# Requirements Specification

## Project Description

This project is a standalone desktop application developed using JavaFX and Java to create an application for tracking required information for tabletop game combat in an automated and organized manner.

## Requirements

Graphic JavaFX Interface

|  |  |
| --- | --- |
| Description | The application must have a graphics interface created using JavaFX to display information to the user. |
| Source | Requirements Provided by Team |
| Priority | Priority Level 0: Essential Feature |

Creature Addition and Removal

|  |  |
| --- | --- |
| Description | The application needs to be able to add creatures to the creature field and remove creatures from the creature field. |
| Source | Requirements Provided by Team |
| Priority | Priority Level 0: Essential Feature |

Creature Identification

|  |  |
| --- | --- |
| Description | The application needs to be able assign names and images to creatures for the identification of them on the creature field. Creatures should also be outlined with a portrait depicting them as allied, enemy, or neutral. |
| Source | Requirements Provided by Team |
| Priority | Priority Level 0: Essential Feature |

Health Tracking

|  |  |
| --- | --- |
| Description | The application needs to be able to assign a hit point value to each creature and maintain this hit point calculation through damage or healing done to the creature. |
| Source | Requirements Provided by Team |
| Priority | Priority Level 0: Essential Feature |

Initiative Tracking

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| --- | --- |
| Description | The application must assign turn order initiative values to each creature and sort them accordingly on the creature field. |
| Source | Requirements Provided by Team |
| Priority | Priority Level 0: Essential Feature |

Bonus Health System

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| --- | --- |
| Description | The application contains a system for assigning temporary HP according to the standards used in 5th Edition Dungeons and Dragons. Temporary HP may only come from one source, adding new temporary HP removes existing temporary HP. Damage taken is taken from temporary HP before normal HP. |
| Source | Requirements Provided by Team , D&D 5e |
| Priority | Priority Level 1: Desired Functionality |

Condition Tracking

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| --- | --- |
| Description | The application can assign conditions to creatures from a list of pre-existing conditions. These conditions are tracked in a list in the creature information. |
| Source | Requirements Provided by Team |
| Priority | Priority Level 1: Desired Functionality |

Save and Load Functionality

|  |  |
| --- | --- |
| Description | The application can save existing combats of creatures and load combats of creatures from saved files. |
| Source | Requirements Provided by Team |
| Priority | Priority Level 2: Stretch Goals |

## Use Case Modeling

A diagram of a system

Description automatically generated

Add Creature

|  |  |
| --- | --- |
| Actors: | * General User |
| Goal: | * Create a Creature Representation |
| Preconditions: | * None |
| Scenarios: | * Adding an allied creature * Adding a neutral creature * Adding an enemy creature |
| Exceptions: | * None |

Remove Creature

|  |  |
| --- | --- |
| Actors: | * General User |
| Goal: | * Remove a Creature Representation |
| Preconditions: | * Creature Must Exist |
| Scenarios: | * Removing an allied creature * Removing a neutral creature * Removing an enemy creature |
| Exceptions: | * None |

Fill Out Creature Information

|  |  |
| --- | --- |
| Actors: | * General User |
| Goal: | * Add Information to a Creature |
| Preconditions: | * Creature Must Not Exist, Creature Creation Dialog Must Be Open |
| Scenarios: | * Set Creature Health * Set Creature Initiative * Set Creature Name * Set Creature Image * Set Creature Alignment * Set Creature Temporary HP |
| Exceptions: | * Temporary HP can be changed on created creatures |

Damage Creature

|  |  |
| --- | --- |
| Actors: | * General User |
| Goal: | * Reduce Creature’s Health |
| Preconditions: | * Creature Exists |
| Scenarios: | * Damage Creature without Temporary HP * Damage Creature with Temporary HP * Damage Creature with 0 HP |
| Exceptions: | * None |

Heal Creature

|  |  |
| --- | --- |
| Actors: | * General User |
| Goal: | * Increase Creature Health |
| Preconditions: | * Creature Exists |
| Scenarios: | * Heal Creature with Full Health * Heal Creature Missing Less Health Than Healed * Heal Creature Missing More Health Than Healed |
| Exceptions: | * None |

Give Creature Temporary HP

|  |  |
| --- | --- |
| Actors: | * General User |
| Goal: | * Give Creature Temporary HP |
| Preconditions: | * Creature Exists |
| Scenarios: | * Add Temp HP to Creature with Temp HP * Add Temp HP to Creature without Temp HP |
| Exceptions: | * None |

Add Creature Condition

|  |  |
| --- | --- |
| Actors: | * General User |
| Goal: | * Add Condition to Creature |
| Preconditions: | * Creature Exists |
| Scenarios: | * Adding first condition * Adding additional condition |
| Exceptions: | * None |

Remove Creature Condition

|  |  |
| --- | --- |
| Actors: | * General User |
| Goal: | * Remove Condition From Creature |
| Preconditions: | * Creature Exists, Creature Has Condition |
| Scenarios: | * Removing a Condition |
| Exceptions: | * None |

Save Combat

|  |  |
| --- | --- |
| Actors: | * General User |
| Goal: | * Save Open Data |
| Preconditions: | * None |
| Scenarios: | * Saving Single Creature * Saving Multiple Creatures * Saving Empty Field |
| Exceptions: | * None |

Load Combat

|  |  |
| --- | --- |
| Actors: | * General User |
| Goal: | * Load Previously Saved Data |
| Preconditions: | * Field is Empty |
| Scenarios: | * Loading Single Creature * Loading Multiple Creatures * Load Nothing |
| Exceptions: | * None |

View Existing Creatures

|  |  |
| --- | --- |
| Actors: | * General User |
| Goal: | * Have Creatures Displayed |
| Preconditions: | * A Creature Exists |
| Scenarios: | * Looking At Creature Field |
| Exceptions: | * None |

# Design Specification