**CSCI490 Information System Development**

Senior Project Report

**To Rem & Back (2D Game)**



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# **Introduction**

To Rem & Back is a 2D Game that features Random Level Generation

and AI as core mechanics. It mixes both the Side-Scroller and Roguelike

genres interchangeably to embrace mechanics of both in a single game.

The game’s progression revolves around the battle to break from heroin

Side effects and how the character’s story uncovers across the stages of the

game.

The game revolves around the protagonist and his mysterious story after surviving a plane crash and waking up at the hospital with a considerable amount of heroin in his blood because of a mistake by one of the nurses, which triggers a certain state of hallucination, or dreaming, (REM) inside which he will be fighting his way out back to reality.

The game takes inspiration from the roguelike genre. Games like:

Spelunky, Rogue Legacy, Dead Cells.

The game is designed and developed using Game Maker Studio 2 engine

and uses its native programming language Game Maker Language (GML).

it will be exported for windows; which houses a large portion of the gaming

market.

# **Gameplay Briefing**

At some levels in the game, the player is constrained by the affected character’s abilities: only walking and exploring sideways at times, uncovering hints about the truth behind his journey.

The triggers back to REM, however, are assigned to happen at certain events along the way. Key moments in the story are going to drop the player back up in REM where they will be solving puzzles and challenges in order to escape.

In every visit to Rem, the player will experience a new level (since dreams are random and spontaneous), and is left to find his way out of it by solving puzzles, unlocking all features, and evading disturbing figures and characters met earlier during the story. All that under a certain amount of time. If the time runs out, the player will enter Rem again, with another random layout, and will have to solve the puzzles again, creating a huge replay value since the levels are always randomly generated. After retrying a certain level, some puzzles may not be in the same place again and thus adding a sense of mystery and entertainment to the game.

The character in Rem, however, is no longer tied to just walking (left & right), instead they can run, jump, sprint, etc...

This state of trial and error is implemented to match the state of people of who get trapped in their dreams/coma.

After succeeding in solving the challenges of Rem, the player will return to the Sidescrolling level and continue forth with the journey. Slowly uncovering the backstory behind the incident.

# **Future Considerations**

Unlike what we think, 2D games still exist in 2019 and are performing very well in the market.  
Even indie developers with modest production capabilities are able to tell very valuable stories and create engaging mechanics using capabilities that engines like Game Maker Studio are offering.  
To Rem & Back has a story to tell, and it’s one of the very few games ever made to feature more than one player perspective (camera perspective) and more than one genre in the same game, blending both the fun in unraveling the story through different levels and the technical pleasure of creating a random level generator and an AI system for enemies.  
Therefore, we are considering making To REM & Back not just a demo, but a complete finished product to be released in the market as soon as the development and testing phases are over.

# **Conclusion**

Our plan was to create a game that features two different genres and camera perspectives in one coherent story. On the technical side, we wanted to create a game that isn’t plainly simple. The random level generation coding and the AI search and follow system were main contributors to this.  
We were able to succeed in writing the code and script, designing the assets, and finalizing the first portion of the game.  
Given the enough time and effort, we might be able to produce a finished game that is able to compete in the 2D gaming market.