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Game Design Document

DigiPen’s Team Can’t Escape Games

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# Prototype 1: 3rd Person Linear Adventure

# Prototype 2: 1st Person Rail Shooter

# Prototype 3: 3rd Person Infinite Runner

For this level, we wanted to experiment with the idea of procedural generation on the engine. How easy would it be to generate content as the player advances through the stage? and, how can we make this a fun concept? To answer this last question, and since the prototype in itself is a simple one, we added a self-competition element to it: The main goal of this prototype is to try and make it as far as possible and, as a bonus, gather as many coins as you can. When you die, the game displays how far you made it, and then the player can retry to surpass their previous record. In the next section, we will go through the main mechanics and elements of this prototype.

![Imagen que contiene suelo, edificio

Descripción generada automáticamente]()

The whole runner consists on a infinite stretch of lava, with a few blocks to stand in between and **obstacles** spread along the way which you need to avoid, as they hurt the player. To go from one block of ground to the next, the player needs to make use of the **jetpack** mechanic. But you cannot fly forever, as there is a gasoline bar that gets depleted as the jetpack is used, and the player will crash into the floor/lava when this meter hits zero. In order to avoid this, a handful of gasoline tanks are distributed in semi random locations in between ground blocks, and the player has to fly smart in order to not run out of gas in the middle of the lava passage. As the level progress, the amount of distance you have to fly becomes larger, and the number of obstacles increases. So, the main idea is to be careful with the gas spending, position yourself strategically to grab the tanks while avoiding obstacles, and make it to the next safe ground.

## Game Mechanics

### Player controller mechanics

**Running:** This is done by using the **left joystick** while in the ground. The player will just run and turn in the direction he is walking.

**Jumping:** This is achieved by pressing **A** while grounded. The player will be given a small impulse up, and while in the air, it can still be controlled in which direction it moves.

**Jetpack:** When pressing **A** while jumping or while falling, and keeping it pressed, the player will activate the jetpack. This will give a constant propelling up, which allows the player to fly through the level. While flying, the directional stick can be used to move the player around as if he was grounded. This move uses gasoline.

**In-air Dash:** This move can only be used when the player is on the air (either jumping, falling, or flying). To activate, press **X** or **Y** on the controller. It will give a boost in whatever direction the player is facing, and it’s a good move to use when trying to reach an item before it leaves the screen, or for fast avoiding obstacles (or reaching a platform faster). Warning though, this move uses a big amount of gasoline, so only use it when sure you can replenish.

The choice to give the player option to move forward and back was to have the freedom for the player to do stuff like going after items that are ahead and then, if there is enough gas, come back to pick stuff that may have gone past. In short, to add a tactical element to the player’s choices.

### Stage Elements and Hazards

The player, apart from having a gasoline bar, has a health bar. **Three** hits against obstacles will end the game, and there is no way to heal during a run. When getting hit by an obstacle, the player will gain a one second invulnerability. After that, its back to being careful.

**Lava**: Number one hazard in the game. Touching the lava means instant game-over, no matter how much HP the player has left. So avoid it at all cost.

**Ground Walls**: Clashing against the walls of the blocks of ground will hurt the player, taking 1 HP from them and knocking them back.

**Obstacles**: These will be spawned on semi random locations throughout the run, and as the distances between ground blocks increases, so does the number of obstacles (and the scrolling speed of the level increases too). The obstacles rotate at a semi-random speed, which makes it harder to avoid them, and will always be positioned on top of the lava, never on the area of the ground blocks. They will also take 1HP off the player, and have the same knockback as the walls.

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**Ground blocks**: These are the safe spots for the player. In here, you can stand and recover some gasoline (the player will recover gasoline not only by getting the tanks, but also by staying grounded, though at a slower rate).

**Gasoline Tanks**: These will recover 20% of your gasoline tank. They are randomly generated along the level, and there are always enough for the player to be able to remain on the air. But the obstable placement can sometimes make it hazardous to go after some, so the player needs to choose carefully which to pick up.

**![Imagen que contiene interior, naranja, rojo

Descripción generada automáticamente]()**

**Coins**: Right now in the game, coins are just a collectible, with the amount collected being displayed on the upper left side of the screen. In the original planning of this prototype, coins were to be used to obtain instant powerups while playing, which could be chosen from a list in the upper right corner of the screen. These would’ve cost a number of coins, and would’ve lasted a fixed amount of time after activating them. Because of time constraint, this feature did not make it into the final prototype.

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### Level Structure

As stated before, the level will consist on a big lava hallway, with small blocks of ground in between. As the player progresses, the scrolling of the level becomes faster, the amount of distance between ground blocks increases, and both the coins, gasoline tanks and obstacles increase in number. This is all handled procedurally.

### Obstacles, Coins and Gasoline Tank Spawn

These resources never spawn on the area of the safe ground. They will always be positioned on top of the lava sectors, as a way to incentivize the player to focus on recovering when on the safe ground.![Imagen que contiene tren, interior, persona

Descripción generada automáticamente]()

*Ground area on the level*

### Game Over

As stated, player looses the game when HP runs to zero, or when hitting the lava. This will pop a text saying the game is over, and also showing the player how much progress they managed to ahieve.

