The Hero Project
Requirement Specification

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Abstract

The Hero Project is a **bullethell roguelike multiplayer RPG** providing a very unique storytelling and gameplay experience. Its main goal as a school project is to create a solid base for a video game ready for further development. The core should be highly abstract, stable and easy to extend.

This document provides some basic information about the project, its purpose and its requirements.

Contents

1   Introduction

The Hero Project is a **bullethell** [I] **roguelike** [II] **multiplayer** [III] **RPG**[IV] pro-
viding a very unique storytelling and gameplay experience.

It is highly inspired by previous titles in the roguelike and roleplay
game genres, the most noteworthy being Realm of the Mad God, Titan
Souls and Enter the Gungeon.

While all mentioned games are using a topdown pixelart setting, the
Hero Project is drawn in a very unique combination of high and low res-
olutions.

2   Project Goals

The main goal of the Hero Project as a school project is to create a solid
base for a video game ready for further development. This base includes
all elements listed in the Functional Requirements and Technical Re-
quirements sections.

[I]   A video game sub-genre where the screen is usually covered in bullets.

[II] A video game sub-genre which, based on the Roguebasin Interpretation, is defined by

- **Permanent Failure:** The player is encouraged to take responsibility for the risks
  he takes.

- **Procedural Environments:** Most of the game world is generated and provides
  complexity in resources and other elements of the game.

- **Resources:** The player can manage a limited amount of resources.

The Roguebasin, Berlin and Roguetemple Interpretation may give a more detailed ex-
plaination on this subject.

[III] A multiplayer game allows but does not require clients to play together. The Hero Project
is not meant to be played online only!

[IV] A roleplay game is a game in which the player assumes the roles of characters in a
fictional setting and takes responsibility for his acting either thorugh literal acting.

3   Functional Requirements

3.1   /FR10/ **Artificial Intelligence**

Entities[I] similar to a character are controlled by the game and interact with their environment by using Effects.

3.2   /FR20/ **Character**

A single client is able to control at least one characters actions and manage its inventory.

3.3   /FR21/ **Movement**

The player is able to control his characters movement using an input of his choice.

3.4   /FR22/ **Levelling**

A Character is able to gain levels which directly modify his Attributes and also affect AIs like enemies, most likely by modifying their Attributes, Spawnrate[II] or Items dropped.

3.5   /FR30/ **Effects**

Game Entities can be given effects which allow them to interact with their environment. They can be activated or enabled or interact permanently. The most common effect, which is also implemented in the core game, is an attack.

3.6   /FR40/ **Items**

Items are the main resource in the game. They can also be given effects which can interact with other entities.

[I] Every interacting object in the game is referred to as a (game) entity
[II] Entities created in a limited amount of time

3.7 /FR41/ **Inventory**

An inventory keeps a limited amount of items and is split into baseitems, equipment and the inventory itself. Storing an item inside the equipment allows the entity to use its effects.

3.8 /FR42/ **Item Interaction**

The player is able to interact with items in his inventory and use their effects using his input or user interface.

3.9 /FR50/ **Attributes**

Entities are influenced by 8 attributes called *health, mana, damage, defence, vitality, wisdom, speed* and *agility*. Their values are used as variables in the entities actions and can also be modified.

4 Usability Requirements

4.1 /UR10/ **Minimalist User Interface**

While providing a huge amount of complexity the game also requires clarity for the user. A minimalistic interface can improve the usability a lot and make the game more enjoyable for the player.

5 Technical Requirements

5.1 /TR10/ **Cross-Platform**

The game should run on multiple platforms including all major desktop operating systems and popular consoles.

5.2 /TR20/ **Extendable**

Being only a core also implies that it will be extended which requires at least a modular pattern.

5.3   /TR30/ **Scalable**

The core game has to be highly scaleable which requires it to be abstract, decoupled and easy to maintain.

5.4   /TR40/ **Multiplayer Ready**

Because the actual game is thought to be played on a server with multiple clients the core has to be ready. A real multiplayer is not necessary but should be easy to implement later on, which requires the code to be designed for multiple clients.

6   Quality

Extendability and functionality are high priority for the core game because of their huge influence on the later game. High quality graphics are only required for presentation and therefore low priority.

7   Conclusion

The Hero Project as a school project should lead to a core game ready to be extended to a full game later on. The cores quality has very high priority because of the influence on the games further development.