



Nudge RPG Website Requirements Document

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(Author: Jason)

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Introduction

(Author: Zara)

Dungeons and Dragons, more commonly referred to as D&D, is a fantasy based tabletop [RPG](#) where players create characters who go through adventures and combat according to the ruleset. It originates from tactical war games but differs with character creation and the addition of more fantasy elements. While D&D has more focus on combat and rules, some other games have taken a different approach and leaned into the creative and narrative side of [RPGs](#). These games involve the wildly popular game Fate, as well as the up and coming game NUDGE, which has been in the works for 5 years by Christopher Stuetzle, Associate Professor and Chair and Department of Computer and Data Sciences at Merrimack College.

Professor Stuetzle wants a website that will be used alongside NUDGE, providing an easy way for users to create and reference their characters and also coordinate [campaigns](#) with their friends. The website will need a strong focus on sustainability and flexibility so that the website can be built on and changed as the game evolves over time. Our group Czech Mates, consisting of Cam Chrissis, Jason Demers, and Zara Masino, has been tasked with designing and building this website for Professor Stuetzle.

Executive Summary

(Author: Zara)

This website will allow users to log into their accounts through Google. There are two types of accounts: user and administrator. The user will have the ability to search for and follow other players, with mutual followers being [friends](#). A user will be able to create characters through filling out character sheets. These character sheets are saved and kept for later reference. They will be able to edit these characters afterwards, delete them, or copy them. Users will also interact with [worlds](#). They can create and invite [friends](#) to their own [world](#), as well as send scheduling reminders. They can view the information of characters in the [campaign](#) as well as remove them as long as they are acting as the [GM](#) in that [world](#). Admin will have additional abilities with an administrator page. They will be able to view and manage the database of users through this page.

Functional Requirements

(Author: Zara)

World

- Users must be able to create any number of worlds.
 - ◆ Worlds must have a world name.
 - ◆ Worlds must have a list of characters.
 - ◆ Worlds could have a schedule ability to alert players in the world when the next game meeting is.
 - The schedule should send reminder emails.
 - The reminder emails should have the time.
 - The reminder emails should have a link to the world.
 - The reminder emails could have a Google Calendar event.
 - ◆ Worlds could have one graveyard.
 - Once a player is in the graveyard they will not be able to be revived.

Character Sheets

→ General

- ◆ Names for items, spells, skills, and abilities must be modifiable to fit new worlds.
- ◆ When elements are hovered over, definitions of that information must be displayed.
- ◆ Character sheets must be saved as changes are made to them.

→ User inputted Values

- ◆ The user must be able to input information for the following character information.
 - [High Concept](#)
 - [Trouble](#)
 - Two Additional [Aspects](#)
 - Description
 - Physical Appearance
 - Background
 - Major Relationships
 - Other
 - Portrait of the character
 - Skill Levels (default value of 0, range of 0-8)

Alchemy	Hunting
Arcana	Lore
Athletics	Physique
Burglary	Rapport
Deceive	Shooting
Empathy	Stealth
Engineering	Survival
Fight	Will

- Equipment
 - Equipment must be a shield, weapon, or armor.
 - Equipment must be modifiable.
 - Shields must have 1 modification slot.
 - Weapons must have 3 modification slots.
 - Armor must have 2 modification slots.
 - Some weapons cannot be used with a shield.
- Current [Fate Points](#)
- Current [Resolve](#)
- Current [Vigor](#)
- Current Money
- Current AP

→ Non user input values

- ◆ The character sheet must calculate and display the following information.
 - Secondary attributes (default level 5, add according the the formulas below)

Attribute	Formula
Awareness	<i>(Burglary + Hunting + 2 * Shoot)</i>
Charisma	<i>(Burglary + Deceive + Rapport + Stealth)</i>
Defense	<i>(Engineering + Fight + Physique + Stealth)</i>
Endurance	<i>(2 * Athletics + Fight + Survival)</i>
Health	<i>(Alchemy + Physique + 2 * Survival)</i>
Knowledge	<i>(Alchemy + Engineering + 2 * Lore)</i>

Magic Attack	(Arcana + Deceive + Rapport + Will)
Magic Defense	(Arcana + Engineering + Lore + Will)
Magic Heal	(Alchemy + Deceive + 2 * Empathy)
Magic Reach	(Arcana + Empathy + Rapport + Will)
Melee Attack	(Fight + Hunting + Physique + Survival)
Ranged Attack	(Athletics + Burglary + Hunting + Shoot)
Max Action Points (AP)	2 + (Knowledge + Endurance) x .2 (rounded down)
Max Vigor	2 * (Magic Reach + Endurance) + character level
Max Resolve	2 x Health + 3 x character level
Magic Range	(Magic Reach) x 0.5 (rounded down)
Movement	2 + (Awareness + Charisma + Endurance) x 0.1 (rounded down)

Users

→ Account

- ◆ Users must be able to register for an account.
 - Users must log in through Google.
 - Accounts must have a username.
 - Users must be allowed to modify their usernames.
 - Usernames must be unique.
 - Users could log in through Discord.
 - Users could log in through Twitch.
 - Users could have a profile picture from their login method.

→ Character Sheet Capabilities

- ◆ Users must be able to create any number of characters through character sheets.
 - Users must be able to upload art of their character.
 - Users must be able to modify the character in the character sheet view.
 - Users must be able to sort their character view.
 - Users must be able to print out character sheets in PDF format.
 - Users must be able to create copies of characters.
 - Users must be able to delete characters.

→ **Social Capabilities**

- ◆ Users must be able to search for other users based on username.
- ◆ Users must be able to follow other users.
- ◆ Users must be able to see a list of who they follow.
- ◆ Users must be able to see a list of who is following them.
- ◆ Users that follow each other must become [friends](#).
- ◆ Users must have a [friends](#) list.
- ◆ There will not be chat functionality.
- ◆ There will not be matchmaking.

→ **World Capabilities**

- ◆ Users who are acting as a [GM](#) in their own world have the following abilities.
 - [GMs](#) must be able to send invite codes.
 - Invite codes must be unique per [world](#).
 - Invite codes could be done as QR codes.
 - [GMs](#) must be able to invite [friends](#).
 - [GMs](#) won't be able to invite anyone other than [friends](#).
 - [GMs](#) must be able to remove players from the [party](#).
 - [GMs](#) won't have the ability to delete other people's characters.

→ **Admin Capabilities**

- ◆ Admin must have access to the user view of the site.
- ◆ Admin must have access to an administrator page.
- ◆ Admin must be able to access a database of players and be able to modify it.
 - Admin must be able to remove [worlds](#).
 - Admin must be able to remove players.

Nonfunctional Requirements

(Author: Jason)

→ Hardware:

- ◆ The AWS servers should be sufficient for hosting the website and database.
- ◆ All computers that support modern browsers should be sufficient for using the website from the client end.

→ Usability:

- ◆ The website must be able to host five hundred users.
- ◆ It must be usable with the major web browsers (Safari, Firefox, Chrome, Edge).
- ◆ It must have a color-blind friendly color scheme. All images must have alternative text.

→ Reliability:

- ◆ Must not crash or break even when there are hundreds of users online. All data must be saved correctly even with large amounts of traffic.
- ◆ Character sheets must save edits anytime there is a change made.

→ Performance:

- ◆ The website should have consistent response times regardless of current online users.

→ Supportability:

- ◆ The code must be well organized and well commented.
- ◆ It must also have clear documentation in order for continual support to remain easy.

Potential Risks and Challenges

(Author: Cam)

- If a feature to autosave a character sheet is not properly implemented, users could lose their progress.
- UI could appear distorted on mobile devices.
- Data loss or corruption could occur in the event of a database or server issue.

Development Timeline

(Author: Jason)

- 9/12 Requirements Draft
- 9/19 Requirements Final
- 10/3 Functional Spec. Draft
- 10/12 Functional Spec. Final
- 11/9 Manual User Manual Draft
- 11/16 Manual User Manual Final
- 11/21 Poster Poster Draft
- 11/23 Poster
- 11/28 Poster Written Report-Out
- 11/30 Present Poster Final
- 12/7 Present Tech Document Draft
- 12/14 Software Deployed & Tech. Manual Final

Glossary

(Given by Client, Author: Cam)

- **Fate Point** - The “currency” of the game...each player starts each session with 3 fate points and can spend them during the session to power various abilities.
- **Aspect** - A two to six (approximately) word phrase describing something about a character
- **High Concept** - A character’s primary aspect that describes the identity of the character. Examples include “Fastest guns in the west” or “Thief with a heart of gold”.
- **Resolve** - A character’s *Resolve* represents the overall will-to-go-on of the character. This incorporates ideas such as the character’s current state of physical health, mental health, and determination.
- **Vigor** - A character’s *Vigor* represents the energy that taking actions during battle (and, in some cases, outside of battle) can reduce. This includes maneuvers and actions, casting spells, or putting forth extra effort. The Vigor is described as part of the actions for each skill, and it is another valuable resource but is recovered when the characters are given a chance to rest.
- **Action Points** - Each character begins each round of combat with a number of *Action Points* or “AP” which can be spent to perform various tasks and actions during combat
- **High Concept** - A character’s primary aspect
- **Trouble** - A character’s aspect that can get them into trouble (examples: “Never backs down from a fight” or “Drinks like a sailor”)
- **GM** - Game Master. The GM controls all aspects of the game besides a player character’s chosen actions.
- **Campaign** - A series of individual experiences that take place within a role playing game.
- **World** - A setting in which a [campaign](#) for a given role playing game takes place.
- **RPG** - A type of game in which players assume the roles of characters in a fictional world.
- **Party** - A group of users sharing an RPG world. Players must be following each other in order to join a party.
- **Friends** - Players who mutually follow each other on the platform.
- **Character Sheet** - The character sheet displays a character’s general information, skills, status effects, equipment, and attributes (view only).