Project Plan

D&D Character Creator

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Version	:	3
State	:	Finished
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Version History

Version	Date	Author(s)	Changes	State
1	05-03-2024	Marijn Colen	Project assignment up to Strategy	Starting
2	06-03-2024	Marijn Colen	Rest of Project 3assignment Project organisation	In progress
3	08-03-2024	Marijn Colen	Moved some text from Goal of the project to Context Rewrote Strategy Activities and time plan Testing strategy and configuration management	Finished

Distribution

Version	Date	Receivers
3	08-03-2024	COEF, SCHE, OLIA

Contents

1.   Project assignment

1.1   Context

For Semester 3 Course Based, we all have an individual project we will work on for the semester. There is a list of requirements for this project, but as long as the project conforms to these requirements, the rest of the project can be whatever we, as students, want it to be. I have decided to make a Dungeons & Dragons character creator application for my project.

The main problem my application aims to tackle is the time it takes to create characters, specifically for one-shots. A one-shot is a single, self-contained session of D&D, which is typically played in just one session, allowing players to experience a short adventure without committing to a long-term campaign. There are two major problems with creating characters for one-shots.

- Creating characters can take a lot of time because of all the information you have to write down manually
- When you participate in multiple one-shot sessions, you almost always have to make an entirely new character for each one, as it is hard to change a character to fit each one-shot after you've already played the character in a different one-shot.

1.2   Goal of the project

My application aims to fix these issues by making it easier to create a digital character, using source material from both official and unofficial sources. The application also makes it easier to use the same character in multiple one-shots, as it will be possible to 'reset' your character, making it seem like you have never used the character before. It is also possible to change your character's level, both upward and downward, making it easier to fit the requirements for any one-shot.

1.3   Scope and preconditions

Inside scope:	Outside scope:
1 Creating a character using the official D&D 5th edition rules.	1 Playing D&D
2 Making custom homebrew content	2 Writing a D&D campaign
3 Creating a group of players and managing their characters as Dungeon Master	3 Managing a D&D campaign
4 Viewing your characters at different levels	4
5 Viewing your character's skills and traits	5

Playing D&D is outside of the scope of the application. The application is meant as a tool you can use while playing the game to keep track of the abilities your character has. As actually playing the game is often done at a table with friends using paper and a grid paper, this is hard to digitalize and would take a lot of time, hence why it is not part of this application. While playing the game, every player has their own character sheet, which holds the information for their character. This application aims to digitalize the character sheet, but not the rest of the game. Writing and managing a D&D campaign is also not part of this for the same reasons.

1.4   Strategy

I will use an Agile strategy for this project. I will work in 3-week sprints and continuously re-evaluate which user stories have priority and which ones I will work on for the next sprint.

1.5   Research questions and methodology

How should a character's information be displayed?
- Library, Available product analysis
- Field, Focus group
- Workshop, Tinkering

What kind of homebrew content should people be allowed to make?
- Library, Community research
- Library, Available product analysis
- Field, Observation

How can the character creation process be streamlined?
- Field, Focus group
- Workshop, Tinkering
- Field, Survey

How can I balance customisation options and simplicity in the character creator?
- Library, Literature study
- Field, Focus group
- Showroom, Peer review

2.   Project organisation

2.1   Stakeholders and team members

Name	Abbreviation	Role and functions	Availability
Erik Schriek	SCHE	Technical Teacher	Thursdays 13:00-16:00 Fridays 09:00-12:00
Frank Coenen	COEF	Technical Teacher	Mondays 13:00-16:00 Thursdays 09:00-12:00
Amalia Oliveira De Arruda Camara	OLIA	Semester Coach	Mondays 09:00-12:00 Fridays 13:00-16:00

2.2   Communication

I will see my teachers twice every week at school, and will try to plan at least one meeting with at least one of the teachers weekly. I will try my best to divide the meetings so that I have spoken to every teacher multiple times. There is also a sprint review meeting every three weeks, with SCHE or COEF, alternating between the two every meeting.

3.   Activities and time plan

3.1   Phases of the project

Sprint 1: Create project plan and basic setup of the backend
- Write project plan
- Create the first setup of the backend, with the first few RESTful services and tests

Sprint 2: Basic character creation
- Make it possible to manually generate characters, not entirely through the frontend yet
- C4 diagrams
- Create the first setup of the frontend

Sprint 3: Full character creation
- Make it possible to create characters using the website
- Characters are saved level-by-level
- Create the first setup of the database

Sprint 4: Player group management
- Dungeon Master can create groups
- Players can join groups
- Dungeon Master can manage players

Sprint 5: Homebrew content creation
- Homebrewers can create new races and classes
- Dungeon Master can manage what races and classes players can use

Sprint 6: Wrap-up
- Reading guide
- Portfolio
- Final touches

3.2   Time plan and milestones

Phasing	Effort	Start date	Finish date
1 Create project plan and basic setup of the backend		19-02-2024	08-03-2024
2 Basic character creation		11-03-2024	29-03-2024
3 Full character creation		01-04-2024	19-04-2024
4 Player group management		22-04-2024	17-05-2024
5 Homebrew content creation		20-05-2024	07-06-2024
6 Wrap-up		10-06-2024	21-06-2024

4. Testing strategy and configuration management

4.1 Testing strategy

The biggest part of my testing strategy is integration testing. I will write unit tests for at least 90% of my code, which will automatically run whenever the project is uploaded to Git. I will also implement usability testing to ensure the UI is clear and people understand what they have to do to use the application. I will also implement SonarQube for code analysis, making sure there is no code that is highly likely to cause problems.

For the unit tests, I have Git CI/CD setup so that all tests are required to succeed before the application can go live. This way, the tests are ran automatically at every push.
For the usability tests, I will try my best to not intervene with the user testing the application. At the start of the test, I will also explain this to the user, telling them they have to try to use the application all by themselves as if I wasn't there. As long as the user is doing fine on their own, I will remain a quiet observer. Only if the user directly asks me a question (knowing they're supposed to try on their own first), I will help them while also making a note of what the question was about, so that I can try to make that part of the application more clear after the test. I will also create a survey for them to fill out at the end of the test, asking them questions about what parts of the application were very clear to them, what parts were slightly unclear to them, and what changes they would like to see made to the application.

4.2 Test environment and required resources

I will be using GitLab as a CI/CD environment for my backend, which will automatically run my unit tests whenever I upload my changes to ensure the application always passes all tests. For the usability tests, I will ask my friends and family who play D&D to use my application and give feedback on what they think should be changed.

4.3 Configuration management

I will have a GitLab repository for this application that is used for automatically testing the application. As I will be the only one working on this project, so I will not be using separate branches for this project.

5.   Risk assessment

Risk	Prevention activities	Mitigation activities
1 Laptop loss	Frequent pushes to Git for remote file storage	I have a spare laptop that I can continue my work on using the remote files on Git
2 A teacher is indefinitely unavailable	None	There are more teachers available at Fontys