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Design Document

World of Discordia Companion App

Proposed By:
DodoCreates

Proposed To:
Dragon Legion e.V.

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Introduction

1 Vision and goals

The digital companion app for *World of Discordia* should be developed to increase the popularity of TTRPGs among youth and specifically *World of Discordia*. Currently, *World of Discordia* lacks a digital tool of its own. The application should simplify the game process without restricting the educational and social benefits of TTRPGs. It should address the needs of student players and game directors (GDs). The tool should be usable for the user, developable by the non-profit organization *Dragon Legion* with limited resources, and implementable at schools. The resulting concept will be presented to the *Dragon Legion* and subsequently developed for use in The RPG Initiative as well as play by the common public.

The vision is to create a digital companion app for *World of Discordia* that enhances the educational and social benefits of TTRPGs for students while being easily developed and implemented, as well as to provide a tool that supports both student players and game directors, fostering engagement and simplifying gameplay without detracting from the offline experience.

1.1 Objectives:

01: Enhance Gameplay: Assist student players and GDs in gameplay without interfering with the offline game experience.

02: Ensure Educational Benefits: Provide features that support the educational benefits of TTRPGs and do not contain distractions or harmful features

03: Support Development & Integration: Create a tool that is developable by a non-profit organization with limited resources and implementable in schools while adhering to regulations and standards.

2 General conditions

2.1 Areas of application

The application is developed for mobile use, primarily for smartphones, with consideration for tablet responsiveness. The app is designed to support offline TTRPG gameplay in educational contexts, specifically within school settings, but is suitable for all modes of play.

2.2 Target groups

Student Players: Youth aged 10-18 participating in *World of Discordia* in a school setting, who need an engaging, easy-to-use tool to enhance their gaming experience and streamline lengthy processes. This group is the primary user base, and the app's design is centered around their needs for accessibility, entertainment, and educational support.

Game Directors (GDs): Student or adult GDs who guide the *World of Discordia* sessions, requiring tools to simplify game management, track player progress, and create engaging

narratives. GDs play a crucial role in delivering the TTRPG experience, and the app aims to provide them with resources and functionalities to streamline their tasks and enhance the overall quality of the game.

3 System context and overview

The *WoD* digital tool will affect students and influence the implementation of TTRPGs. Stakeholders can be considered as those who are affected by design decisions. Key stakeholders include:

- Players: Students, *Dragon Legion*, RPG Initiative Facilitators
- Context-Setters: School Council, School Club Manager, Students' Parents
- Subjects: Opinion Holders, WoD Tool Development Team
- Crowd: RPG Initiative Managers, University Partners

First and foremost, the app needs to serve students' and facilitators' needs, as well as align with the mission, brand identity, and logistical and strategic goals of the *Dragon Legion*. The digital tool will work in conjunction with the *Dragon Legion's* TTRPG system, *World of Discordia*, and will be utilized in The RPG Initiative. The system must also be compatible with the school systems and legal frameworks in Germany and throughout Europe. It needs to be on a scale in which it is easily developable by the Development Team. Lastly, it needs to fulfill scientific approach standards and bring value to the field.

4 Functional requirements

The World of Discordia Companion App needs to provide specific functions to support gameplay.

FR1: Hero Creation: The app must provide a tool for users to create heroes with step-by-step guidance and limited by official game rules. Differentiation between Quick Build and Custom Build.

FR2: Hero Management: The app must allow users to edit and manage hero attributes, statistics, skills, and actions.

FR3: Interactive Character Sheet: The app must feature an interactive character sheet that allows users to perform in-game actions, manage equipment, cast spells, roll dice, and take notes.

FR4: Hero Level-Up: The app must allow users to level up their heroes according to the game rules.

FR5: Game Creation: The app must allow Game Directors to create and manage game sessions. Players must be able to join and leave games.

FR6: Game Object Management: The app must provide tools for GDs to create and manage game objects such as locations, NPCs, and quests, including descriptions and connections.

FR7: Resources: The app must allow users to browse, preview, read and bookmark published resources related to the game.

FR8: Library: The app must provide access to a library of official game materials such as spells, creatures, heritages, and items.

FR9: Profile Management: The app must allow users to manage their personal information, account settings, and app preferences. Users need to be able to sign up with a school account.

FR10: Encounter Simulation: The app must include an encounter simulator for users, mostly GDs, to simulate battles between heroes and creatures from the library and custom creations.

FR11: AR Map Integration: The app may integrate an AR map tool for users to visualize and estimate distances and areas of effect on the game map.

FR12: Dice Roller: The app must allow users to roll polyhedral dice, standalone, and from their hero sheets with automatic calculations.

FR13: PWA: The application must run and be installable as a progressive web app.

5 Quality requirements

The digital companion app must meet specific quality requirements to ensure its success and effectiveness in educational settings. These requirements address usability, safety, and compliance.

QR1: Usability for Children and Teens: The app must be easy to use and intuitive for students aged 10-18. The user interface (UI) and user experience (UX) should adhere to best practices for designing for children and teenagers, including simple navigation, clear instructions, and age-appropriate content.

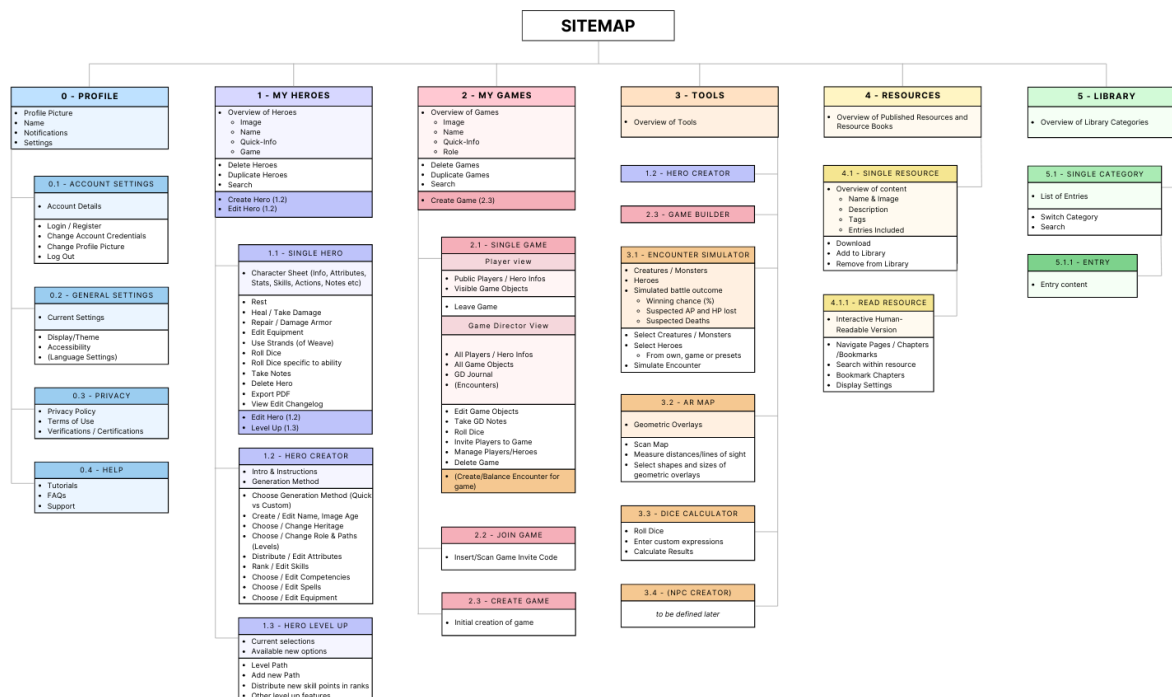
QR2: Privacy and Safety Compliance for Schools: The app must comply with privacy laws and regulations, such as the General Data Protection Regulation (GDPR), to protect students' data. It should include safety features such as content filters and secure communication channels to ensure a safe online environment for children.

QR3: Accessibility: The app must be accessible to students with diverse abilities and needs. It should include features such as screen reader compatibility, customizable display settings, and alternative input methods to ensure that all students can effectively use the app.

Sitemap

World of Discordia

APP STRUCTURE



https://www.canva.com/design/DAGbbDj19rk/Vyr81w3dsZSmC_YMr7Pe9A/view?utm_content=DAGbbDj19rk&utm_campaign=designshare&utm_medium=link2&utm_source=uniquelinks&utlId=hb5581c996d

* Entries marked with "*" are to be determined or require revision.

➤ Entries starting with an arrow imply interactions and functions

★ Entries starting with a star are comments by the author

0 Profile

- Profile Picture
- Name
- Manage Notifications
- Settings

0.1 Account Settings

- Log in or register.
 - Sign up with a school account.*
 - Create a new personal account.
 - Log in with an existing account.
- Change account credentials.
 - Email

- Username
- Password
- Change profile picture.
- Log out.

0.2 General Settings

- Display / Theme Settings*
- Accessibility Settings*
- Language Settings*

0.3 Privacy

- Social Settings*
- Privacy Policy
- Terms of Use
- Verifications/Certifications

0.4 Help

- Tutorials
- FAQs
- Support

1 My Heroes

- List of Heroes
 - Image, Name, Heritage, Role(s), Path(s), Game.
- Delete Heroes
- Duplicate Heroes
- Search, Filter

1.1 Single Hero

- **Header**
 - Name, Image, Heritage, Role(s), Path(s)
 - Defense
 - Detail Page
 - Armor
 - Take damage
 - Repair
 - Detail Page
 - Health
 - Take damage
 - Heal
 - Detail Page
- **Primary Menu**
 - Export PDF
 - Edit Hero (Hero Editor)

- Changelog
 - Delete Hero
- **Secondary Menu**
 - Level Up (1.3)
 - Rest
 - Dice Roller
- **General**
 - Attributes
 - Strength (STR)
 - Dexterity (DEX)
 - Agility (AGI)
 - Vitality (VIT)
 - Senses (SEN)
 - Presence (PRE)
 - Instinct (INS)
 - Reason (REA)
 - Roll Attribute Check (modifier automatically added)
 - Detail Page
 - Defenses
 - Vulnerabilities
 - Resistances
 - Detail Page
 - Conditions
 - Detail Page
- **Abilities**
 - Competencies
 - Type + Competency
 - Roll Competency Check
 - Skills
 - Skill + Skill Bonus + Attribute modifier + rank
 - Acrobatics (AGI)
 - Beguile (PRE)
 - Climb (STR)
 - Collect Information (PRE)
 - Disable Mechanism (REA)
 - Disguise (PRE)
 - First Aid (REA)
 - Forgery (REA)
 - Fortitude (VIT)
 - Legerdemain (DEX)
 - Lock Picking (DEX)
 - Notice (SEN)
 - Run & Jump (AGI)
 - Search (REA)
 - Stealth (AGI)
 - Swim (AGI)
 - Willpower (REA)
 - Roll Skill Check (modifier automatically added)

- Detail Page
 - Talents (if related to skills)
 - Detail Page
- **Combat**
 - Speed, Combat Modifier
 - Detail Page
 - Reposition
 - Detail Page
 - Actions
 - Equipped Weapon(s)
 - weapon + attack + damage + attribute + type
 - Switch equipped weapon(s)
 - Roll Attack/Damage (modifiers automatically added)
 - Detail Page
 - Talents
 - Detail Page
 - Reactions
 - Free Attack
 - Detail Page
 - Talents
 - Detail Page
 - Free Actions
 - Detail Page
 - Other Actions
 - Detail Page
- **Equipment**
 - Manage Equipment*
 - Money
 - Copper Pennies
 - Silver Marks
 - Gold Crowns
 - Armor
 - armor + armor points + penalties
 - Wear
 - Detail Page
 - Shields
 - shield + modifier + penalties
 - Wield
 - Detail Page
 - Weapons
 - Detail Page
 - weapon + attack + damage + attribute + type
 - Wield
 - Equipment
 - Detail Page
- **Spellbook**
 - Speed, Weave Modifier
 - Detail Page

- Strands
 - Use
 - Recover
- Spells
 - spell + name + range + attack + circle + effect
 - Roll spell cast/attack/damage (modifiers automatically added)
 - Detail Page
- Search, Filter Spells
- **Bio**
 - Traits
 - Heritage
 - Detail Page
 - Role
 - Detail Page
 - Paths
 - Detail Page
 - Description
 - Edit Description
 - Backstory
 - Edit Backstory
- **Journal**
 - Notes/Planning, Allies/Enemies, Lore/Info, Other
 - Edit notes

1.2 Create/Edit Hero

- **Quick Build**
 - Instructions
 - Choose Heritage
 - Choose Role(s) & Path(s)
 - Generate*
 - Edit (Hero Editor)
- **Custom Build / Hero Editor**
 - Instructions
 - Input / Edit Name
 - Upload / Choose / Edit Image
 - Choose / Change Heritage
 - Choose / Change Role & Paths (Levels)
 - Distribute / Edit Attributes
 - Rank / Edit Skills
 - Input / Edit Competencies
 - Choose / Edit Spells
 - Choose / Edit Equipment
 - Save*

1.3 Level Up

- Level up*

- Current selections
- Available new options
- Level up Path
- Add new Path
- Distribute new skill points
- Other

2 My Games

- List of games
 - Image, name, user's role, players.
- Delete Games
- Duplicate Games
- Search, Filter

2.1 Single Game

- **Game Director View:**
 - Delete game
 - Roll dice
 - Quick add new Game Object
 - **General**
 - Info
 - Edit Name
 - Change / Remove Image
 - Edit Description
 - Players
 - Invite Players
 - Manage Players
 - Players' Hero Sheets (Read-Only)
 - **Overview**
 - Edit
 - **Game Objects (Locations, NPCs, Creatures, etc...)**
 - Edit game objects
 - Name
 - Image
 - Statblock (if Creature / NPC)
 - Edit
 - Journal
 - Edit
 - Connections
 - Edit
 - Quick add new Game Object (pre-input type according to current type)*
- **Player View:**
 - Leave Game
 - **General**
 - Info

- Players
- **Game Objects (Locations, NPCs, Creatures, etc...)**
 - Name, Image (if provided), Connections

2.2 Join Game

- Input Code
- Scan QR

2.3 Create Game

- Choose from Template
- Create own
 - Input Name (required)
 - Upload Image (optional, placeholder img will be inserted if omitted)
 - Input Description (optional)

3 Tools

- Overview of Tools
 - Name, Description, Image
- Hero Builder (1.2)
- Game Builder (2.3)

3.1 Encounter Simulator

- Selected Heroes and Creatures
- Choose Heroes
 - Search, Filter
 - From Game
 - Player Heroes
 - NPCs*
 - From Own
 - Create temporary NPC (quick build)*
- Choose Creatures
 - From Library
 - Search, Filter
 - Create temporary custom (quick build)*
- **Simulate**
 - Calculated winning chance (%)
 - Average rounds
 - Heroes
 - Calculated suspected AP and HP lost
 - Suspected Deaths
 - Creatures
 - Calculated suspected AP and HP lost
 - Suspected Deaths

3.2 AR Map*

- Introduction
- AR Map
 - Scan Map code
 - View Control Zones
 - Measure distances
 - Visualize
 - Lines of sight
 - Radii
 - Cones (if applicable)

3.3 Dice Calculator

- Roll Results
- Quick Roll
 - 2d10s
 - Apply (Dis-)Advantages
- Custom expression (e.g. $2d6 + 4$)
- Roll any die
 - Add dice
 - Remove dice (hold)
 - Roll
- Roll log (cached)

3.4 NPC Creator*

- (to be defined later)

4 Resources

- **Browse**
 - Published resources by category
 - Cover image, Title, Snippet
 - Search, Filter
- **Owned**
 - Downloaded, Added, Purchased* Resources
 - Cover image, Title, Snippet
 - Search, Filter

4.1 Single Resource

- Overview
 - Name, image, author/publisher, tags, description, and library entries included
- Purchase* (add to Owned)
- Download (readable resource)
- Read
- Add to Library (add entries to library)
- Remove from Library (remove entries from library)

4.1.1 Read Resource

- Read (like epub)
- Table of Contents
 - Navigate pages, chapters, and bookmarks.
 - Search within the resource.
 - Bookmark chapters*
 - Adjust display settings*

5 Library

- Overview of Library Categories
 - Spells
 - Creatures
 - Equipment
 - Heritages
 - Roles & Paths
 - Locations
 - NPCs
 - Gods
- Search, Filter Entries from All Categories (only added from resources)

5.1 Single Category

- All Entries from Category (only added from resources)
 - Image/Symbol, Name, Category-specific snippet
- Switch Category*
- Search, Filter

5.1.1 Single Entry

- Entry Content
 - Name
 - Image/Symbol (if applicable)
 - Snippet
 - Attributes
 - Description
 - Statblock (if applicable)
 - Sub-Entries (if applicable)
 - Source (Resource)

X Uncategorized

- Detail page
 - Title
 - Tags/Type
 - Content
 - Source (page number)

- ★ Detail pages for explanations of pretty much everything that is written in the rulebooks. Accessible mainly through the hero sheet and the library detail pages (other locations could be possible, in resource books or stat blocks). Detail pages include objects not listed in the library, such as Attributes, Skills, Conditions, Talents, Actions, and other rules. Objects that are listed in the library are almost identical to their library entries, but when accessed through a hero sheet or stat block, modifiers, and stats will always be calculated and provide a breakdown of how the resulting stat came to be.

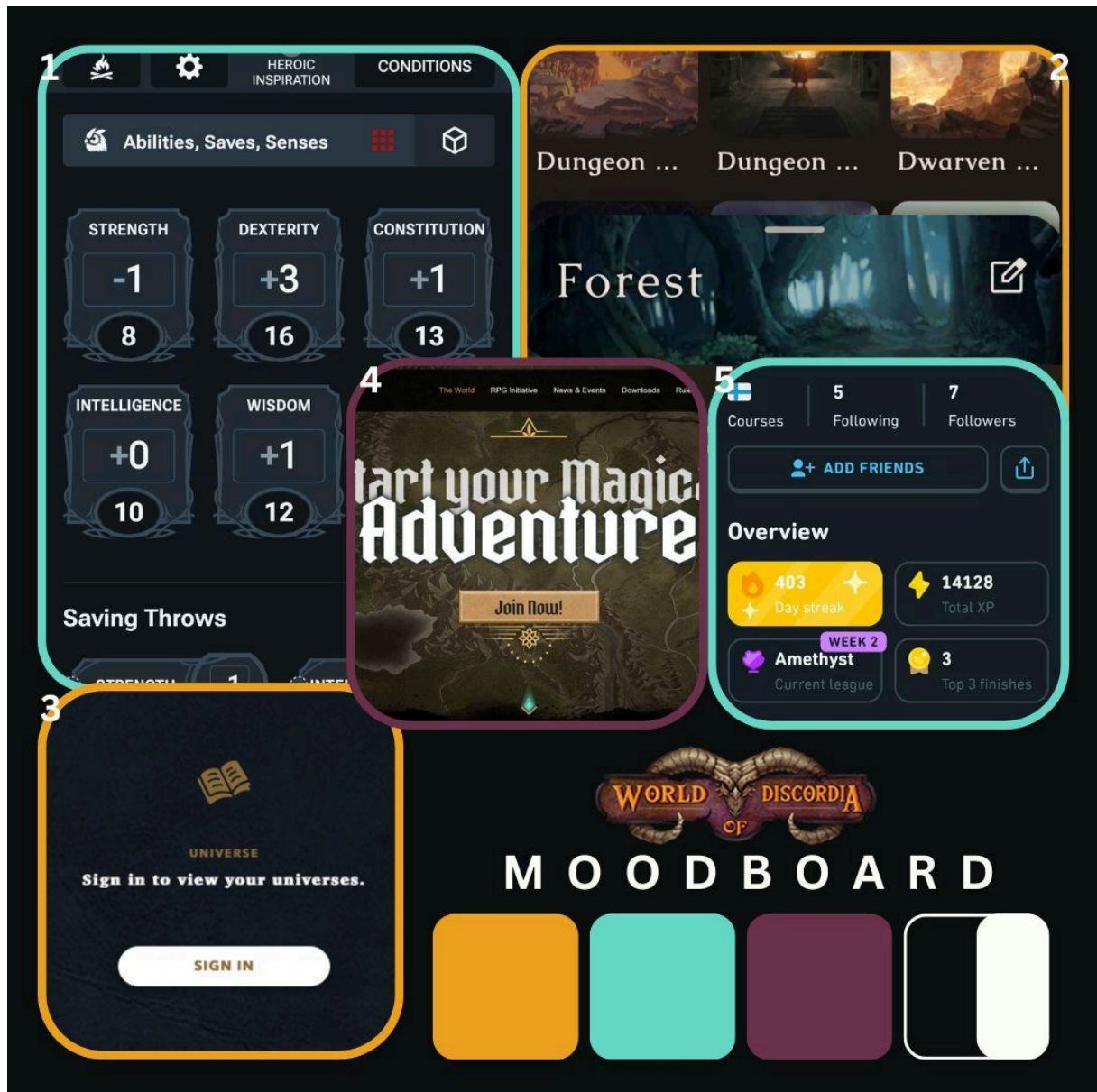
Wireframes

Link to Dev view for the Alpha Prototype:

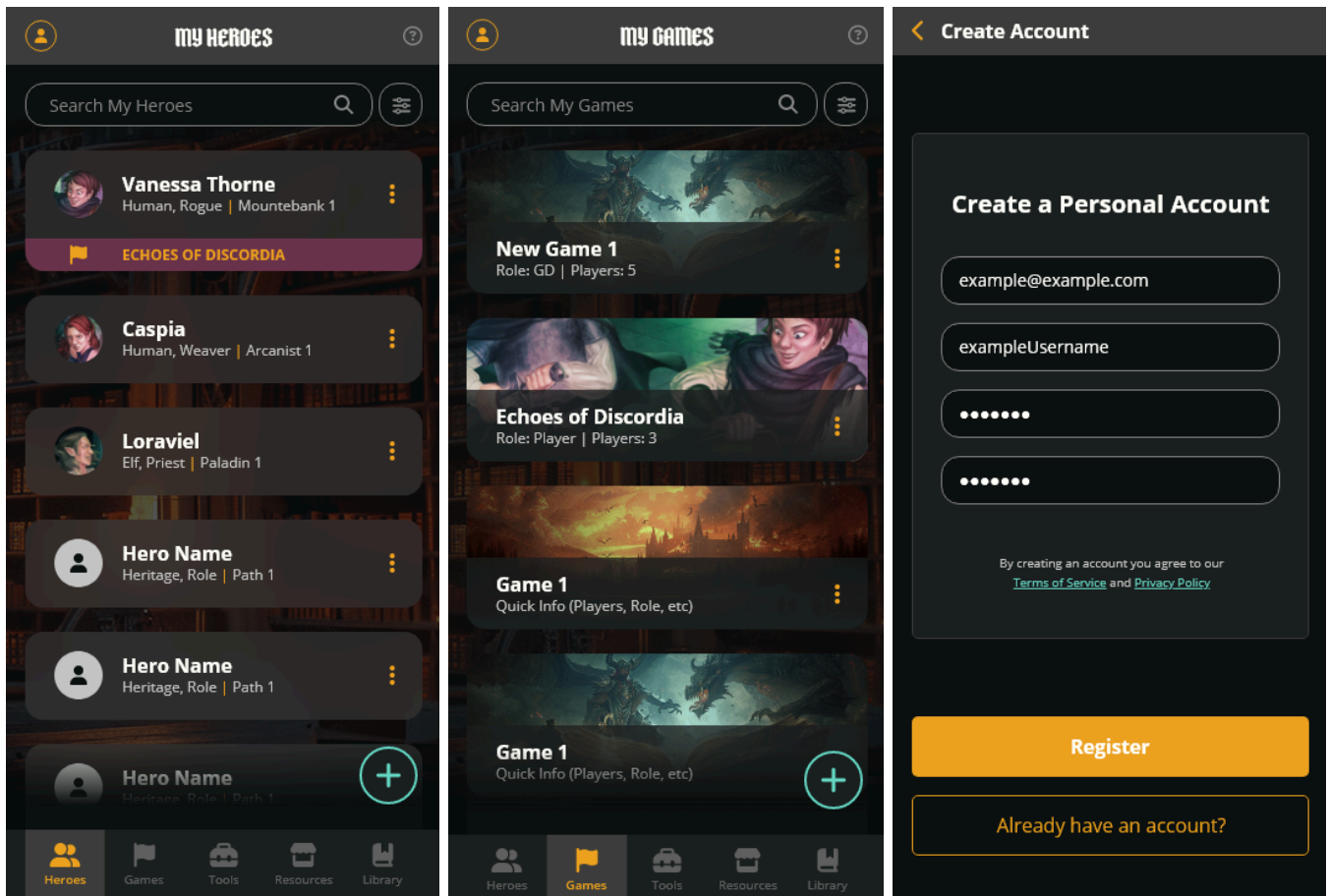
<https://xd.adobe.com/view/4a35c953-13cb-4887-8bca-c6cfdd3c0cfe-1f>

Styleguide

Moodboard



Note: From (in order) *D&D Beyond* (Wizards of the Coast LLC, 2025a), *Pocket Bard* (Pocket Bard LLC, 2025a), *Alchemy* (Arboreal, 2025), *The Discordia* (Dragon Legion e.V., n.d.), *Duolingo* (Duolingo, 2025).



Adobe XD Styleguide:

<https://xd.adobe.com/view/be2f24c3-ff7f-4585-89da-612564a73e93-eb7c/>

Guidelines

Color

The color scheme should avoid overly bright, rainbow-like colors and instead be visually attractive, modern, and neutral. The color scheme must provide sufficient contrast between text and background for readability and be gender-neutral. Suggested color harmonies are triadic, split-complementary, or squared/rectangular.

The design should be developed in dark mode, however, a light mode should be available for the user to switch to later (display settings). Suggested primary colors are Gamboge and Turquoise, which together with the secondary color Eggplant, form a harmony between triadic and split-complementary.

Primary: Gamboge #EDA21F

Primary / Accent: Turquoise #66D8C6

Secondary: Eggplant #6C324B

Background: Night #0B0F0F

Icons

Icons are a crucial part of visual design. They need to be self-explanatory and take advantage of commonly known mental models. It's recommended to add labels to less established or more abstract icons. Where applicable, free icon libraries can be used, custom made icons (e.g. dice, defense, armor, health) should be adapted to fit the style of other icons. Icons for interactions should be at least 16x16px.



Note: Icons not in the correct color

Icons used in the prototype by fontawesome.com and by flaticon.com (requires attribution).

Interactions

To make interactions usable and navigation intuitive, the following guidelines should be considered:

- **Touch targets:** Design clickable elements with large target areas, safe spaces, and rounded corners.
- **Micro-Animations:** Provide visual and possibly haptic feedback for interactions in small animations or effects.
- **Transitions:** Use transitions between pages, pop-ups, and overlays to enforce the mental map, such as moving into the frame from the side or popping up from below.
- **Instructions:** If instructions are required for complex interactions, consider using step-by-step instructions that guide teens through the process but offer them a way to skip instructions if they don't need them.
- **Alternative inputs:** Consider incorporating alternative input methods, adapt design for spelling errors, and limit required text input.

- **Auto-format:** Auto-format fields rather than asking users to type fields in a specific format.

Content

Clear, concise content is essential. It's important to avoid overwhelming users with too much text or cluttered layouts. Short paragraphs, bullet points, and visual aids increase scannability and comprehension. The most important information should be prominent through hierarchy, and the use of relevant images can make the content more relatable and engaging. For teens, it's important to use simple language, avoiding jargon and complicated and verbose content. Cut the amount of text and shorten the length of sentences and paragraphs.

Performance

Ensure fast performance by loading images only in the resolution needed and caching as much as possible for offline use. If the application requires loading time, provide a simple and accurate loading-status indicator and preview the page layout without content, if possible. Run tests to improve the speed and performance.

Suggestions for Further Development

The following lists some suggestions for the further development of the *World of Discordia* digital companion app, categorized by priority.

Priority One:

- **Conceptual Considerations:** Determine and improve sections marked “to be determined” or requiring revision.
- **Class Diagrams and Game Objects:** Create class diagrams and settle on which game objects have which attributes, especially content pages for spells, creatures, heritages, and locations. Finalize the rules and rulebooks before settling the design.
- **Finalize Design:** Determine the visual design.
- **Content Formatting:** Improve content usability by using less text and more icons, as well as nicely formatted information.
- **Account Verification:** Look into how to verify school accounts.
- **Account Transfers:** Consider enabling account transfers from school accounts to personal accounts.
- **Compliances:** Safety regulations for schools must be researched and thoroughly implemented. Requirements for possible certifications need to be considered.
- **Tutorials:** Add tutorials for first-time users.
- **Back-End Design:** Develop a back-end design to publish content.
- **Tablet Design:** Adapt the design for tablet use.
- **User Testing:** Conduct more thorough user testing in a beta version with actual functionality and design, especially focusing on complex navigational behaviors.
- **Facilitator Feedback:** Gain feedback from facilitators observing students interacting with the application.

Priority Two:

- **AR Map Improvements:** Collaborate with the system development team to ensure accurate mathematical measurements and logic for the AR map tool.
- **Mascot Creation:** Design a character to act as a mascot, possibly incorporating them into the tutorials.
- **Content:** Game templates and premade adventures should be created.
- **Pricing for Schools:** Consider pricing models for schools.
- **Content Sharing:** Enable sharing of user-generated content like encounters, adventures, items, and NPCs on the resource tab.

- **Images:** Provide a small library of official images to be selected or inserted if omitted by the user.
- **Accessibility:** Improve for students and schools.

Priority Three

- **Customization:** Offer customization options such as dice.
- **Music Integration:** Integrate music, such as playing music from within the campaign view.
- **Shop Generator:** Consider creating a shop generator.