**Trello:** [**https://trello.com/b/hnU8ma5N/zenquest**](https://trello.com/b/hnU8ma5N/zenquest)

I used labels of different colors to track dates.

Trello contains relevant implications, UX principles, iterations & much more

**Functionality Testing**

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| --- | --- | --- | --- | --- |
| Description | Input | Expected Outcome | Actual Outcome (screenshots) | Pass |
| Daily quests - Expected | Any text in the daily quest entry field | Daily quest is added to list, and a toast message pops up (same for all quest types) |  | **✔** |
| Daily quests – Invalid | Empty entry field/ only spaces | Nothing happens. User is unable to add quest |  | **✔** |
| Habits - Expected | Any text in the habit entry field | Habit is added to list  Green label if positive; red label if negative |  | **✔** |
| Habits – Invalid | Empty entry field/only spaces | User is unable to add habit |  | **✔** |
| Main quests - Expected | Any text in the main quest entry field, with or without due date.  (User can only choose a future date from the calendar pop-up) | Main quest is added to list  If due date is selected, it is shown as a small label under the quest |  | **✔** |
| Main quests - Boundary | User manually enters a due date that is the day before current date  User enters current date or the following day | If the due date is a day before current date, error message shows up.  If due date is current date or the next day, accept |  | **✔** |
| Main quests - Invalid | Empty entry field/ only spaces  Any date before the current date is chosen. | Empty: user is unable to add quest  Invalid date: error message shows up |  | **✔** |
| Side quests – Expected | Any text in the side quest entry field  User clicks the dice button | Side quest is added to list  Dice: random side quest is generated (chosen from preset list) |  | **✔** |
| Side quests – Invalid | Empty entry field/ only spaces | User is unable to add quest |  | **✔** |
| Quest Completion - Expected | User clicks the tick/plus buttons | For main and side, quest is removed.  For daily and habits, quest counter increases by 1. Quest is not removed. A completed daily quest is blurred (this resets daily).  XP is added depending on quest type, and Zen Coins are added depending on chance (50% at level 1), with toasts indicating specific numbers). XP progress bar and Zen Coins display are updated.  For negative habits, HP is deducted (no rewards). HP progress bar is updated.  If XP is full, user levels up. Dismissible toast pops up. Restores full HP.  Some items have a critical chance stat. Critical hits give double the original rewards (blue toast). |  | **✔** |
| Quest Removal – Expected | User empties out an existing quest item | The quest is removed from the list, and a toast pops up |  | **✔** |
| Market – Custom Rewards – Expected | User enters a real-life reward with name, description and price  User clicks the X button | Reward is added to list  Reward is removed |  | **✔** |
| Market – Custom Rewards – Boundary | 0 is entered as price  1 is entered as price | 0: error message  1: accepted |  | **✔** |
| Market – Custom Rewards – Invalid | Any field is left empty/ only spaces | Error message pops up |  | **✔** |
| Market – Any Item (Weapons/  Equipment/  Potions) – Expected | User clicks Buy/Upgrade button with enough Zen Coins  (Upgrade button is shown if user already owns the item) | User successfully buys the item, and it is added to inventory. Zen Coins is deducted according to price. Item stats added to user.  User successfully upgrades item, and level of item increases by 1. Zen Coins are deducted according to price. Item stats added to user. |  | **✔** |
| Market – Any Item - Boundary | User has 99 Zen Coins and tries to buy an item that costs 100  User has 101 Zen Coins and tries to buy an item that costs 100 | 99: error message pops up  101: user successfully buys the item, and it is added to inventory. Zen Coins are deducted according to price. |  | **✔** |
| Market – Any Item – Invalid | User clicks Buy/Upgrade button with insufficient Zen Coins | Error message pops up |  | **✔** |
| Inventory - Expected | Weapons/Equipment: User clicks Equip button  Potions: User clicks Use button  User clicks Sell/Downgrade button | Equip: User gains extra bonuses depending on the weapon/equipment. If an item is already equipped, the new item is equipped in place of it.  Use: User gains bonuses from potions  Sell/Downgrade: Item is sold for half its price. If weapon/equipment, item stats are removed. |  | **✔** |
| Nav bar - Expected | User clicks a nav button | User is taken to respective page.  Quests -quest page  Market- market page  Items - inventory page | A screenshot of a video game  AI-generated content may be incorrect.A screenshot of a video game  AI-generated content may be incorrect. | **✔** |
| Mini HUD - Expected | User scrolls past the main HUD  User clicks the hide button at top right corner (hides header and main HUD) | The mini HUD shows up at top of the screen. |  | **✔** |
| Daily quest bonus & pentalty | User completes 5 or more daily quests in one day  User fails to complete 5 or more daily quests | User gains extra XP and coins. Toast pops up to notify user.  User loses HP. Toast pops up to notify user at the start of each day. |  | **✔** |
| XP | User fills the XP bar | The XP bar resets to 0, and level increases by 1. XP required for next level increases.  Formula: xp required = 100+(level-1)\*(10^1.2)  Each level increases zen coin gain & zen coin chance  Formula: (coin gain)\*(ln(level+1))^1.05  Zen coin chance +1% per level (capped at +50%).  Show level up toast.  HP restored to max. (If max already, +0 HP)  If additional XP from previous level, carry over to next level. |  | **✔** |
| HP | HP reaches 0 (death)  HP is already max | Upon death, level -1 and coins -10%. (if level = 1 already, only decrease coins)  Show death toast.  Then reset to max Hp.  Any HP recovery will be HP+0. HP cannot go over max HP. |  | **✔** |
| Items | Potions:  User tries to use HP potion when already at full HP.  User uses HP potion when not at full HP.  User uses XP potion.  User uses a Xp/Coin boost potion  Other Item testing done above (Market & Inventory) | Error toast shows up for all these.  Full HP: Potion does not get consumed.  Otherwise, HP gets recovered according to type of HP potion.  User gains XP. XP gain scales with stats.  User gains boosts for a limited duration of time. |  | **✔** |
| HTML/CSS Validation | HTML: <https://validator.w3.org/>  CSS: <https://jigsaw.w3.org/css-validator/> |  |  | **✔** |

All testing is done using VS Code preview.

After each iteration, I also tested the website on both my phone and laptop (with GitHub deployment) to ensure everything actually works. I asked my family and random people online to give feedback on each iteration.

**User feedback**

|  |  |  |
| --- | --- | --- |
| Feedback | Improvements | Evidence |
| Create custom icons/sprites to enhance aesthetics | I used PixelLab to generate pixelated icons for my website to replace the emojis. |  |
| The pomodoro timer is a bit boring | I added a blue flame animation while the timer is going |  |
| Add a way to delete quests/habits without just completing them | I made it so that quests can be removed by removing all content in the textbox (leaving it empty), rather than making an extra delete button (takes up space). |  |
| Add an option to hide the header/HUD. It becomes unnecessary and takes up space when the user is more familiar with the website | Added a button to hide the header and HUD. A mini HUD shows up at the top of the screen instead. |  |
| Add more specific feedback toasts, e.g. successfully bought XXX, instead of just Success! | I made different toasts specific to different situations. |  |
| Ability to sort quests | Users can now drag quests around to rearrange them. I also made the quest items larger to make them easier to drag. |  |
| I should not be able to select an earlier date for my main quest. | I made it so that users can only select a future/current date from the calendar, and if they manually type a previous date, an error message is shown. |  |
| For weapons and equipment, instead of quantity, change it to level. Seems more logical. | I replaced weapon/equipment quantities with levels. After the user buys an item for the first time, the Buy button changes to Upgrade. Sell button in inventory changes to Downgrade. |  |
| Option to randomly generate a side quest | Added a button to randomly generate a side quest (from a preset list) |  |
| I can’t see if my boost potion is working or not | I added indicators which allow users to see what type of boost potion is active currently and its remaining duration |  |
| When I try to type on mobile, the screen keeps jumping around since it forces me to zoom in when typing | I made it so that users don’t get forced to zoom in when typing |  |
| The level up rewards are underwhelming, considering that it is pretty hard to level up | Each time the user levels up, they gain one of each boost potion.  I also made it so that user gains a random potion upon finishing a focus session (pomodoro).  Might add more rewards later. |  |

Things to test:

* **Functionality:**
  + **Link Testing:** Check all links (internal, external, anchor, and MailTo) to ensure they work as expected and lead to the intended pages.
  + **Form Testing:** Test all forms, including input validation, data handling, default values, and scripting.
  + **Cookie Testing:** Ensure cookies (sessions) are handled correctly for user experience and security.
  + **HTML/CSS Validation:** Verify that the website uses correct HTML and CSS and that there are no syntax errors.
* **Usability:**
  + **User Experience (UX) Testing:** Evaluate the website's ease of use, intuitive design, and readability.
  + **Content Testing:** Ensure content is clear, concise, and well-organized, with proper spelling and grammar.
  + **Readability Testing:** Audit the website's content to ensure readability with short paragraphs, bullet points, and adequate whitespace.
  + **Visual and Design Appeal:** Test the website's visual appearance, including layout, color schemes, and typography.
* **Performance:**
  + **Site Speed:** Test page load times, error rates, and responsiveness to ensure the website performs optimally.
  + **Load Testing:** Simulate high traffic to ensure the website can handle multiple users without crashing.
* **Compatibility:**
  + **Cross-Browser Compatibility:** Test the website on different browsers and versions to ensure consistent rendering and functionality.
  + **Mobile Responsiveness:** Verify the website's layout and functionality on different mobile devices and screen sizes.
  + **Device Compatibility:** Test on different devices and operating systems to ensure a consistent user experience.
* **Security:**
  + **Security Testing:** Identify and address potential vulnerabilities, such as SQL injection and cross-site scripting.
  + **Payment Gateway Testing (If Applicable):** Ensure secure and reliable payment processing if your website has an e-commerce component.
* **Accessibility:**
  + **Accessibility Testing:** Ensure the website complies with accessibility standards (e.g., Web Content Accessibility Guidelines) to accommodate users with disabilities. Color blindness.