

SIT254 - Game Design


# Game Design Document

Not All Dreams Are Good

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## 1. Vision, Scope And Goal of Project

### Vision:

The vision of “Not all dreams are good” was to create an interactive open world game. Open world games have increased in popularity in the past few years with games like Minecraft, Terraria and The Elder Scrolls V: Skyrim. Not All Dreams Are Good is similar to these games because the player has the ability to go outside and explore the open world, interact with objects to gain clues, defeat enemies and complete puzzles. The vision is to create a big enough open world with many different interactables and puzzles.

### Scope:

By the looks of the vision, the scope of the game is large. Our prototype is a scaled down version of the open world down and includes fewer interactables, enemies and puzzles. As the game is further updated the scale will also further increase. Although, in scope the game requires the character to find clues hidden throughout the map, defeat enemies and complete puzzles. Other in scope features include an user interface menu. As this is just a prototype there are some features that aren't included within the scope of the game like in-app purchases and difficulty of gameplay.

### Goal of Project:

- Complete prototype of the game
- Follow the pitch as much as possible

## 2. Team roles/participations/contributions

Team Members	Student ID	Role
RIDDHI PATEL	219179773	2D/3D Designer/GDD/AGILE Master
NEELKUMAR CHIRAGKUMAR SHAH	218481046	Programmer
DUKE AMARASENA	215200017	Level Designer
JOSHUA RICHARD JOOSSE	220244217	Sound Designer

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## 3. Key Requirements Summary

### 3.1 Design

To find the right design for our game we must first do some background research on similar games. From there we can start to conceptualise our own design. Through our research and game pitch we can then create our concept art and then begin prototyping. Throughout the developing process we can play test to ensure the game is properly working and going as planned.

### 3.2 Technology

The technology we will be using to create our game is Unreal Engine 4. UE4 is a great software with many different capabilities. It primarily focuses on 3D game production and uses two different types of coding interfaces, blueprints and C++. UE4 is also free to use which fits within our budget.

### 3.3 People

Each team member has been given a specific role throughout the project. There is one 2D designer (Riddhi Patel), one sound designer (Joshua Richard Joosse), one level designer (Duke Amarasena) and one programmer (Neelkumar Chiragkumar Shah). However when it comes to programming we will all pitch in to help.

### 3.4 Timeframe

We have a limited time frame to create our prototype due to our current COVID-19 situation and hence interaction with our team members have been restricted. However we have been given 5 weeks to complete this prototype. The first two weeks consisted of everyone doing research on their given roles and finding concepts for the game. We also have to familiarise ourselves with UE4 as we have little background on how to use the software. The next 3 weeks will consist of us building the game and gathering all components together and play testing.

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## 4. Concept Summary

### 4.1 Title

As pointed out in the game pitch the title of the game is “Not All Dreams Are Good”. This follows the required theme of the game which is “dream”. The tagline for this game is “Escape your own mind”

### 4.2 Gameplay Hook

Not All Dreams Are Good is an open world game which means players have more creativity within this game. The main character has to explore the open world and ultimately find clues to escape the “Dream Space”. Players must find clues in order to progress and can be done so by defeating enemies and solving puzzles.

### 4.3 Genre

The genre of this game is sandbox, fantasy, puzzle-solving.

### 4.4 Theme

We are required to create a game that revolves around the common theme of “dream”. Not All Dreams Are Good has done this by implementing the theme in its title. It also includes the theme in its gameplay where the player has to escape the “Dream Space” by collecting all the clues within the “dream”.

### 4.5 Platform

The game will be available to play on PC and Console. The reason why this game is best suitable for PC and Console is because it will be easier to control the characters. However in the future it may be open to other platforms too. The game will also be available on Steam.

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## 5. Target audience/market analysis

According to the game pitch the primary audience of this game is targeted toward the age group of 12-17 year olds. This is because most within the age group of 12-17 play these types of games and are popular within this age demographic. The secondary audience is targeted at 17-25 year olds. This is for the more mature audience and likes to use critical thinking. Lastly, the tertiary audience are parents with young children under the age of 12. This audience is less practical than the first two, in which the parents want to understand who the characters are, what the story is and why it attracts the attention of their children.

## 6. Game Setting/Story

The game setting will take place in the 'Dream Space' where the player will have to fight their way through enemies while picking up clues to progress further in the game. The player is lost in the Dream Space and the only way to escape is through completing timed puzzles and destroying enemies blocking you from escaping. 'Not All Dreams Are Good' contains a more subtle environment where it provides the player with more enjoyment but by providing interesting sceneries and settings for better experience. The game is set in this subtle and calm environment to fool the player into thinking that there is no danger when in fact, the Dream Space is a lure to keep you there forever with no escape and no connection to the outside world.

## 7. Gameplay System

### 7.1 Description of core gameplay:

#### 7.1.1 Rules and Mechanics

The rules in 'Not All Dreams Are Good' are that the player must; escape the 'Dream Space', collect and follow all clues, react defensively to enemies, and solve puzzles. The mechanics in 'Not All Dreams Are Good' are running, jumping, fighting, solving, and collecting.

#### 7.1.2 Gameplay modes

'Not All Dreams Are Good' will have one gameplay mode being 'Medium Difficulty' which every player will be able to play effortlessly on. This gameplay mode will encompass a medium amount of; enemies appearing on screen, puzzle solving and overall challenge within the game.

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### 7.1.3 Reward system/achievements

After the player kills an enemy, they are rewarded with clues to progress further in the game as well as a small increase in their health. The clues are to be collected by the player which assists them in escaping from the 'Dream Space'. As the player is rewarded with clues to help them along the way, they will also be led to locked doors that lead them further out of the 'Dream Space' and when the puzzle to unlock the door is solved correctly, they are rewarded with an unlocked door.

## 7.2 Summary of Game Options

A tutorial will pop up during the initial startup of the game along with the rules and goals. This feature can always be in the menu if the player forgets any controls and rules. As of now there aren't any different game modes but the player can increase or decrease the difficulty of the game. Different game modes will be added in future updates.

## 8. Feedback and Internal Economy Worksheet and Checklist

Clues, time and health are resources used within the internal economy. These resources contain a mix of both positive and negative feedback which makes the game balanced and interesting to play. Clues create positive feedback to the player as they make their way through the game. Time is used as negative feedback in the game as the player has to race against time to finish puzzles in order to escape the 'Dream Space'. Health is used as a resource that creates positive and negative feedback within the game by either allowing the player to live or die.

## 9. Feedback and Balance Worksheet and Checklist

The feedback that is created from the resources in the internal economy within 'Not All Dreams Are Good' causes the game to be balanced as there is an equal amount of both positive and negative feedback that the player experiences. For example when the clues resource is picked up, this leads the player to progress in the game and hopefully assist them in escaping the 'Dream Space' which ultimately avoids a negative game state being that the player gets attacked by enemies which prevents the player from escaping.



## 10. Art Design (visual and audio)

### 10.1 Visual direction:

The visual direction we are trying to go for this game is more rustic and fantasy. We think going with a fantasy theme for our game best suits the gameplay. We don't want to limit the design to just one visual concept and can be interchangeable in future updates. Different levels will have different environmental designs for example level 1 would be woodlands, level 2 would be castle based.

### 10.2 Reference Art:



Reference: <https://www.forbes.com/sites/hnewman/2019/05/15/world-of-warcraft-classic-feels-like-a-totally-different-game/>

The above picture is from the game World of Warcraft.



Reference:<https://www.forbes.com/sites/davidjagneaux/2020/01/16/greymoor-is-the-next-elder-scrolls-online-chapter-expansion-and-will-introduce-western-skyrim/#29ae14d16c00>

The above picture is from Skyrim

### 10.3 Environment description:

The environment and art for the levels were created UE4 as were the creation of the necessary assets that are placed within the levels. The inspiration was gained from the similar games that were created in the similar purpose and goal. The levels are designed for the purpose of the target audience and keeping the audience interested while playing the game and solving puzzles. The use of the environment, textures and assets are varied though different levels to keep the game flowing and to avoid boredom.

For the environment, we will include the landscape material for the different levels which are filled with different textures and assets as each level will bring different challenges. The inclusion of rocks, lakes, trees etc., provide for better context as well as to please the audience with gameplay flow. Since the game genre and theme is considered to be dreams, our aim was to create and develop settings that would be ideal and appealing to the context but also to our target audience.

## 10.4 Game characters:

There is one main character in this game. The character will have a strong build as it will have to defeat enemies. Along with their strong build the character will wear a cloak. As stated before we don't want to limit our design to just one concept so the player can change the colour of the clothes, skin and gender of the main character to their liking.

Along with the main character there will be enemies within the game. The enemies will be different creatures, mostly grotesque, ugly creatures.

## 10.5 Audio Direction:

The character design in 'Not All Dreams Are Good' are of a fantasy type which ties in with the level design sparking memories of a fantasy style. The audio design within the game makes use of calm electronic music for the background when no enemies are present and begins to add tension when enemies approach and time starts running out for solving puzzles. The music will be Royalty Free Music from Bensound.com which will be called 'Adventure' and 'Dance'. The sound effects are of a foley type and some will be sourced from royalty free websites as some cannot be recorded with voice or by other means.

# 11. Description User Interface Design for the target platform

## 11.1 In-Game UI Design:

The UI design for the game platforms are designed to provide experience with the target audience since the target audience are aged between 12-17. The UI will mostly be consistent and detailed through the gameplay and level to make use of the platform power as each platform will be different and vary. The representation or quality of the UI design and assets will depend on each platform but the designs will remain consistent to keep the game flow and interested to our target audience.

## 11.2 Out of Game UI Design:

The out of game UI design includes the main menu which will appear at every launch of the game. The main menu will feature three primary functions: Start new game, Load previous saved file and Settings. When the player clicks the settings option, it will bring you to the next screen which gives the player the option to change game difficulty, sound, fx, graphics, controls.

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## 11.3 Control Design:

As the game is available on both PC and consoles there will be slight differences. In PC simple up, down, left, right keyboard buttons will be used to move the character. The space bar would be the jump option. However the player can always change these settings to meet their comfortability. On the console the left joystick would be used to move the character around the buttons as jump, crouch, etc.

## 12. Description of any level re-design

We decided that instead of the game being in 2D it'll be in 3D as we are using Unreal Engine 4 so we're using those features to the best of our abilities. We also changed the gameplay a little, the clues are hidden in enemies and that is how you progress further in the game. We also restricted the clues to only finding 3 rules. We did this as we have limited time to complete the project. Programming of the pitch has also changed as the entire concept of the game cannot fit into the limited time we have.

## 13. Detail of the Technical Design

### 13.1 Requirements Analysis

#### 13.1.1 Technical Hardware

This game is primarily played on the PC and console. There are two main hardware components this game includes, CPU and GPU. These two are essential in keeping the game run smooth. As our game is a sandbox, open world game a mid range CPU and GPU would be needed. However in the future if this game was to become a multiplayer game with various different servers it would require a higher CPU, but that is for the future.

#### 13.1.2 Technical software

The main software for this game creation is Unreal Engine 4. UE4 is great software for beginners to use. It has a great range of features and primarily focuses on 3D gameplay. We also have the option to use either Blueprint coding or C++ coding.



### **13.1.3 System Intelligence**

This game uses AI intelligence. The enemies will use the built in AI feature in Unreal Engine 4. They will be able to roam freely in the open world and when the main character approaches them or when the enemy approaches the main character, the enemy will attack.

### **13.1.4 Data Management/Support**

The game has an option to save any current changes within the game so when the player returns they can continue from where they left off. If the player was to die they can continue from their last saved file, acting as a checkpoint.

## **13.2 2D/3D Graphics**

The pitch was originally targeting a 2D game. Please refer to section 12 as to why we chose this approach. As Autodesk Maya is supported by UE4 all character designs and other additional designs will be made there and then imported into UE4.

The environmental design will be created in UE4 as they have their own feature which gives us this ability.

## **13.3 Animations**

Unreal Engine 4 has this great feature which is easy to understand and use to animate our characters. UE4 also gives us the ability to create cutscenes which we could incorporate in later updates.

## **14. Appendices**

### **Feedback and Internal Economy Worksheet and Checklist**

Review the internal economy and feedback mechanisms identified for your game design in the Rules Worksheet. Update these in the table below to reflect refinements made while creating your game.

### Resources used in the Internal Economy

Name of resource	How it is used in the game
Clues	Players accumulate clues at different points in the game and the more clues the player collects, the more information they will receive in order to progress in the game.
Time	Players get given a certain amount of time to complete a puzzle in order to progress in the game. As the game progresses, puzzles will become harder which makes it difficult for players to solve within the given time.
Health	Players get a certain amount of health when they start the game and will decrease when an enemy attacks the player or if the player falls from a great height.

### Feedback mechanisms

Type of feedback (positive/negative/random)	Input resources (amount of feedback depends on quantity of these resources)	Output resources (resource whose level is changed as a result of this feedback)	Goal of this feedback mechanism
Positive	Clues	Clues, information to progress in the game	To give the player hints on how to proceed in the game and rewarding them with information to assist them further.
Negative	Time	Time, loss condition (running out of time and failure to complete puzzle), unlocking of doors if puzzle is completed within the timeframe	To prevent the player from completing the puzzles in time, preventing them from progressing in the game.

Positive and Negative	Health	Health	To give the player health when the game starts and award them with a little bit of health to keep them playing the game and preventing a negative game state from occurring. Health is lost if an enemy or if the player falls from a great height, enforcing a negative game state.

## Part 2: Economy

Undertake the exercises below. If none of these are relevant then identify the reasons why and suggest strategies for providing equivalent rigor to your game setting.

Identify any of the economic patterns in your game design and confirm that their role matches your original design intention. Consult Game Engine Patterns PDF (module 2) for further information on economic patterns.

The Multiple Feedback pattern is present in the game 'Not All Dreams Are Good' in the way that there are many different types of feedback present in the game, positive and negative. As the time resource drains when solving puzzles, the health resource draining and gaining, and the clues providing information for the player to progress, this depicts a multiple feedback pattern that is present within this game.

Reflect: Have you discovered any extra insight into your game structure through identifying formal patterns present in it, or alternatively: are you considering incorporating a formal pattern into the game design to manipulate the internal economy in a particular way?

We have discovered that the Multiple Feedback pattern proves to be a suitable pattern for the game as it informs the player that the game is not as easy as it may appear to be. This extra insight into the game structure was formed on the basis of the variety of different victory and loss conditions that are present within 'Not All Dreams Are Good'.

## Feedback and Balance Worksheet and Checklist

Review the feedback mechanisms identified for your game design in the Rules Worksheet. Update these in the table below to reflect refinements made while creating your game.

### Feedback mechanisms

Type of feedback (positive/negative/random)	Input resources (amount of feedback depends on quantity of these resources)	Output resources (resource whose level is changed as a result of this feedback)	Goal of this feedback mechanism
Positive	Clues	Clues, information to progress in the game	To give the player hints on how to proceed in the game and rewarding them with information to assist them further.
Negative	Time	Time, loss condition (running out of time and failure to complete puzzle), unlocking of doors if puzzle is completed within the timeframe	To prevent the player from completing the puzzles in time, preventing them from progressing in the game.



Positive and Negative	Health	Health	To give the player health when the game is started and award them with a little bit of health to keep them playing the game and preventing a negative game state from occurring. Health is lost if an enemy or if the player falls from a great height, enforcing a negative game state.

### Balance considerations

Describe your game in terms of fairness? What attributes (feedback, mechanics, action) make it fair?

*Are the feedback mechanisms described above well placed throughout the game?*

The attributes in the game that make it fair are the resources having a balanced amount of feedback (positive, negative, positive and negative) to make the game fair for all players to enjoy. This was implemented in 'Not All Dreams Are Good' and the feedback mechanisms described above have been well placed throughout the game for it to be balanced.

Describe your game in terms of stability? What attributes (feedback, mechanics, action) make it stable?

*How are resources managed for each player? Are the feedback mechanisms described above well placed throughout the game?*

The game is stable in the way that the clues resource is collected by the player in order to gain information on how to progress further in the game which creates stability and avoids a negative game state or negative feedback loop. The clues help push the player in the correct direction and assists them in solving puzzles. The positive feedback mechanism for the clues as described above are well placed throughout the game as it is one of the main focuses of the game, making it a stable game to play.

Describe your game in terms of engagement? What attributes (feedback, mechanics, action) make it engaging?

*What considerations have been made for providing engagement as a component of a fair and balanced game? How are audio and visual cues used to provide information to the game player that may impact upon their fair and stable game experience?*

The considerations that have been made for providing engagement in the balanced and fair game 'Not All Dreams Are Good' are introducing the Time and Health resources which produce both positive and negative feedback. This engages the player as it makes play interesting and rewards the player when they complete an action that produces positive feedback. It also engages the player when the game is not easily completed. The audio cues used within the game provide information to the game player that may impact upon their fair and stable game experience in the way that if for example they approach a puzzle and solve it incorrectly, a locked door sound will play alerting the player that they have incorrectly solved the puzzle and have not unlocked the door. The visual cues used within the game provide information to the game player that may impact upon their fair and stable game experience in the way that enemies approach the player which could induce a negative game state if the player runs out of health caused by the enemies.

### **Difficulty of your game**

<i>Absolute difficulty</i>	<i>Relative Difficulty</i>	<i>Perceived difficulty,</i>
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Describe the amount of intrinsic skill required to meet a challenge and stress.	Describe the difficulty of a challenge relative to the player power to meet that challenge.	Describe how the player may feel about the game challenges.
Player must be quick to solve puzzles while staying under the time limit by sliding tiles by clicking and dragging to complete an image of a key, unlocking the door.	Players use mental problem-solving abilities to solve puzzles in a set amount of time to meet the challenge and proceed past the obstacle.	Players may feel stressed when they are pressured to complete the puzzle within the set time.
Player character must evade enemies with the up, left, right and down arrow keys.	Player to observe the area and move to a suitable position where an enemy is evaded.	Players may feel tense as they avoid enemies which will prevent their health from decreasing if they collide with an enemy.

### User testing

Refer back to SIT254-PlayerPsychologyWorksheetAndChecklist completed for your game, specifically the goals and psychological techniques employed. Using the USE model (Figure 1) describe how you will be testing each characteristic for your game.

Figure 1. USE Model

*User*

Description of user element to be tested	Testing method	Plans for testing	Outcomes
Determination of player puzzle solvability	Flow theory	Map out player's actions and moves when attempting to solve puzzles within a time limit. Observe players' reaction if puzzle is either successfully solved or unsolved.	Players mostly completed the puzzles while avoiding a negative game state from occurring but some had failed to complete the harder puzzles in the time given.

*System*

Description of system element to be tested	Testing method	Plans for testing	Outcomes
Determination of game mechanics based on player interaction	Heuristic Evaluation	Conduct a playtest session with new players of the game and conclude the session with a survey that asks players what the predominant game mechanics are in 'Not All Dreams Are Good'.	Players figured out what the game mechanics are in the game and had a clear idea of the aim and objective of the game.

*Experience*

Description of experience element to be tested	Testing method	Plans for testing	Outcomes
Determination of players' positive or negative experience with the game.	Flow Theory	Conduct a playtest session with new players of the game and conclude the session with a survey asking players to rate their experience with the video game and whether they had a positive or negative experience with the game.	Mixed results from players as some liked the increase in challenge of the puzzles but others felt it was difficult to complete them within the given timeframe. Players also enjoyed receiving clues and defeating enemies to be rewarded with a small amount of extra health.