**Project Proposal**

**DND Decks**



Application made for players who play Dungeons and Dragons. The application will allow players to access the game's spells and items as if they were digital playing cards. While also allowing players the ability to calculate value and homebrew support.

**Submitted to**

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**Introductions: Client Specifications and Product Description**

DND (Dungeons and Dragons) is an RPG (Role-Playing-Game) tabletop game that contains a huge amount of fictional content alongside player-made content: Homebrew. The game is played with a group of people and is run by a DM (Dungeon-master) or Gm (Game-master), the GM makes the world in which the player’s characters play in and crafts and adventure or what is called a campaign. The players create a character of desired specifications such as name, race, class, ability, etc. This character is used throughout the adventure the game master has crafted and with the role-playing elements, the players turn the game to life using their imaginations. There are so many choices and options on the player's characters that the player may lose track at some point with all of that, not to mention the rules and calculations that the player will have to make during the campaign. As a possible result, the fact of keeping track of everything may cause the player to lose interest in the game.

To help the player, I have made a solution that may assist the player with his/her character inventory and spell system. There are many programs and solutions out there that all have many great features and all, but I have come up with a solution that makes it easier and more visually appealing for players to organize and read with more understanding of an item or spell. The solution displays these elements in a card format, which contains all the information on the item or spell. Alongside the card system is a calculation system to calculate values based on the player’s character properties and values. The program solution will also be able to support homebrew for player-made content. The really useful part for homebrew players will be that all elements will be stored into separate JSON files, which will make the elements very accessible and easy to use.

The project will make use of Newtonsofts.Json.Net open-source library to store all the elements in a JSON file format, similar to XML file storing system but more efficient, quicker, and easier to read. The application main form will use a FlowLayoutPanel control to setup all the character profiles, which will contain the data needed to make calculations and list what items and spells the character has. There will be separate forms that will contain the elements so the user can drag and drop what they want or need. Each element will be able to show all the information on the element and show a small temporary pop-up of the card element that will be more visually viewable when hovering over the element.

**Project Goals and Objectives**

DnD Decks is a tool for players who play Dungeons and Dragons. The tool will allow for players to keep track, calculate values, and understand what items and spells they have by having the items and spells organized into digital cards. Essentially the program will profile decks of cards for the user and each card will provide easy to understand information.

The interface will start with the profile selection screen, so the user selects one of their profiles and the page tab will change to a profile tab, which has saved information on a few player values and a card view box. This page tab will also contain buttons to open up pop up forms that will contain the item and spell cards list; from this form, the user will be able to drag and drop cards from the pop up to the profiles inventory and spells list. Once the user is done he or she can save his or her work.

In the Planning phase, In GitHub, I will set up a project board to plan all the development phases’ plans.

The development phase will consist of first designing the UI. After that the scripting phase will begin by writing the profiling system, then the saving system using JSON.Net. Then after that work on the item and spell element cards, which will each be individual JSON files, but I may need to write a separate application to get the basic spells into individual files, however, this part shouldn’t take long.

The end product should come around after polishing the code and all pre-requisite plans are finished, but if there is enough time then I might also implement some small features to go along with the finished project. If the product is successful then version 2 will come out with cross-platform support, but this will be worked on separately from the original project.

Before the release of this project, many tests will be done to provide quality assurance and a private beta will be open for suggestions and bug reporting. Once the project is working as purpose then there will be a final piece of polishing before presenting. The expected release date – (2-3 weeks)

In this project I am hoping to learn about project development, more understanding of Json for future use, and the implementation of ideas and work will hopefully make future projects much easier to approach.

**Tools requirements**

**Hardware**

* Computer with
  + 4 cores, 3.3 GHz CPU or better
  + NVIDIA Quadro GPU or better
  + At minimum 12GB of ram
* Keyboard and mouse
* 2 displays

**Software**

* (Microsoft Windows OS) Windows 10 Pro and no later.
* .Net Framework 4.7.2
* GitHub

**Conclusion**

**Capabilities**

The program can make decks of cards for the individual user and display those cards when needed. Homebrew Support, basically DND moding; Element cards will be file storable and modifiable, as well as the capability to add your own. The program also supports almost unlimited profiles; I say almost because that will vary in storage space. The application does allow for calculations based on the digital card properties and player properties. The wonderful benefit of this application is that it’s FREE!

**Limitations**

May or may not be fully completed with all quality of life features such as search bars, categories, or full calculations system and this also goes for any suggested features during beta.

More features planned for version 2 of project, which will be a rewrite of the original project but rewritten on the Uno-Platform, alongside that a lot more features will be introduced and other RPG’s such as Elite dangerous RPG will be getting fully developed decks systems and creation systems.

**Deliverables**

**Deployment and Maintenance**

The program will be deployed once beta testing and any issues have been resolved. Any for maintenance any issues found by users will be issued on the GitHub project page. Updates will be released to the software periodically once released.

Deployment, will be deployed on GitHub for download and later on a website.

**Deliverable Content:**

1. Released software will be available as .exe [executable]
2. Open-source Code on GitHub.