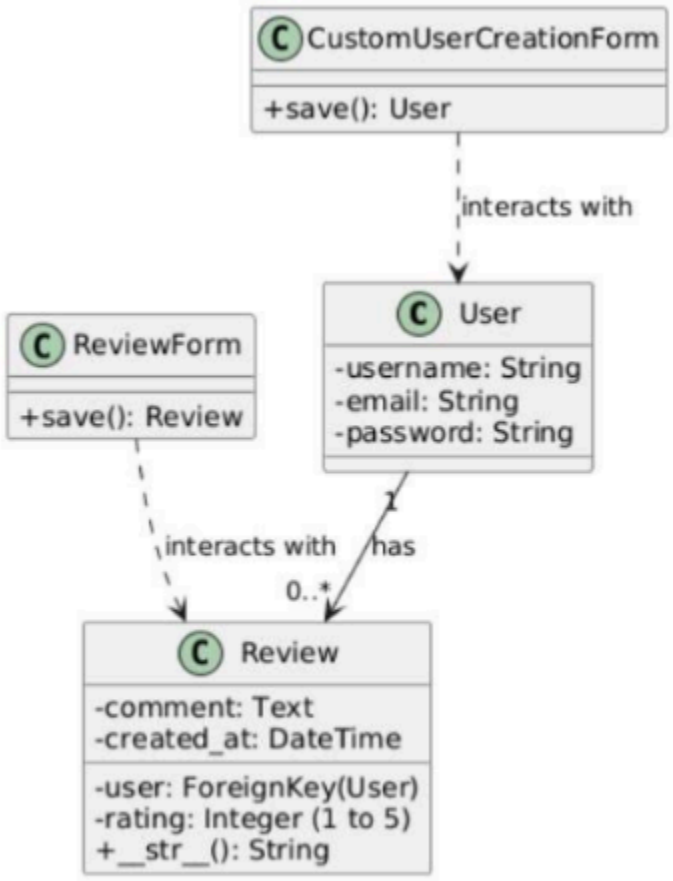
- CEO
- Project Lead
- Developers
- Site Designers
- End Users



ACTIVITY DIAGRAM



CLASS DIAGRAM



USE CASES/USER STORIES

1. **Finding a Gift:**
    - Create an account.
    - Answer the quiz questions.
    - Hit submit to receive gift suggestions.
    - Browse through the recommended gifts.
    - Pick and purchase desired items.

2. **Leaving Feedback:**
    - Go to the Reviews page.
    - Select a rating.
    - Add any additional comments.
    - Submit the feedback.

REQUIREMENTS

Logged using the requirementwizard Python script.

See “requirements_log.json” for full requirements list.

CONTROL PLAN

Link: control_Plan_Project3.xlsx