**DNDeity**

**Team 22 - Project Backlog**

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# **Project Statement**

Playing tabletop rpgs is a rather large time commitment and most people would like to spend the time they have together playing the game. Unfortunately, most games of this nature require a lot of bookkeeping and planning for a game to run smoothly. On top of that, it gets bothersome to keep track of all the various thing that happen in a game. DnDeity makes the whole process of playing a tabletop game a lot simpler as it keeps all the game information in one place, modifies characters in real time, and helps create in-game content.

# **Background Info**

**Audience**

Our target audience consists of Dungeons and Dragons players and dungeon masters. Players of the game want an easy way to create characters and play the game, while dungeon masters want a tool that lets them build campaigns and manage game sessions. Our goal is for DnDeity to be intuitive to use without sacrificing complexity, so that newcomers and veterans of Dungeons and Dragons can use our app.

**Alternatives**

There are a few other applications on the market right now with some of the same functionality such as DnD Beyond and Roll20. They allow their user to track character and game information in an online setting. DnD Beyond focuses more on character management, while Roll20 deals more with providing a virtual tabletop.

**Limitations**

Most of the existing tools do perform some aspect of the game well enough, the problem being that they’re not all unified in one place. Furthermore most of these tools and programs have a rather large barrier to entry as their interfaces are difficult to master. Our goal is to coalesce these tools into one easy to use application, as well as adding further functionality missing from other tools.

# **Functional Requirements**

1. As a user, I would like to be able to register for a DnDeity account
2. As a user, I would like to be able to login to DnDeity
3. As a user, I would like to be able to reset my password
4. (If time allows) As a user, I would like to be able to send private messages to other users
5. As a player, I would like to be able to create a character sheet and set details such as a character’s name, ability modifiers, level, class abilities, and description.
6. As a player, I would like to update and delete my existing character sheets.
7. As a player, I would like a level up function that automates the updating of my character sheet
8. As a player, I would like to view and update my inventory.
9. As a player, I would like to see a list of spells available to me and use them.
10. As a player, I would like to be able to join a game
11. As a player, I would like my character to be able to perform attacks and actions available to me during a game.
12. As a player, I would like to update my own pictures for my avatar
13. As a dungeon master I would like to be able to make a lobby to host a game
14. As a dungeon master I would like to be able to make a map
15. As a dungeon master I would like to add monsters and events to maps
16. As a dungeon master I would like to see what spells the players use
17. As a dungeon master I would like to see the results of player rolls
18. As a dungeon master I would like to have initiative order sorted for me
19. As a dungeon master I would like to add effects to the players
20. As a dungeon master I would like to make new assets for the map
21. As a dungeon master I would like to update the stats of monsters in fights
22. As a dungeon master I would like to set restrictions on character creation
23. As a dungeon master I would like to add monsters to bestiary

# **Non-Functional Requirements**

**Architecture**

Our application will consist of a React JS frontend and a Python Flask server for the backend. We will use a MySQL for our database. The frontend will make API requests to our backend server whenever information is needed, and our backend will query the database to find the necessary data. Once that is done the server will send a response back to the frontend. We will also need to write a program that makes requests to the D&D5e API. This program will get information about monsters, spells, and more and insert it into our database. By storing this data we avoid having to make repetitive calls to their API.

**Hosting**

The MySQL database will be hosted on Amazon Relational Database Service (RDS), and the Python Flask server will be deployed on Amazon Elastic Beanstalk. The React JS frontend will be hosted in Amazon S3. Since everything will be hosted on AWS, everything will be high performance and inexpensive.

**Usability**

The entire purpose of the software is to provide a simpler way to play dungeons and dragons that is easier to navigate than the paper sheets we have left behind. Part of the reason that people may come to this app is because the others are a bit unwieldy. The interface will be approachable and easy to pick up without sacrificing the functionality required to play the game.

**Security**

While DnDeity will not store sensitive user information, our application will still be secure. We will require that requests to our service be authenticated and sanitize our data inputs in order to maintain the integrity of our database. Users will not be able to alter or delete the content of other users.

**Future Updates**

Dungeons and Dragons is notorious for adding new content well after its initial release. Part of our solution should deal with being able to quickly adapt new books to the application. Since the app will be hosted on AWS, it is completely scalable, accommodating as many clients as necessary.