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Sensation Planning Document

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Project Concept

Primary Goal

The primary goal of “The Abyss” is to deliver on the core engagement type of sensation. In order to do this, “The Abyss” is going to focus on visual and audio feedback relating to the sensation of darkness.

Environment / Setting

“The Abyss” takes place in a dark, tunnel-like pit that the player must carefully traverse down to the bottom. Due to the pit being absent of light, the pit has no light in it at all, safe for the small amount of illumination that the player has in the form of a flashlight. The pit is wrought with danger in the form of spikes, long falls, and bats. The player must carefully use their flashlight to make it down the pit without dying.

Mood

The mood of the game should be dark and ominous. This can be established through the use of visual and audio feedback. Visuals, or the lack thereof, can come in the form of a barely lit environment that can only briefly be illuminated with the player’s flashlight. A cool color palette can also help reinforce that the area is dark. Audio can be leveraged to establish a dark sensation by utilizing reverberating ambient noises that get louder and more threatening when the flashlight is off.

Overview

Genre / Experience

The genre of “The Abyss” is a single player 2D platformer that scrolls from top to bottom as a player descends deeper and deeper into the pit. The player is charged with platforming from one safe platform to another in the darkness of the pit and surviving the dangers of the pit as they make their way to the bottom. Like most platformers there are dangers like spikes, long falls, and bats that can harm and kill the player.

Inspiration

Aspects of “The Abyss” ­are inspired greatly from two games: “Spelunky”, a 2D rouge-like platformer, and “LIMBO”, a 2D puzzle platformer. “Spelunky” is the main inspiration behind the mechanical controls of the game, as well as the theme of traversing through a dangerous cave environment. “LIMBO” inspires the mood of “The Abyss” in that the game will deal with light and shadow and have a very limited color palette to help instill a sense of darkness.

Engagement Techniques

Rank of Techniques for Achieving Engagement Type

“The Abyss” primarily focuses on the Sensation engagement type. In order of importance, “The Abyss” gives a feeling of darkness through the following techniques to help achieve this engagement type:

1. **Cosmetic**: The visuals through the use of shadow and light will help give a feeling of darkness to the game. I’ll also be able to leverage audio to help give the game a feeling of darkness by using ominous sound effects and ambient music that increases in volume the longer the player has not used their flashlight.
2. **Excitation**: Fear and risk-taking will play a big part in helping to establish the sensation of darkness. I’ll be able to create these feelings through the limited use of the flashlight making there times when a player may have to chance a jump into an unlit area where there might be spikes, killing the player.
3. **Kinesthetic**: I could use time dilation when close to spikes to give the players a moment of anticipation that they could potentially hit spikes. I can also use an in-game timer to put emphasis further on time, upping the risk factor of moving quickly versus safely plotting a course through the pit. I also plan on using the rumble feature of the Xbox gamepad to provide haptic feedback for the player.

Mechanics

Core Mechanics List and Implementation

I’m considering making “The Abyss” a very mechanically simple game so that I can focus creating the proper sensation of darkness in my game. As such, the mechanics of “The Abyss” are very familiar to that of most 2D platformers. The only exceptions are the mechanics that focus on the sensation of dealing with darkness.

**Mechanics:**

* 2D Movement
* Running
* Jumping
* Flashlight On/Off
* Rotate Flashlight Direction

Controls

Control Scheme and Layout

“The Abyss” has simple controls that should be familiar to anyone who has played a platformer using a gamepad, but with the additions of mechanic specific controls found in “The Abyss”:

**Gamepad Controls:**

* Left Analog Stick:   
  Movement
* A Button:   
  Jump
* Left Trigger:  
  Run
* Right Analog Stick:   
  Flashlight On/Off
* Right Analog Stick:  
  Rotate Flashlight
* Start Button:   
  Pause Menu

User Interface

Pre-Game UI

“The Abyss” has a fairly standard menu that is controlled by the keyboard or gamepad. The game starts with opening splash screens for DigiPen, myself, and best played with gamepad screens of which only the DigiPen splash screen is not skippable. This leads directly to the start screen which features the title of the game, DigiPen copyright, and a single start button. Pressing the start button will open the main menu with options to start a new game, view the controls, view the credits, or quit the game. Quitting the game opens a confirmation of destructive action modal that will allow the player to return to the main menu or quit the game. The controls button leads to an explanation of the gamepad controls. The credits button lists DigiPen, the instructor, and myself as creators for the game. Lastly, the new game button will start the game.

In-Game UI

“The Abyss” has a very minimal UI that features only three elements: Player Health, Flashlight Duration, and Timer. The Player Health is the visual representation of the player’s hit points before they die. A player can take damage 3 times before dying. Upon only having a 1 hit point left the health will animate like a beating heart with audio to represent the dire situation that the player is in. Flashlight Duration is the amount of battery power that the player’s flashlight has left. As the player uses the flashlight the Flashlight Duration decreases until eventually it runs out, leaving the player without any light. The Timer exists to give the player a sense of urgency and give players a goal of trying to beat a goal time or a high-score time.

Pause Game UI

“The Abyss” has a pause menu that can be activated by pressing the start button on the gamepad. This will greatly darken the game screen and present a menu that is very similar the main menu of the game. As such, the pause menu has resume, controls, main menu, and quit game buttons. The resume game button will get rid of the pause menu and resume the game. The controls menu will display the gamepad controls for the game. The main menu and quit game buttons have confirmation of destructive action modals that are called before performing either of their actions to return to the main menu or quitting the game entirely.

Learning

Primary Teaching Methods for Players

“The Abyss” is a simple game and will present the player with a series of images that explain the movement mechanics of the game, flashlight mechanics, and present the dangers of the pit to the player before they start the real game. However, if upon playtesting during lab reveals that this is not enough to teach the player how to play the game, then I tutorial level might need to be pursued.

Feedback

Visual Feedback Systems

Due to “The Abyss” dealing with darkness as a sensation this will be a challenging game to provide visual feedback to the players in. I’ll have to make good use out of the things that the player can see and make sure that the darkness is just right so as to not completely screw the player over when they cannot use the flashlight. If the player gets hurt I’ll provide screen overlay red that flashes briefly as well as slight screen shake and lastly the in-game UI health meter will be updated to show damage. To help make bats easier to detect their eyes will glow so that players can see when bats are attacking. Primarily I’ll be focusing most of my effort on the lighting system in the game. I’ll also do my best to provide shadows that are displayed when a flashlight hits a light obscuring object.

Audio Feedback Systems

“The Abyss” will be a game with a lot of visual obscurity in the form of darkness so my audio assets will have to provide a lot of feedback to the player. Moving, Running, Jumping, landing on a platform, turning on and off the flashlight, and taking damage will all have to be important audio feedback for the player. In addition to this, the ambient audio of the game should help provide the sensation of darkness by slowly getting louder and more ominous as the player goes longer without light.

Focal Points

Key Visual Landmarks

Key visual landmarks in “The Abyss” involve cave terrain assets. Key cave terrain assets include breakable platforms, stable platforms, platforms with spikes, spider webs that bounce the player, and empty areas where there are no platforms. I’ll be utilizing a combination of these assets to create unique cave tunnels for the player to go down.

Art Assets

Art Assets List

The art assets I’ll need for “The Abyss” are subject to change, as I will be making these assets myself, and currently are listed as follows:

**Art Assets:**

* Menu Title
* Menu Buttons
* Controls Diagram
* DigiPen Splash Screen
* My Splash Screen
* Best Played Splash Screen
* Game Logo
* Player Sprite
* Player Flashlight
* Player Jump Sprite
* Player Fall Sprite
* Player Dead Sprite
* Bat Sprite
* Bat Glowing Eyes Sprite
* Normal Terrain
* Breakable Terrain
* Stable Platforms
* Spider Webs
* Spikes
* Player Start Area
* Player Exit Area
* Health UI Element
* Flashlight UI Element
* Timer Icon
* Health Icon
* Flashlight Icon
* Damage Screen Overlay
* Darkness Vignette

Audio Assets

Audio Assets List

The audio assets I’ll need for “The Abyss” are subject to change, and will be comprised of assets I make and assets that I use from the DigiPen sound library. These assets are currently are listed as follows:

**Audio Assets:**

* Button Hover
* Button Selected
* Menu Music
* Player Hurt
* Player Start
* Player Jump
* Player Land on Platform
* Player Run
* Player Move
* Player Hit Spikes
* Crumbling Ground
* Spider Webs
* Bats Flying
* Bat Shriek
* Ambient Music
* Ambient Noises
* Water Dripping
* Victory Audio
* Defeat Audio
* Menu Audio

Risks & Mitigations

Specific Risks

The biggest concern I have for risks involve writing my own 2D character controller, writing scripting that creates line of sight for light and shadows, and writing scripts that control dynamic audio. I have not done any of these things before, so it will be a first time for me in learning how to do all these things. Other risks involve the overall scope of the project, the time I’ll need to create audio and visual assets, and how much work I’ll be receiving in my other classes.

Specific Mitigations

In order to mitigate the over scope that I might have in “The Abyss” I’m prepared to make a very basic 2D controller for my character that is only basic movement. This is the reason why I don’t have things like climbing or hanging on to ledges. As far as mitigating the line of sight scripts for light and shadow I’ll be trying to find any and all resources I can to help me in dealing with 2D light in Unity3D. This is a must have for my game so I’ll be tackling this problem first. The dynamic audio is something I’m prepared to cut altogether if I really need to because I can stick with standard audio. The time risks involved in making assets will have to be prioritized by must have and “would like to have”, this way the most important things will get done first, one at a time.