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## CONCEPT AND PROPOSAL DOCUMENT GROUP ASSIGNMENT

**Jogos e Simulação**  
RELATÓRIO

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# 1 CONCEPT DOCUMENT

## Title and Premise

*Scavenger Hunt* is an arcade style dungeon crawler with horror elements, where you are trying to survive for as long as possible while accumulating a high-score.

## Player Motivation

The player will attempt to beat the high score while simultaneously finding clues (such as message logs) that uncover what happened in the abandoned spaceship.

## Unique Selling Proposition

A thrilling dungeon crawler with horror mechanics, which will cater to people who enjoy more action-styled horror games (such as *Resident Evil 4*), the high score chasing experience of rogue-likes (such as *Spelunky*), and the asymmetric multiplayer experiences of titles like *Dead by Daylight*.

## Target Market / Target age

The target market is mainly composed of people that enjoy the thrill of trying to beat their previous record. The added horror mechanics will help make the game more interesting for other types of players, like those who enjoy asymmetric multiplayer games. Ideally, the game will be given a T rating (according to the ESRB system) as it would contain violence and horror, but not as far as to contain actual gore or blood.

## Genre

Third person arcade style dungeon crawler with horror aspects. Multiplayer consists of asymmetric multiplayer components.

## Expected Hardware Requirements

We have based the following minimum requirements on the weakest hardware in our team: CPU: i7 2.2GHz; GPU: NVIDIA GeForce 555m; RAM: 4GB; Storage: 200MB;

## Competitive analysis

- Hades - A fast paced hack'n'slash rogue-like dungeon crawler;
- Diablo - Dungeon crawler with strong RPG elements;
- Path of Exile - similar to *Diablo*, but free and with large a set of customizable characters;
- Dead Space - A horror game with a fully diegetic interface;
- Binding of Isaac - A body horror dungeon crawler with a quirky and mysterious story;

## Goals

We intend to immerse the player in our game and make them feel anxious/fearful, dreading what is around the next corner. To accomplish this, we will make the game very dark to reduce visibility. We would also have a permanently player-chasing NPC to increase tension, similar to the Tyrant in *Resident Evil 2*. Somber and dynamic music, mixed with a strong sound design, will assist in increasing tension when the big monster is nearby.

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## 2 GAME PROPOSAL

### Title, Hook and Goals

*Scavenger Hunt* is a game that keeps the player interested generating new levels and new experiences per level. The added horror ambient will force the player to always be aware of his surroundings, and the limited supplies will require the player to balance his ammunition against the weaker enemies or to stagger the large (unkillable) one. While going through the levels, the player will learn what happened on that ship and all the secrets behind it. These messages will be randomly spread across the level, so the player will never know where they are.

### Story Synopsis, Backstory and Characters

You play Skye Forager, a scavenger that usually spends her days looting spaceships and selling off what is found inside. Skye is no stranger to action, but she had the unfortunate luck of stumbling upon PATHOS-IV, a seemingly abandoned ship that turned out to be more dangerous than she could have imagined. The ship's crew was corrupted by an unrelenting biomechanical entity, and Skye seems to be its next target. One of these entities, the Hunter, is large and will seemingly stop at nothing to make Skye its next victim.

### Gameplay and Main Mechanics

The player takes a third person perspective and begins by exiting their own spacecraft. PATHOS-IV is randomly generated, and incredibly dark, which results in the player having an incredibly narrow field of view due to their flashlight being one of the few sources of light. The player searches rooms, fights enemies, and scavenges for ammunition and supplies (the latter which increases the player's score). The player is also being chased by an invincible monster (the Hunter), which can, at best, be staggered by the player's weapon. The Hunter can find upgrades around the map which will make it more powerful. In multiplayer, the player can either choose to play as Skye or as the Hunter.

### Technology and Main Components

Procedural generation will be used for level creation, so for each run the player will get a different experience. The multiplayer connection will be created using Photon. The AI for the Hunter, when is not controlled by a player, will have different modes of behaviour. These include searching for the player, patrolling, upgrading its skills, and if it hears the player it will try to chase the sound. In terms of lighting, real-time lights and particles will be used in some sections which will help create a creepy atmosphere. An example of this would be flickering and hanging lights with visible dust particles. The light and materials will make use of custom shaders to allow for things like bump-maps and dynamic shadows.

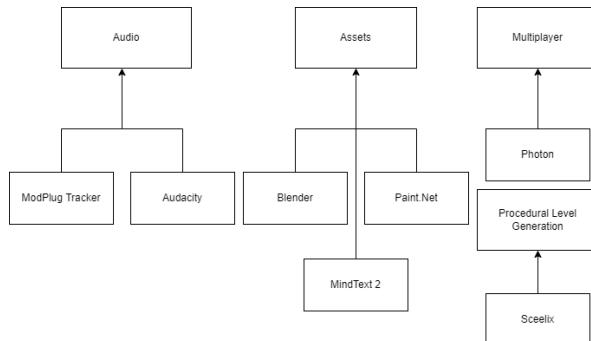


Figure 1: Main Components

## Art and Audio

We find it important to have a strong visual aesthetic, so we have decided on a bright neon color palette for lighting with hard, dark shadows. Essentially, we are aiming for a combination reminiscent of *Tron*, *Far Cry 3: Blood Dragon*, *Technicolor Antichrist Box*, and *Doom 3*. Since we intend on making as many assets as possible, this also means that we will end up leaning on simpler, but stylistic graphics as opposed to a realistic look. We have created an example of what we intend our aesthetic to be and have included it in the section 3 (Annexes), along with the art that inspired us.

Ideally, we could have a synth heavy soundtrack which could be layered depending on the circumstances (for instance, a drum track is added when the player has been spotted by the Hunter). This would be easily done using tracker music, but due to Unity's lack of tracker support, having waveform audio (MP3) will probably end up being easier.

## Team

- Diogo Sousa - Custom shaders and light artist, AI and particle system programmer
- Lourenço Soares - Procedural generation programming, netcode, assets
- Pedro Ribeiro - Assets, AI programmer, scripting

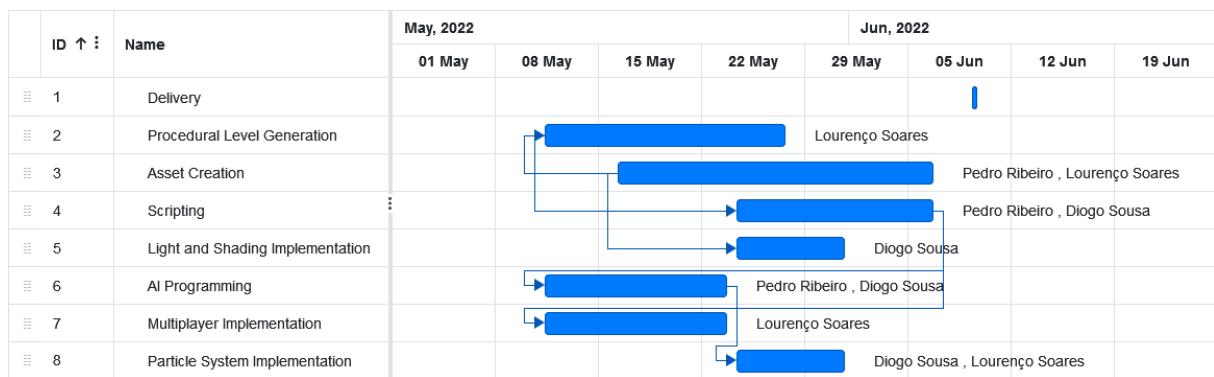


Figure 2: Task schedule

## Risk Analysis

As is usual in game development, there is a risk associated with deadlines as the project can undergo unforeseen delays, in order to lower the chances of that happening we will follow a strict work schedule to make use of our time efficiently and to avoid any unnecessary crunches. Procedural generation also contains some risks as a more independent system can come up with some unwinnable scenarios, or lackluster scenarios where the map is too repetitive or uninteresting. Ideally, we would be able to balance the game according to Mihalyi Csikszentmihalyi's State Of Flow to ensure the player is sufficiently engaged in the game. When considering multiplayer we will have to verify that one player does not have a significant advantage over the other, making the game unfair.

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### 3 ANNEXES

#### Concept Art

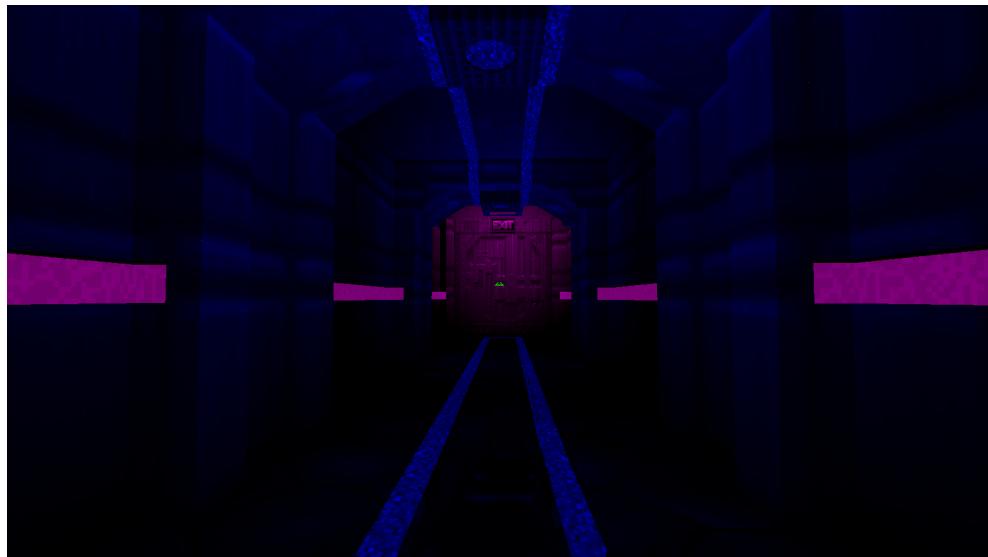


Figure 3: Initial concept art for PATHOS-IV's lighting, put together in Doom Builder

#### Examples Taken From Other Media



Figure 4: An image from the movie Tron, which features a strong "clean" futuristic aesthetic.



Figure 5: Far Cry 3: Blood Dragon makes use of a distinct neon style

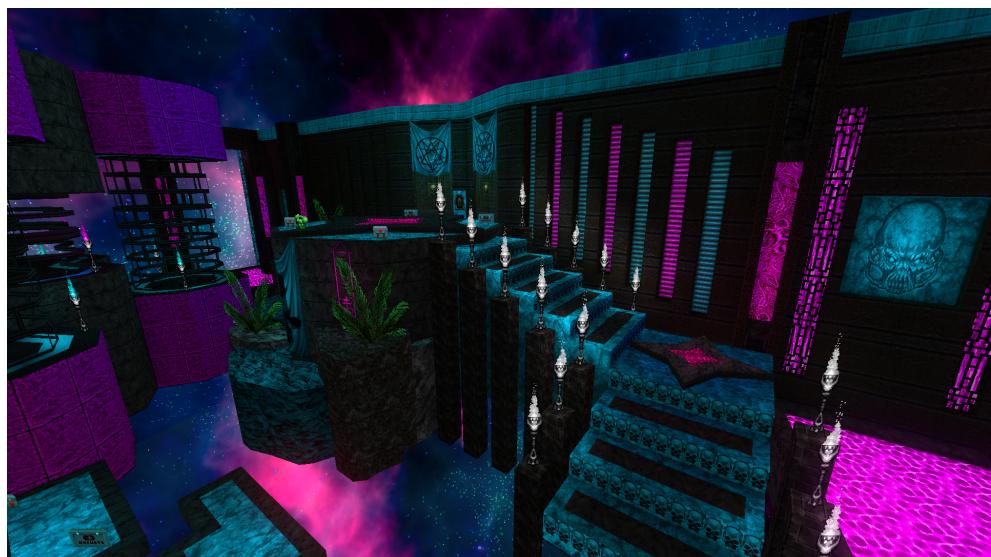


Figure 6: Technicolor Antichrist Box in Doom 2 features heavy usage of cyan and magenta

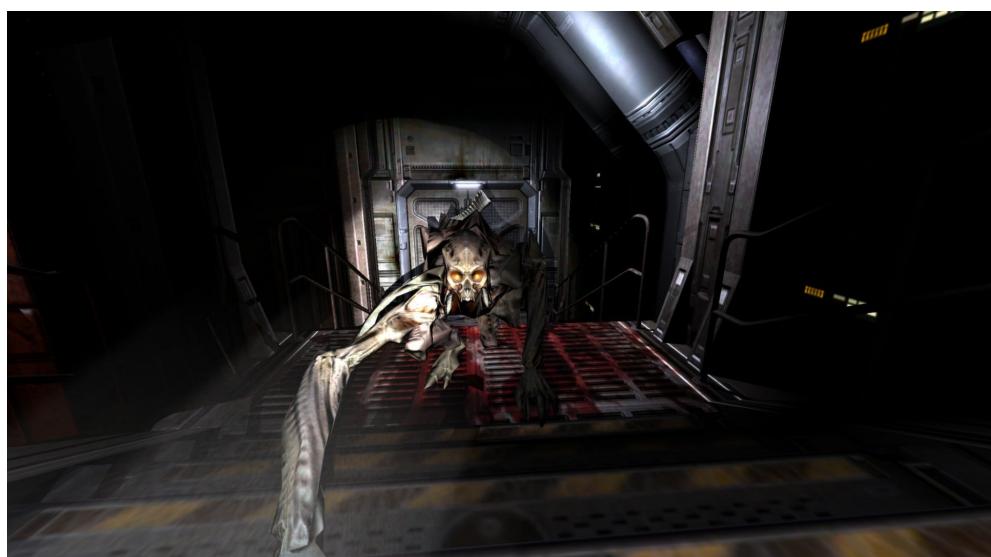


Figure 7: Doom 3 has incredibly dark shadows, providing a very small field of view



Figure 8: SOMA's monsters are biological machines that corrupt their victims