Project Charter

Project Overview

The goal of this project is to create a D&D World Generator that can produce randomized, unique maps with robust environmental storytelling elements. The map generator will feature two distinct views: a "Player View" with a "Fog of War" effect and a comprehensive "Dungeon Master View." The primary objective is to create an immersive D&D gameplay experience, with the generator taking care of world-building and leaving room for players and the Dungeon Master to focus on the narrative and characters.

Requirements

1. Random Map Generator:
    - The system should generate random maps without needing any user input regarding layout such as placing walls or rooms.
    - The maps should be diverse and unique to maintain a high replayability value.
    - The generator should consider a variety of terrain and geographical elements, incorporating them organically into the generated map.

2. User Views:
    - There should be two distinct user views:
        - Player View: This view should feature a "Fog of War" effect, obscuring parts of the map that the player's character has not yet explored.
        - Dungeon Master View: This view should present the entire map, allowing the Dungeon Master to navigate the unfolding narrative.

3. Narrative (Environmental Storytelling):
    - Each map should have embedded environmental storytelling elements that contribute to the narrative of the game. These can be through the placement and structure of geographic features, the layout of structures, or even the presence (or absence) of certain creatures or items.
    - The generator should create a sense of history and depth in the map, making the environment an active part of the storytelling.
    - These environmental cues should be open to interpretation by the Dungeon Master and players, allowing them to weave these elements into their unique story.

4. Theme:
    - The theme for the maps is up to the development team. It could range from traditional fantasy settings to more exotic or unique themes. The theme choice should be communicated and approved by the client.
    - The theme chosen should influence the narrative and the elements generated in the map.

5. Resource and Timeline:
    - The project is estimated to take around 900 hours of work to complete, distributed among the six-person team.
    - The project has a budget for additional resources. The team can request paid content from the client, within a budget of around $20.

Project Work Breakdown

The project will be divided into six stages, allowing us to effectively manage resources and meet the estimated completion time of 900 hours.

- Project Kickoff and Requirements Review: Understanding the project requirements and establishing the project team (20 hours).

- Research and Planning: Conducting necessary research and planning the project timeline and roadmap (80 hours).

- Design and Development: Creating the random map generator algorithm, developing user views, and incorporating environmental storytelling elements (550 hours).

- Integration and Testing: Combining all components into a cohesive system and performing comprehensive testing (150 hours).

- Deployment and Client Review: Preparing for deployment, presenting the final product to the client, and gathering feedback (50 hours).

- Project Wrap-up: Completing final documentation, process review, and project handover (50 hours).

Deliverables

- Web-based UI for the Dungeon Master (DM):
    - A control panel for the DM, who will be the only one operating the system on a computer.
    - A player view projection/display controlled by the DM, which will have a "Fog of War" effect.
    - A feature that allows the DM to select spaces on the map where players exist, removing the fog of war in those areas on the player view.
    - A comprehensive DM view that always displays the entire map.

- Backend for Dungeon Map Generation:
    - A system that handles the creation of randomized, unique maps with environmental storytelling elements.
    - The backend will generate maps without any user input for layout, ensuring a diverse and unique gameplay experience.

Supporting documentation will also be provided, outlining how to use the generator, its features, and the underlying logic behind map generation and environmental storytelling.

Project Management

Roles and responsibilities will be assigned to the six members of the team during the project kickoff, after an initial goal for the body of work has been realized. Regular meetings will be held to discuss progress, address any issues, and adjust plans as necessary. (not set, just writing something down) The team plans to meet on Monday morning's from 12:00pm to 3:00pm. The first 30 minutes or so of this Monday session is intended to review the work of the previous week and plan for the work of the coming week. The team also plans to set aside time on Wednesdays to work collaboratively and review progress of current tasks and plan for further/upcoming work.

Task assignments, progress tracking, and communication will be facilitated through a central repository hosted on Gitlab. The team has chosen Gitlab as our 'single source' of truth because we are the most familiar and confident with it. The fact that the team has license to most, if not all of Gitlab's features, has separated it from other Version Control tools as the team's first choice. The team has also considered GitHub as a secondary choice.

The team will also make use of communication channels to facilitate collaboration. Discord will be primarily used, and formal communication with clients, tutors and other individuals associated with the project will be done through emails and organized in-person meetings.

With regards to the project management methodology the team has adopted, the team is leaning towards the Waterfall methodology however the team's commitment to this choice will be incredibly lenient until a more concrete and vivid goal for the product has been realized.

Tools, Resources and Methods

The project has a budget for additional resources. The team can request paid content from the client, within a budget of around $20.

The following is a list of software and tools we will likely use to undertake the project:

- GitLab
- Discord for communication
- Java for back-end
- Web-based front end (Javascript, React, CSS, HTML)
- IDEs
- Frameworks
- Gitlab workflow

How would we best do a design review at the midpoint?

To conduct an effective design review at the midpoint, our team must adhere to several key steps.

Firstly, it is imperative to seek feedback from the client. By doing so, we can ensure that our understanding of the requirements is aligned with the client's expectations. This feedback will also serve as a valuable point of comparison as we progress through the design review process.

Secondly, we should diligently document the rationale behind each design decision as they are made. Utilizing a centralized platform, such as Gitlab, will establish a single source of truth for this documentation. With the design decisions justified and recorded, we can thoroughly review the work completed up to that point, analyzing the effectiveness of our choices. We will also engage in discussions regarding how the justifications and execution of ideas have influenced the final outcomes.

Additionally, the team should openly discuss various elements of our workflow that have impacted our production, including communication methods, meeting schedules, and the use of Gitlab etc. By carefully considering both observable positive and detrimental effects on production, as well as subtler influences, we aim to optimize our design process moving forward by acknowledging and learning from mistakes made.