Group Project Proposal – Due 10/06/2024 @ 11:59 pm

Group Project Proposal – The Instructors Team must approve this!!

Each Member must upload a copy to the designated Dropbox in i-college

Group Members:

Caleb Thang

Ammar Abbkar

Abdinur Hussein

In this assignment, you will submit a proposal for your group project. This proposal must include:

- Proposed Group Members
- Project summary
- Proposed the wireframe - visual representation detailed outline of the user interface (UI) and layout of an app.
    - Layouts - Number and name of unique screens in Project
    - Functionality - Proposed Use case from transitioning from screen to screen.
    - User Experience - Proposed Use cases for each Screen
    - Iterative design – Test cases and approach to refine the improvements.
- Proposed APIs you will integrate into your app. (if applicable)

Project Summary:

The objective of this project is to create an immersive text-based adventure game set in a magical **fantasy forest**. Players will navigate through various scenarios, interact with mystical creatures, and make choices that affect the storyline. The game will be enhanced with CSS animations and transitions to create a captivating user experience.

Proposed Wireframe:

We suggest the following wireframes to guide the game's design:

Main Menu Screen:

- Game Title.
- Start Button.
- Instructions Button.
- Settings Button.

Story Screen:

- Narrative Text Area.
- Choice Buttons(options based on the narrative).
- Interactive Creature/Image Area.
- Back to Menu Button

Instructions Screen:

- Brief game instructions
- Back to Menu Button

Settings Screen:

- Volume Control.
- Theme Color selector.
- Back to Menu Button.

Layouts:

- Main Menu Screen.
- Story Screen.
- Instructions Screen.
- Settings Screen..

Each Page Details: (Explain the detailed information about the topic)

Main Menu to Story Screen:

- User clicks the “Start” button.
- The main menu fades out, and the story screen fades in with a text animation.

Story Screen to Instructions Screen:

- User clicks the “Instructions” button.
- The story screen fades out, and the instructions screen fades in with a sliding effect.

Story Screen to Settings Screen:

- User clicks the “Settings” button.
- The story screen fades out, and the settings screen fades in.

Back to Main Menu:

- User clicks the “Back to Menu” button on any screen.
- The current screen fades out, and the main menu fades in.

Fantasy Forest - Wireframe Details

Story Screen Wireframe

Header:

- Game Title displayed in a magical font (styled with CSS).
- Navigation options (Start Game | Instructions | Settings).
  Layout:
- Use Flexbox for horizontal alignment of the header elements.

Main Section:
Narrative Text Area:

- Dynamic text area where the story unfolds with CSS transitions, allowing for text to fade in/out based on player decisions.
- Text content adjusts according to user actions, creating a unique adventure each time.

Interactive Creature/Image Area:

- Display a visual of a mythical creature or enchanted environment.
- CSS animations such as hovering effects for creatures (e.g., wings flapping, glowing aura).
- Image of the creature fades in or moves slightly when hovering for a more interactive experience.

Choice Buttons (Options Based on the Narrative):

- Buttons that allow the user to make choices that affect the storyline.
- Use CSS transitions to animate the button (e.g., hover effect changes background color or scales the button slightly).
- Each choice updates the narrative area, adding an interactive and immersive experience.

Footer:

- Quick navigation options (Back to Menu | Save Progress | Inventory).
- Layout styled with Flexbox for neat alignment.

Instructions Screen Wireframe

Header:

- Game Title displayed again for consistency.
- Navigation options (Start Game | Story | Settings).
  Main Section:
  Instructions List:
- Each instruction will have a slight CSS animation to slide or fade in upon page load.
- Text steps styled with CSS for easy readability and engagement (e.g., bullet points or numbered lists).

Back to Menu Button:

- Button styled with hover effects (e.g., color change or text glow).
- Clicking the button will take the user back to the main menu screen with a smooth transition.

Settings Screen Wireframe

Header:

- Game Title.
- Navigation options (Start Game | Story | Instructions).
  Main Section:
  Volume Control:
- A slider styled using CSS for users to control the volume.
- Use CSS transitions for slider movement, providing visual feedback as the volume changes.

Theme Color Selector:

- Dropdown menu or buttons allowing users to switch between themes (e.g., day theme, night theme).
- Hover effects on buttons to enhance interactivity.

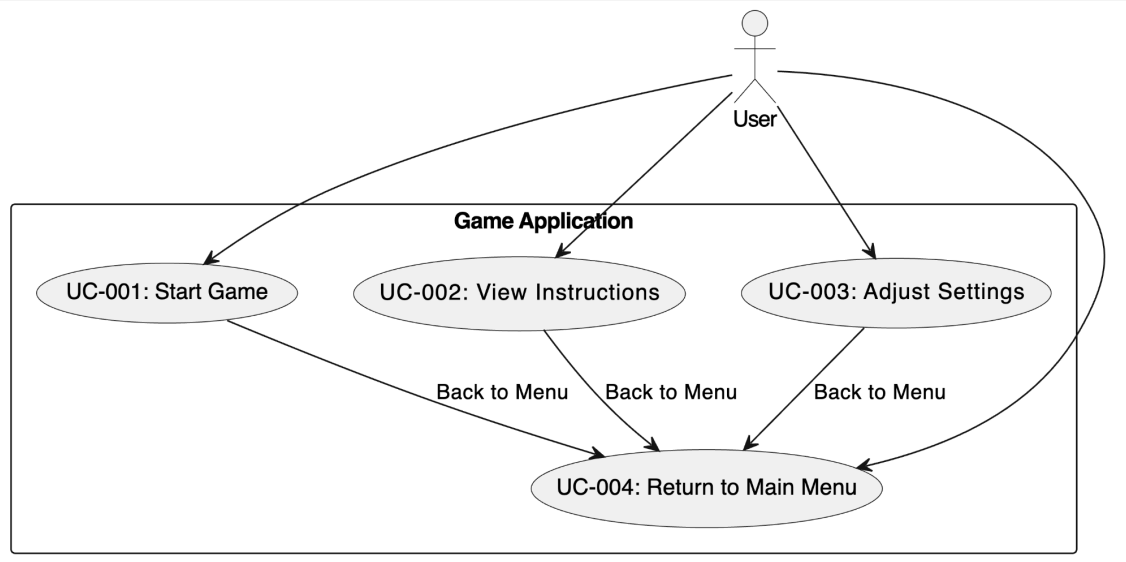
Back to Menu Button:

- Consistent with other screens, this button will have hover effects and a smooth transition back to the main menu.

User Experience and Iterative Design:

- The wireframe prioritizes ease of navigation and responsiveness to user choices.
- Proposed test cases will focus on screen transitions and ensuring smooth interaction between elements (e.g., from Story to Settings).
- The iterative design process will focus on enhancing animations, refining UI responsiveness, and improving text readability through user feedback.

Functionality:



Down below is use cases explanation:

Use Case ID: UC-001

Actor: User
Description: A user can navigate from the Main Menu to the Story Screen to start the game.
Preconditions: User is on the Main Menu screen with the "Start" button visible.
Postconditions: The Story Screen is displayed with animated text and interactive choices.

Steps:

1. User clicks on the "Start" button.
2. The Main Menu fades out with a CSS `fade-out` animation.
3. The Story Screen fades in with an animated text transition (e.g., text gradually appears or types out).

4. The narrative text is dynamically loaded based on the game's progress or random storyline elements.
5. The user is presented with interactive choices that influence the storyline.

Use Case ID: UC-002

Actor: User
Description: A user can view the game instructions from the Story Screen.
Preconditions: User is on the Story Screen with the "Instructions" button visible.
Postconditions: The Instructions Screen is displayed with animated steps and smooth transitions.

Steps:

1. User clicks on the "Instructions" button.
2. The Story Screen slides out with a CSS slide-left animation.
3. The Instructions Screen slides in from the right with a list of gameplay instructions.
4. Instructions are animated to slide in or fade in on page load.
5. The user can scroll through or interact with the instructions before clicking "Back to Menu" or navigating to other screens.

Use Case ID: UC-003

Actor: User
Description: A user can adjust the game settings from the Story Screen.
Preconditions: User is on the Story Screen with the "Settings" button visible.
Postconditions: The Settings Screen is displayed, allowing the user to adjust volume and theme color.

Steps:

1. User clicks on the "Settings" button.
2. The Story Screen fades out using a CSS `fade-out` animation.
3. The Settings Screen fades in with volume control and theme color options.
4. The user adjusts the volume using a slider (CSS transition moves the slider to indicate changes).
5. The user changes the theme color, and the theme updates in real-time with a smooth transition.
6. The user clicks "Back to Menu," and the current screen fades out, returning them to the Main Menu.

Use Case ID: UC-004

Actor: User
Description: A user can return to the Main Menu from any screen.
Preconditions: User is on the Story, Instructions, or Settings Screen with the "Back to Menu" button visible.
Postconditions: The Main Menu is displayed after a smooth screen transition.

Steps:

1. User clicks on the "Back to Menu" button on any screen.
2. The current screen (Story, Instructions, or Settings) fades out using a CSS animation.
3. The Main Menu fades back in, with the original screen layout intact.
4. The user can navigate to other options or screens from the Main Menu.

Transition implementation details:

1. Screen Transitions (Fading between screens):

- Use case: Moving from Main Menu to Story Screen, or switching between Story, Settings, and Instructions.
- **Implementation:** When the user clicks on buttons to navigate screens, the current screen's `fade-out` class is applied. The next screen uses the `fade-in` class to smoothly appear.

2. **Button Hover Effects:**

- Use case: Buttons in the game (e.g., "Start", "Instructions", "Settings") respond visually when hovered.
- **Implementation:** The button will change its background color and slightly grow in size on hover with a smooth transition.

3. **Text Changes (Story Screen):**

- Use case: As the user advances through the story, the text updates with fading or typing effects.
- **Implementation:** When the story updates, new text will fade in smoothly.

Transformations implementation details:

1. **Creature/Image Animations (Hover Interaction):**

- Use case: On the Story Screen, when hovering over a mythical creature or image, it transforms to create a magical effect (e.g., scales or rotates).
- **Implementation:** The creature will slightly grow and rotate when the user hovers over it, adding a mystical, interactive effect.

2. **Button Click Animation:**

- Use case: When a user clicks on any button (e.g., "Start" or "Settings"), the button reacts visually.
- **Implementation:** The button shrinks slightly when clicked, providing tactile feedback to the user.

Animations implementation details:

1. Text Typing Animation (Story Screen):

- Use case: Story text appears as though it's being typed out, creating an immersive storytelling effect.
- **Implementation:** The narrative text appears as though it's typed out letter by letter, enhancing the experience.

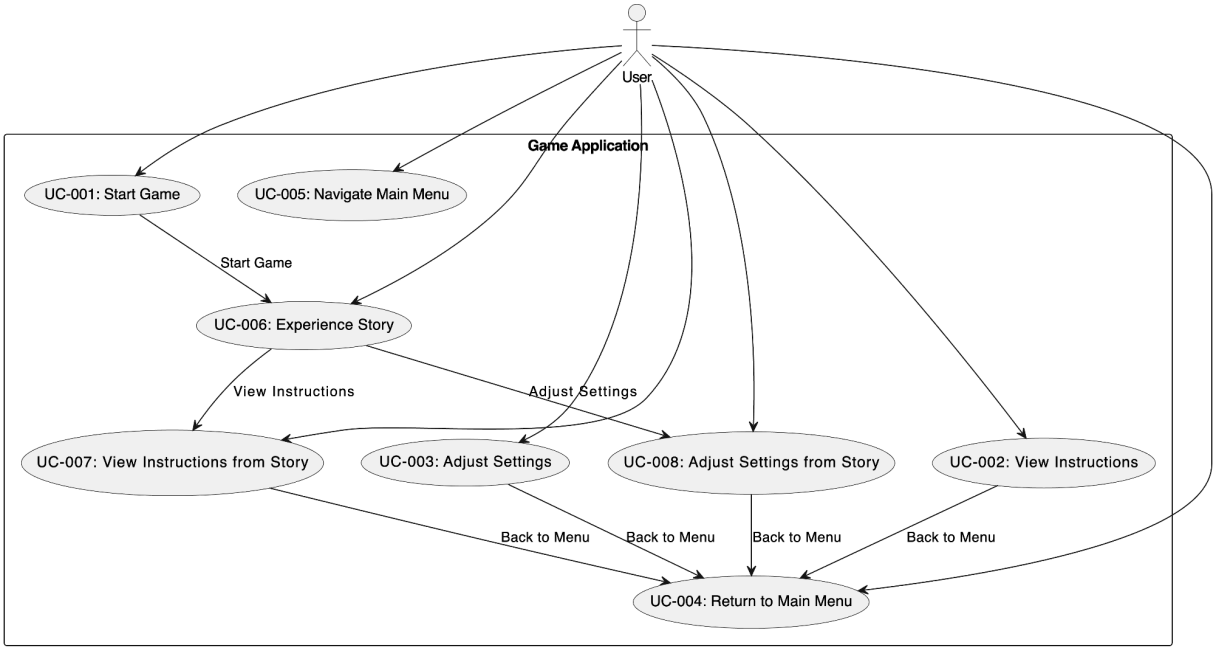
2. **Creature Animation (Wings Flapping or Glow Effect):**

- Use case: Adding a continuous animation to creatures on the Story Screen, making them feel more alive (e.g., flapping wings or glowing aura).
- **Implementation:** Creatures will continuously animate, either by flapping wings or glowing, using looping CSS animations.

3. Screen Transition Animations (Sliding Effect):

- Use case: Switching between Story and Instructions or Settings Screens with a sliding effect.
- **Implementation:** When switching screens, the outgoing screen slides out to the left, and the new screen slides in from the right.

User Experience:



Use case explanation for User experience:

1. Main Menu Screen:

Use Case ID: UC-005
Actor: User
Description: A user can navigate through the Main Menu to access the game or settings.
Preconditions: User has loaded the game and is on the Main Menu screen.
Postconditions: The user can choose to start the game, read instructions, or access settings.

Steps:

1. Game Title Display:
    - UX Goal: The game title is displayed in a magical font, subtly animated to give the screen a mystical and inviting feel (e.g., glowing or shimmering effect).
    - Effect: This sets the magical tone right from the start.
2. Interactive Menu Buttons:
    - UX Goal: Buttons like "Start Game," "Instructions," and "Settings" should respond to user interaction with hover effects (e.g., glowing, color change, or slight scaling to signal interactivity).
    - Effect: These subtle animations enhance feedback and make the buttons feel responsive, encouraging the user to explore.
3. Responsive Layout:

- UX Goal: The layout should adapt to different screen sizes (mobile and desktop) using Flexbox, ensuring that the main menu looks balanced and accessible on any device.
- Effect: Improves the overall accessibility and user experience on multiple platforms.

2. Story Screen:

Use Case ID: UC-006
Actor: User
Description: A user experiences dynamic story content and interacts with mythical creatures through choices.
Preconditions: User clicks "Start Game" on the Main Menu.
Postconditions: The user makes decisions that drive the story forward, with visual feedback and engaging animations.

Steps:

1. Narrative Text Area:
   - UX Goal: Text appears in an animated form (e.g., typing effect or fading in), allowing the player to feel more immersed in the story. The text changes based on user decisions.
   - Effect: Adds a layer of depth to the storytelling, making each choice feel meaningful and part of the adventure.
2. Interactive Creature/Image Area:
   - UX Goal: The screen should display a visual of a mythical creature, enchanted environment, or object. When the user hovers over it, the creature responds with CSS animations (e.g., wings flapping, glowing aura).
   - Effect: Enhances immersion, giving the feeling that the world is alive and reactive to the player.
3. Choice Buttons:
   - UX Goal: Buttons for making choices should be clearly visible and react with hover effects (e.g., glow or grow slightly when hovered). These choices should affect the progression of the narrative.
   - Effect: Encourages the player to engage more deeply, as the buttons provide visual feedback, making the decision-making feel consequential.
4. Save Progress and Inventory Options:
   - UX Goal: Provide easy access to saving progress and viewing inventory with clearly labeled buttons. These should respond with visual feedback when clicked.
   - Effect: Enhances ease of navigation and maintains immersion without interrupting the gameplay flow.

3. Instructions Screen:

Use Case ID: UC-007
Actor: User
Description: A user views and interacts with a list of game instructions.
Preconditions: User clicks the "Instructions" button on the Main Menu or Story Screen.
Postconditions: The user understands how to play the game through clearly presented instructions.

Steps:

1. Instructions List with Animated Entry:
    - UX Goal: Instructions (e.g., bullet points or numbered steps) appear with subtle CSS animations such as sliding in or fading in upon page load.
    - Effect: Keeps the screen from feeling static, making the user feel like they are still engaged in the game world while learning how to play.
2. Simple and Readable Layout:
    - UX Goal: The instructions should be clear, concise, and spaced well, ensuring readability on all devices. Use font size and color contrast to make reading easy.
    - Effect: A user-friendly layout minimizes frustration and encourages them to learn the game mechanics smoothly.
3. Back to Menu Button:
    - UX Goal: The button to return to the Main Menu should remain consistent with other screens, with a visible hover effect (e.g., glowing or color change).
    - Effect: Users can easily navigate back, enhancing the sense of control and reducing confusion.

4. Settings Screen:

Use Case ID: UC-008
Actor: User
Description: A user can adjust volume and theme settings.
Preconditions: User clicks "Settings" from the Main Menu or Story Screen.
Postconditions: The user adjusts preferences and settings to customize their game experience.

Steps:

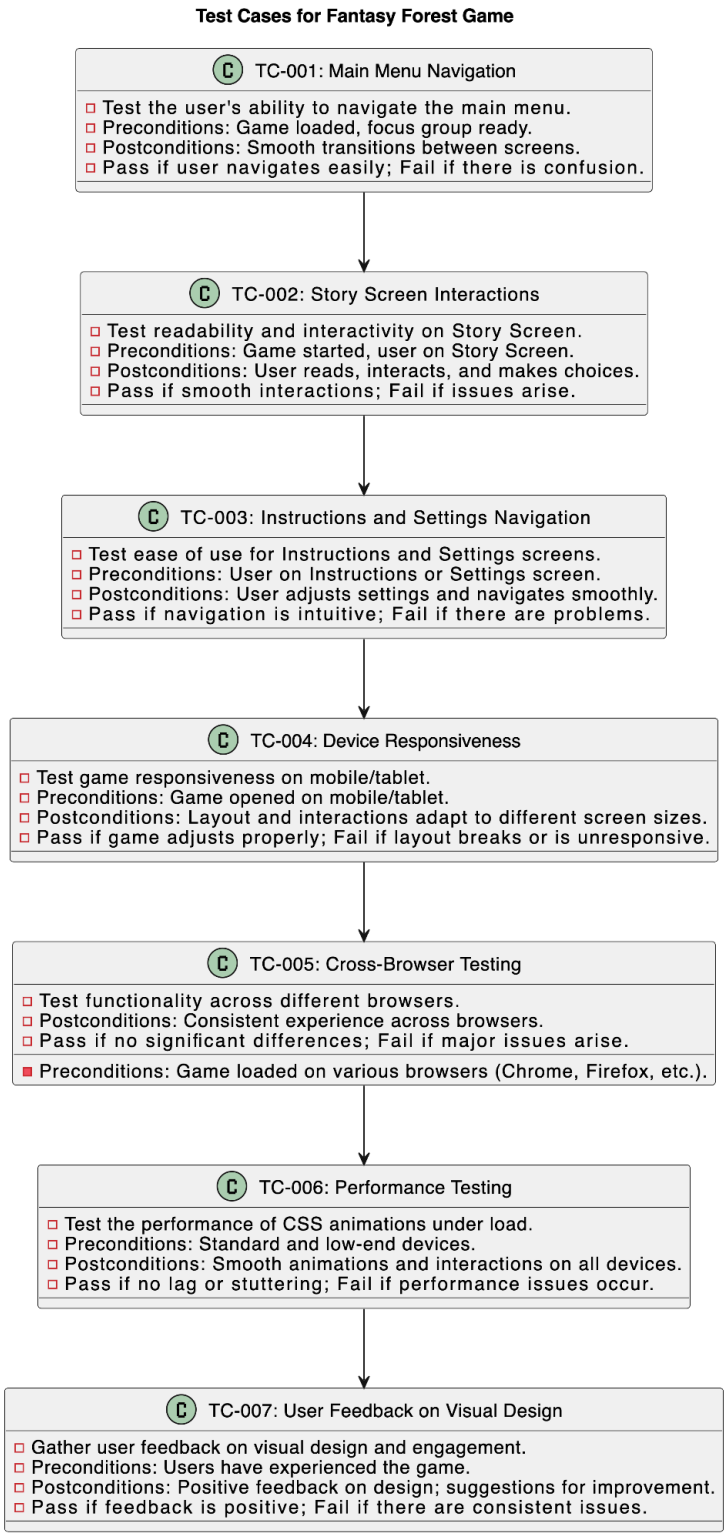
1. Volume Control Slider:
    - UX Goal: The volume control slider should be smooth and responsive. As the user adjusts the slider, they receive real-time feedback through both

visual and auditory changes (e.g., volume bar filling, corresponding volume change).
    - Effect: Empowers users by providing immediate feedback, making the process intuitive and satisfying.
2. Theme Color Selector:
    - UX Goal: Provide a dropdown or button-based color selector to switch between different themes (e.g., day/night mode). The user should see a preview of the selected theme with a smooth transition in background color.
    - Effect: Customization enhances user experience and allows for personalization, making the game feel more tailored.
3. Back to Menu Button:
    - UX Goal: Consistent with other screens, the "Back to Menu" button will respond to user actions with hover effects, allowing for easy navigation back to the main menu.
    - Effect: Continuity across screens reduces cognitive load, creating a seamless and predictable experience.

General UX Goals Across All Screens:

- Consistency in Navigation: All screens should include a "Back to Menu" button that is easy to find and responds with visual feedback. This creates consistency, ensuring users can navigate intuitively between different screens.
- Responsive Design: The layout should be adaptive for different devices (desktop and mobile), ensuring accessibility for all users. Use CSS Flexbox/Grid to ensure components are aligned properly on various screen sizes.
- Visual Feedback: Interactive elements (buttons, sliders, images) will use CSS hover effects, animations, and transitions to provide real-time feedback, improving the feel of interactivity and engagement.
- Smooth Transitions: Screen changes will be animated using fade-in, fade-out, and slide effects to maintain flow and avoid abrupt transitions, which can disrupt the immersive experience.

Test Cases:


Test Cases for Fantasy Forest Game
TC-001: Main Menu Navigation
Test the user's ability to navigate the main menu.
Preconditions: Game loaded, focus group ready.
Postconditions: Smooth transitions between screens.
Pass if user navigates easily; Fail if there is confusion.
TC-002: Story Screen Interactions
Test readability and interactivity on Story Screen.
Preconditions: Game started, user on Story Screen.
Postconditions: User reads, interacts, and makes choices.
Pass if smooth interactions; Fail if issues arise.
TC-003: Instructions and Settings Navigation
Test ease of use for Instructions and Settings screens.
Preconditions: User on Instructions or Settings screen.
Postconditions: User adjusts settings and navigates smoothly.
Pass if navigation is intuitive; Fail if there are problems.
TC-004: Device Responsiveness
Test game responsiveness on mobile/tablet.
Preconditions: Game opened on mobile/tablet.
Postconditions: Layout and interactions adapt to different screen sizes.
Pass if game adjusts properly; Fail if layout breaks or is unresponsive.
TC-005: Cross-Browser Testing
Test functionality across different browsers.
Postconditions: Consistent experience across browsers.
Pass if no significant differences; Fail if major issues arise.
Preconditions: Game loaded on various browsers (Chrome, Firefox, etc.).
TC-006: Performance Testing
Test the performance of CSS animations under load.
Preconditions: Standard and low-end devices.
Postconditions: Smooth animations and interactions on all devices.
Pass if no lag or stuttering; Fail if performance issues occur.
TC-007: User Feedback on Visual Design
Gather user feedback on visual design and engagement.
Preconditions: Users have experienced the game.
Postconditions: Positive feedback on design; suggestions for improvement.
Pass if feedback is positive; Fail if there are consistent issues.

Approach to Refine Improvements:

In developing the *Fantasy Forest* text-based adventure game, we will implement an iterative design process that prioritizes user feedback, usability testing, and technical performance. Our goal is to continually improve the user experience, visual design, and game mechanics through an ongoing cycle of testing, analysis, and enhancement.

1. Gather Initial User Feedback

Objective: After developing the initial prototype of the game, we will engage our focus group to collect feedback on the game's navigation, design, and user interactions. This step is crucial to ensure that the core game experience is both intuitive and engaging from the start.

Plan:

- One of the team members or friends will act as a user to interact with the game.
- Conduct interviews and surveys to capture their first impressions, pain points, and suggestions.
- Ask participants to comment on the ease of navigation, engagement level of the story, and visual appeal.

Outcome: This initial feedback will help us identify any immediate usability issues or areas where users feel confused, allowing us to prioritize the most urgent improvements in the next development cycle.

2. Iterative Usability Testing

Objective: Through a series of usability tests, we will closely monitor how our chosen users interact with different screens, transitions, and animations to identify areas for improvement.

Plan:

- Run structured usability tests after each development iteration to track user behavior and assess screen transitions, such as moving from the Main Menu to the Story Screen or the Settings Screen.
- Focus on user interactions with the narrative text area, creature animations, and decision-making buttons.
- Record all user feedback, including any confusion about controls, delays in animations, or unclear UI elements.

Outcome: By refining CSS animations, adjusting button layouts, and improving the pacing of the narrative, we will ensure that users can navigate the game effortlessly, with a smooth, immersive experience.

3. Cross-Device and Cross-Browser Testing

Objective: We aim to ensure the game runs seamlessly across various devices and browsers, providing a consistent experience regardless of the platform.

Plan:

- Test the game on mobile, tablet, and desktop devices to verify its responsiveness and layout adaptability.
- Conduct cross-browser testing, including major platforms such as Chrome, Firefox, Safari, and Edge.

Outcome: Any layout issues, browser-specific bugs, or performance discrepancies will be identified and resolved, ensuring a consistent experience for all users, regardless of their device or browser choice.

4. Performance Optimization

Objective: Ensuring smooth gameplay is critical, especially during animations and transitions. Performance optimization will focus on improving loading times and ensuring the game performs well on all devices.

Plan:

- Profile the game's performance on various devices to identify areas where CSS animations or large assets may be slowing down the game.
- Minimize asset sizes (images, fonts) and leverage lazy-loading techniques where applicable.

Outcome: Performance improvements will enhance the user experience, especially for those on lower-end devices, by reducing lag, stuttering, or long load times. This will ensure the game remains engaging and responsive for all players.

5. Visual and Accessibility Enhancements

Objective: To make the game as visually appealing and accessible as possible, we will regularly refine visual elements and ensure the game adheres to accessibility standards.

Plan:

- Adjust the game's fonts, color schemes, and layout based on user feedback, focusing on readability and overall aesthetic appeal.
- Conduct accessibility checks for color contrast, keyboard navigation, and compatibility with screen readers.
- Test hover effects, button interactions, and CSS animations to ensure they provide clear, visually engaging feedback to all users.

Outcome: These refinements will ensure that the game remains visually appealing and accessible to a broad audience, including those with visual impairments or those who rely on assistive technologies.

6. Storyline and Narrative Flow Improvements

Objective: To keep players engaged, we will iterate on the game's storyline and how it unfolds, based on user input regarding pacing and choice-based outcomes.

Plan:

- Gather feedback from users on how they feel about the storyline, including the pacing of narrative updates and the impact of their choices.
- Test if the players' decisions feel meaningful and if the narrative remains immersive throughout the gameplay.

Outcome: Based on user feedback, we will adjust the speed at which the story progresses and ensure that player choices have significant and noticeable effects on the narrative. This will increase replayability and immersion.

7. Enhancing User Experience (UX) Through Iteration

Objective: Continual enhancement of the overall user experience is crucial. Each iteration will focus on addressing the pain points identified through testing and user feedback.

Plan:

- After each round of feedback and testing, review the recurring issues and prioritize improvements.
- Conduct A/B testing to experiment with different UI layouts, animation timings, or button placements to identify which design choices work best.
- Continuously improve clarity, smoothness of transitions, and responsiveness based on real-time feedback.

Outcome: The iterative refinement process will result in a more polished and enjoyable user experience, with each version of the game feeling progressively more intuitive and engaging for users.

Statement:

We, the undersigned members of the group, acknowledge that we understand the conditions outlined in this proposal. We are committed to actively participating in the implementation of the group project from start to finish. We understand that individual grades may vary based on our contributions and performance, and we agree to present an important phase of the work collectively.

Signed proposal:

Name: FN Caleb LN Thang [CT]

Name: FN Ammar LN Abbkar [AA]

Name: FN Abdinur LN Hussein [AH]

This proposal outlines our plan to develop an interactive website that leverages CSS to create captivating user interfaces. We believe that this project aligns with the objectives of the web development class and offers an opportunity to explore CSS transformations, transitions, and animations in a practical setting. We are excited about the potential of this project and look forward to bringing our ideas to life.