Project plan

Scope of work

- *Scope of the work: what features and functionalities will be implemented, how is the program used, and how does it work*

Gameplay

Main plot

The main character must free the princess held captive by the final boss. The princess is set to be executed because she refused to marry the final boss.

The game

A dungeon crawler game played with a main character. The game consists of multiple chambers through which the player must proceed in order to meet and defeat the final boss. There are three different character types the player may choose from: orc, human and frog. The character types essentially represent the difficulty level the game is played at. In order to have access to the last chamber, in which the final boss is located, the player needs to complete all preceding chambers, gain the experience level of 20 and possess the nano-tech master sword. A chamber is considered completed once the enemies in it have been killed and the exit key found.

The main character

The main character has four key attributes: health, mana, armor and strength points. In addition, the character has experience-meter (XP), which is accumulated in enemy battles. The amount of XP increases the levels of the previously mentioned character key attributes. The player engages in battles with the enemies throughout the chambers.

Enemies, non-playable characters *(NPC)*

Enemies:

- Orc
- Black knight
- Dragon
- Final boss

NPCs:

- White knight
- Shopkeeper
- Chest (contains collectibles)

Weapons, collectibles and consumables

Items and collectibles:

- Health potion
- Mana potion
- Power stones
- Keys

Weapons:

- Wooden sword
- Strong sword
- Nano-tech master sword

Item crafting

The player must collect power stones before the final chamber. The power stones are used to craft the nano-tech master sword.

Technical scope

The game implements simple 2D graphics and audio effects. Moving through corridors and rooms. Combat between the player and different types of monsters. Implement collectibles and tracks progression. It uses SFML. Played with keyboard. Build system CMake.

Usage

Player will be introduced into an initial chamber, and it will progress by changing chambers. In any chamber it will be presented with battles, and secondary characters or NPCs that will assist the player in the progress between chambers. After a set of chambers, the final boss will be reached, and player will win upon defeating it.

High-level structure

High-level structure of the software: main modules, main classes are illustrated in the UML provided in the appendix A.

Planned use of external libraries

- SFML (Simple and Fast Multimedia Library)

Division of work

- Collaboration
    - Git, branches
        - Revision of code and peer reviewing the code
- Division of work
    - One module per person:
        - Tomi: Game engine
        - Jose: SFML integration
        - Garold & Pirkka: Character module, plot/backstory, visuals/audio
        - Olli: Items, plot/backstory, visuals/audio
- Responsibilities between the group
    - Jose & Tomi: mentoring and technical supervising
    - Pirkka: project coordinating

Schedule and milestones

An initial schedule and milestones before the final deadline of the project are depicted in the following timeline.