

Programmierprojekt Analyseergebnis: Key Hunt

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1 Introduction

This is an analysis of the programming project. It will cover the structure and the rules of the game, server client collaboration and software requirements.

2 The idea of the game

The game is a top down labyrinth in a dungeon. The map layout is grid-based. The ideal amount of players would be 4. There are 3 humans and one ghost. The humans goal is to escape the haunted house. The ghost wants to catch the humans. The players only see their room.

3 Rules

The game is round based. Each round is 15 seconds long. In those 15 seconds, every player can enter one action. The player can either, enter the next room, open a chest or do nothing. If the timer runs out and the player did not make a move, the game assumes that the player wanted to wait. The chests are random and contain at least 1 key. Any one of the explorers can open the escape door at the center of the dungeon. If the door has been opened, the players can escape. The ghost can not open any chest. The ghost can go through walls, which means they do not have to have a door to go to the any adjacent room in any direction.

4 Items

The list of items might expand or get shortened based on balancing and fairness.

1. Key: Unlocks the escape door.

5 Server and Client

Server will have the full map/grid. Server will have the information of how many doors there are in each room and in which direction (north, south, east, west) they are placed. It will also know where each player (ghost and human) is and where items are placed. It will send the information and GUI about the room (doors, items etc.) to each player with an 15 seconds timer. The client (human) will get 15 seconds to make a decision which door he wants to take and will send this message back to the server (in case he doesn't want to move anywhere he just waits till the timer is finished). The client (ghost) will get 15 seconds to make a decision through which wall he wants to go and will send this message back to the server. The server gets the message of the clients so he places them in their respective chosen room. In case a key is found or a ghost has landed in the same room as a human, the server will send the assigned message to the corresponding client. This cycle continues until a player has won.

6 Software requirements

These are divided into three sections, software requirements for server, client and for both. This is best shown by a table:

Server	Both	Client
Game Logic	Network Protocol	GUI
Data Structures	Authentication	Input event Listeners
(Maze, Chests/Loot, Positions)	Chat	Command and Debug interface
Game instances/lobbys	Timer(s)	

Table 1: Software requirements