Ask yourself:	Also known as:
Why am I doing this?	Purpose

Table-Top Role-playing Games (TTRPGs) allow for a group of friends to meet up and have a fun time imagining and role-playing various characters and interactions in a large variety of scenarios. One way to keep order in this controlled chaos is to have a well-maintained and accurate central map for interacting with the fictional world. Several solutions for managing this map are high-quality, but are designed with a purely 2-dimensional vision. However, many TTRPG systems allow for movement in a 3-D space. Representing 3-D movement in these solutions is difficult, due to the 2-D top-down view of the map these software solutions provide. As such, it can lead to infighting and make these scenarios much more clunky and undesirable. Thus, the purpose of this project is to fill this niche: Making a TTRPG-system agnostic program that focuses on movement in a 3-D space. This will allow both the players and the Gamemaster to quickly and efficiently deal with these scenarios and adjust the game accordingly, without the need for undoing events or other mishaps due to a lack of the third dimension.

What goal(s) does this project support, what problems are solved, what needs are met?	Goals & Objectives

- Develop a Browser-based 3-D virtual tabletop system
- Support any TTRPG system, not just Dungeons and Dragons
- Provide intuitive ways to interact with and edit the 3-D space
- Enhance player/Gamemaster immersion and spatial awareness

How does this project fit with other solutions that available?	Scope, Project Context, Project Dependencies

This product will be a standalone solution to this problem. I plan on no integrations with similar products or other products in the space, with the exception of importing of some assets (Images/textures) for use in the 3-D space.

This product will:

- Use browser-based Clients 3-D environment, And item manipulation in this environment
- Allow map Creation
- Utilize modern Browser Technology

This product will not:

- Implement AI Features on launch

What is the expected benefit from this project?	Expected Benefits, Business Case, Value, Success Criteria

- Streamlined TTRPG Gameplay
- Enhanced Player and Gamemaster immersion
- All parties' spatial awareness has been improved

What am I going to do?	Scope

- Develop/Utilize a lightweight 3-D rendering system for browsers
- Allow basic user management for Gamemasters
- Implement Real-Time synchronization between all clients via Sockets
- Create a system for 3-D map Creation
- Use the above system for 3-D space manipulation

Who is affected by this and who must be involved?	Stakeholders

1. Gamemasters
2. Players
3. The Computer Science Department

How will we know when I am done and whether the project was successful?	Success Criteria
• The program supports 3-D manipulation of a space • Users can create custom maps • Updates to all clients in a reasonable speed (>200ms) • Works on all major browsers (Chromium, Gecko, Safari) • Minimal crashing during use • User Management/Permissions are fully functional • Data is correctly saved between uses • Data is managed securely	
Completed by:	Parker Hoffman
Date:	1/24/2026
Project Title / ID Number	GamemasterScrawl/5
Approved by:	Dr. Cheri A. Coder