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D&D Combat Encounter Difficulty

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Chapter 1

Introduction

1.1 Document Purpose

The scope of this document is to explain and illustrate how to properly use the D&D Combat Encounter Difficulty application.

1.2 How to use this document

The chapter Introduction presents its purpose and how to navigate the document. The second chapter, Overview, offers a short overview of the application. The third chapter Installation & Set-up presents the System Requirements needed to run the application, together with details on how to install the application. The fourth chapter Usage Instructions provides informations on how to use the application, with a general GUI description, followed by an in-depth descriptions of the features.

Chapter 2

Overview

As a short overview, this is a UWP (Universal Windows Platform) [4] desktop application created with the purpose of computing the encounter difficulty for the table-top role playing game Dungeons & Dragons 5e [5].

It offers a wide range of monsters from which combat composition can be made, as well as the options of selecting the party members level and number.

As soon as a monster is added to the Encounter Info list, or when a change is made in the party, the difficulty of the encounter and the experience gained from it will be updated (the adjusted experience required for a precise computing is also updated). The rules for doing the computations were taken from the official source [1].

The last state of the application is saved, therefore the application starts with the last active encounter and party formation.

Chapter 3

Installation & Set-up

In order to install the application, the following steps must be followed:

1. Enable device for development: Settings → Update & Security → For Developers → Enable "Install apps from any source, including loose files" option
2. Install "App Installer" [3] application from Microsoft Store
3. Double-click the application package and select "App Installer" for opening the package

After the above mention steps were done, the application can be started and used without any additional set-up.

3.1 System requirements

The following are the minimum system requirements for using this application:

- Operating System: Windows 10 or higher
- CPU: 1 gigahertz (GHz)
- RAM: 2 GB
- Hard disk space: 50 MB

A stable internet connection is also required in order to use the application.

Chapter 4

Usage Instructions

This chapter will focus on providing a detailed explanation on how to use the application.

4.1 GUI Description

The interface can be broken down in several highly informative sections.

The start-up screen 4.1 shows on the right side the first page of alphabetical sorted monsters together with the monster search bar, while the left part shows in the top-left part the party details, on the middle-left part the current encounter informations (or instructions when no monster is selected in the encounter) and on the bottom-left side the details regarding the combat difficulty and experience gain.

The screenshot displays the application's start screen with a parchment-like background. It is divided into several functional areas:

- ~Group Info~**: Located in the top-left, it includes a 'Party's XP Threshold' section with options for 'Easy: 25 exp', 'Medium: 50 exp', 'Hard: 75 exp', and 'Deadly: 100 exp'. Below this are dropdown menus for 'Players' (set to 1) and 'Level' (set to 1).
- ~Encounter Info~**: In the middle-left, it features a table with columns 'Name', 'CR', and 'XP'. Below the table, instructions state: 'The encounter contains the selected monsters, with their **Combat Rating** and **Experience Points**. To create an encounter, add monsters from the right list, by clicking an item. Monsters can be removed from the left list, by clicking an item.'
- Bottom-Left Summary**: Shows 'Difficulty:' and 'Total XP: 0 exp (0 per player)', followed by 'Adjusted XP: 0 exp (0 per player)'.
- List of Monsters**: On the right, there is a search bar labeled 'Search for a monster...' and a 'Page Size' dropdown set to '10'. Below these is a table listing monsters with columns: Name, CR, Size, Type, and Alignment.
- Navigation**: At the bottom right, there are 'Previous' and 'Next' buttons.

Name	CR	Size	Type	Alignment
Aboleth	10	Large	aberration	lawful evil
Acolyte	0.25	Medium	humanoid	any alignment
Adult Black Dragon	14	Huge	dragon	chaotic evil
Adult Blue Dragon	16	Huge	dragon	lawful evil
Adult Brass Dragon	13	Huge	dragon	chaotic good
Adult Bronze Dragon	15	Huge	dragon	lawful good
Adult Copper Dragon	14	Huge	dragon	chaotic good
Adult Gold Dragon	17	Huge	dragon	lawful good
Adult Green Dragon	15	Huge	dragon	lawful evil
Adult Red Dragon	17	Huge	dragon	chaotic evil

Figure 4.1: Start Screen

Each monster from the monsters section has the following informations displayed:

- Name: name of the monster

- CR: enemy combat rating
- Size: size of the enemy
- Type: race details of the enemy
- Alignment: details regarding how it behaves in report to laws and in report with the rest of the world

Top-left part 4.2 show how many players are in the party, their level and XP informative threshold in report to the difficulty of the encounter.

The screenshot shows a section titled '~Group Info~'. On the left, there are two dropdown menus: 'Players:' with the value '4' and 'Level:' with the value '6'. On the right, under the heading 'Party's XP Threshold', there are four difficulty levels with their corresponding XP thresholds: 'Easy: 1,200 exp', 'Medium: 2,400 exp', 'Hard: 3,600 exp', and 'Deadly: 5,600 exp'.

Figure 4.2: Start Screen

Middle-left part 4.3 show the currently selected monsters together with their CR and XP, or informations 4.4 on how to use the application if no monster is selected.

The screenshot shows a section titled '~Encounter Info~' containing a table with the following data:

Name	CR	XP
Acolyte	0.25	50
Air Elemental	5	1800
Assassin	8	3900
Berserker	2	450

Figure 4.3: Encounter Informations

The screenshot shows a section titled '~Encounter Info~' with the following text:

The encounter contains the selected monsters, with their **Combat Rating** and **Experience Points**.

To create an encounter, add monsters from the right list, by clicking an item.

Monsters can be removed from the left list, by clicking an item.

Figure 4.4: Usage Instructions

Bottom-left part 4.5 show the computed difficulty of the encounter, along with the experience (both total and per player) and the adjusted experience (which is computed after taking into account the number of enemies, as this increases the difficulty even further).



Figure 4.5: Difficulty Informations

4.2 Features

The features offered by the D&D Combat Encounter Difficulty application are the following:

- monster options navigation (with 4 possible page sizes)

Navigation is done with the "Previous" and "Next" buttons and the page size can be set from the top-right drop-down menu 4.6.

List of Monsters:

Page Size:

10
25
50
100

Name	CR	Size	Type	Alignment
Dire Wolf	1	Large	beast	unaligned
Djinni	11	Large	elemental	chaotic good
Doppelganger	3	Medium	monstrosity	unaligned
Draft Horse	0.25	Large	beast	unaligned
Dragon Turtle	17	Gargantuan	dragon	neutral
Dretch	0.25	Small	fiend	chaotic evil
Drider	6	Large	monstrosity	chaotic evil
Drow	0.25	Medium	humanoid	neutral evil
Druid	2	Medium	humanoid	any alignment
Dryad	1	Medium	fey	neutral

Previous

Next

Figure 4.6: Navigation and Page Size Example

- monster search option

A search in the monster list can be done from the top-right search bar 4.7.

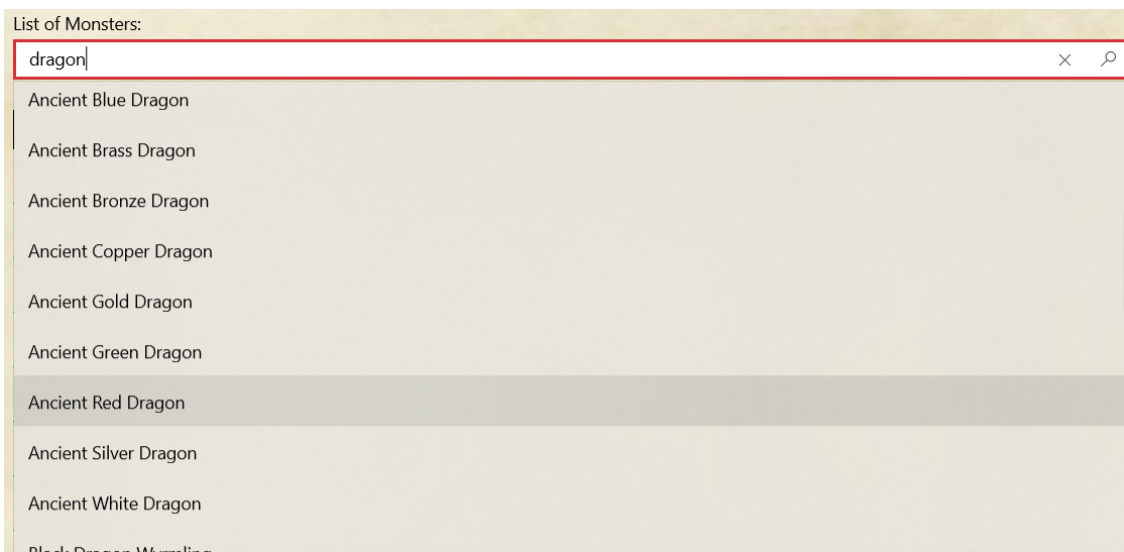


Figure 4.7: Monster Search Example

- players number and level setting

The group information (party members number and level) can be updated with the drop-down menus from top-left part 4.8.

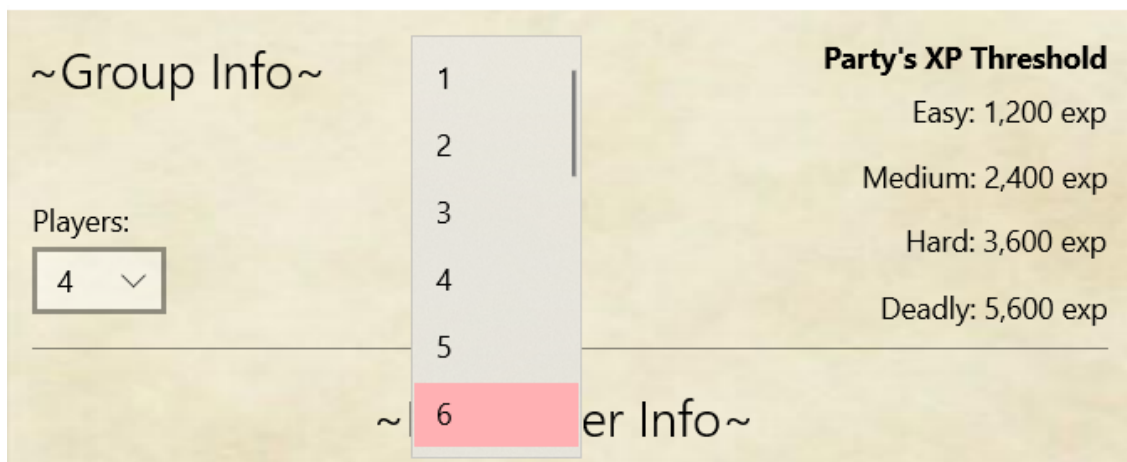


Figure 4.8: Group Information Setting

- monster add/removal to/from encounter informations with left-click
- real-time computation of the encounter difficulty informations
- encounter informations persistence from one application session to another

4.3 API Used

The API used for fetching the required monster's data is the free to use "D&D 5e API" [2].

Bibliography

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