



ENDLESS DREAMER

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Game Design Document

Table of Contents

1. Game Overview.....	2
1.1 Game Details	2
1.2 Logline	2
1.3 Description	2
1.4 Core.....	2
2. Gameplay Elements	3
2.1 Key Features	3
2.2 In-depth Core Loop.....	3
2.3 Concept Art.....	6
3. Development Details	8
3.1 Rough Schedule	8
3.2 My Role in the Team	10
3.3 Team Wishlist.....	10
4. Prototype Plan.....	10
4.1 Minimum Viable Prototype	10
4.2 MVP Ticket Breakdown	11
5. References	15

Game Design Document: Endless Dreamer

1. Game Overview

1.1 Game Details

- Title: Endless Dreamer
- Genre: Endless Runner
- Platforms: PC (initial release), Mobile (planned)
- Mode: Single-player

1.2 Logline

Explore various dreams and unlock their secrets.

1.3 Description

Endless Dreamer is a magical Endless Runner featuring unique systems. Embark on thrilling adventures, uncovering the story behind various dreams. Encounter unique debuff & buff ^[1] mechanics. Level up your characters to unlock their unique abilities. Discover the crafting system to craft potions that give you advantages in your runs with ingredients found on your adventures or purchased from the store. Play and unravel the mysteries of the strange dreams.

1.4 Core

At the core of Endless dreamer, the player runs with an increasing speed, avoiding obstacles and debuffs while collecting coins, powerups, and gems. The farther you run, the higher the distance count and the higher the score count (which can be increased with power-ups and multipliers).

Once the player trips twice consecutively or bumps into an object they would “wake up” and have to start the run again. This can be prevented with a second life with a potion, gems or maybe eventually ads.

¹ The term “buff” is the same as “power-up”, and these terms will be used interchangeably throughout this document.

2. Gameplay Elements

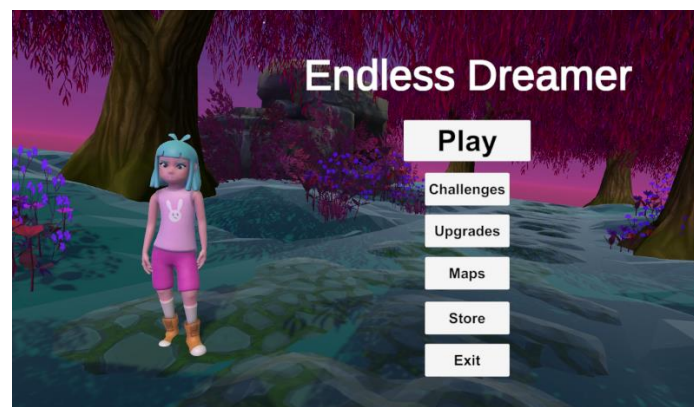
2.1 Key Features

- **Coins & Gems:** Collect coins and gems during your runs to unlock new characters, potion recipes, and upgrade the power-ups found on your runs.
- **Dodging obstacles:** Navigate around various obstacles that challenge your reflexes and skills as you aim for the highest score.
- **Buff & Debuff Mechanics:** Encounter different buffs that provide temporary advantages and debuffs that add an extra layer of challenge to your runs.
- **Character Progression:** Level up your character to unlock unique abilities that enhance gameplay and strategy.
- **Artifact Discovery:** Collect artifacts that reveal pieces of the story behind each dream.
- **Crafting system:** Discover a crafting system that allows you to create potions using ingredients found on your adventures or purchased from the store.

2.2 In-depth Core Loop

Enter the game:

- Press “Play” on the menu
- The default character and map are preselected. The player will be able to unlock and change then in further iterations. This is shown below in the screen capture from the early development of the game.



- Attempt to run as far as possible with the speed getting increasingly faster as time goes on. Achieve this by
 - Dodging obstacles and debuffs
 - Collecting power-ups
 - Utilizing character abilities

Dodge obstacles & Debuffs:

- Move left or right to avoid obstacles using the “A” and “D” keys or “left” and “right” arrow keys.
- Jump over obstacles using the “space” key
 - Rocks, logs, and stumps can be jumped over, but the trees need to be dodged.
- Be careful not to trip (by either landing on obstacles or not jumping over roots meant to trip you)
 - If tripped the screen will turn black and white for the duration until the character recovers
 - If tripped again during the recovery period, the character “wakes up” and the run ends.
- Avoid collecting debuffs:
 - Dark green glowing mushroom: Blurs the screen for a few seconds (debuff resistance increases every 5 levels as characters level up).
 - Banana peels: Cause tripping.

Collect collectibles:

- Collect coins and gems by running through them.
- Collect various power-ups by running through them.
 - Golden glowing mushroom: Grants a temporary speed boost and intangibility.
 - Bubble: Grants a temporary shield preventing the next collision from ending your run.
- Collect chests that may contain:
 - Potion ingredients: Used in the crafting system.
 - Gems and coins: To spend on the shop or for unlocking other characters.

Collect Artifacts:

- Find artifacts on your run and collect them by running through them.
- Artifacts contain small pieces of the dream’s story.
- Once all of them are collected, the next dream will be unlocked

Utilize your character ability:

- Once the character’s energy bar is filled, pressing the “E” key or clicking on the icon on the screen will activate their power. (shown in the image on the right)



- Different characters have different abilities, and their energy bars charge differently.
 - The default character gains a temporary speed boost and intangibility.
 - The default character's power bar charges based on the distance ran.

Use your potions:

There are 3 types of potions:

- Before the run potions:
 - Score multiplier potions: Will double your score for that run.
- During the run potions:
 - Debuff removal potions: Cleanses debuffs, removing screen effects like blur, or a tripping stage.
 - Used with the key "R" or clicking on the icon on the screen. (Shown in the picture on the right)
- After the run potions:
 - Extra life potion: Will resume the run.



Level up Characters:

- After each run, experience points (XP) are gained based on distance travelled
- As the character levels up, unlock the following rewards:
 - Increased resistance to debuffs.
 - Either more efficient power bar completion or longer lasting power.
 - Chests that may contain:
 - Potions or ingredients
 - Gems or coins

Craft potions:

- Use ingredients collected during runs (or purchased from the store) to craft various potions:
 - Score multiplier potions
 - Debuff removal potions
 - Extra life potion
- Potions are stored and can be used before, during, or after your runs depending on the potion.

Continue Running:

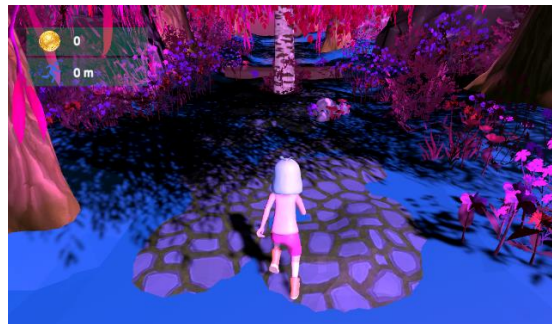
- Continue running
- Aim for higher scores
- Find all artifacts to unlock more maps

2.3 Concept Art

Each dream and its story have a very distinctive atmosphere, reflected through their appearance. (All images were AI generated unless otherwise specified) ^[2]

Magical Forest Dream (Default):

- This dream takes place in a lush, enchanted forest filled with glowing flowers and mushrooms. The soft glow from the flora casts an ethereal light, creating a mystical atmosphere.
- The concept art is below, as well as a screen capture from the early development.



Desert Dream (nightmare):

- This dream transports the player to a vast, barren desert. Sand dunes stretch for miles, and the sun beats down relentlessly, creating a challenging environment. Ancient ruins scattered across the landscape, remnants of a forgotten civilization. The atmosphere is dry, with the occasional dust storm kicking up sand in the distance, and the horizon shimmers with heat.
- The concept art for the map is below:



²<https://www.freepik.com/>

Medieval Dungeon Dream (nightmare):

- This dream plunges the player into a medieval dungeon with an eerie atmosphere. Stone walls and iron gates line the corridors, and the only light comes from flickering torches mounted on the walls. The dungeon is filled with obstacle, decaying bones, and ancient relics that hint at its dark past.
- The concept art for the map is below:



Cloud Dream:

- This dream takes place high above the world, on top of soft, aery clouds. The atmosphere is serene and divine, with rays of sunlight piercing through the cloudscape. A stonelike path forms from clouds, passing by floating temples and islands.
- Small cloud creatures camouflaged between the clouds, watch as the player is running past them. (image from dragon city) ^[3]
- The concept art for the map is below:



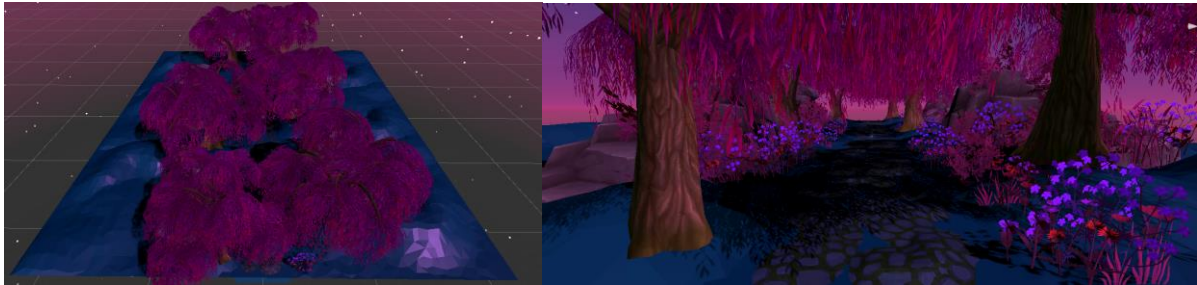
³ <https://www.ditlep.com/dragons/cloud-dragon>

3. Development Details

3.1 Rough Schedule

Week 1

- Create/ source the assets for the default map/dream. This includes environmental assets for the background and the ground for the running track.
- Assemble them together and create the background.



Week 2

- Implementing map boundaries so the player doesn't run off the running track.
- Add obstacles and collision.



Week 3

- Integrate the character model and animations.
- Code the running, moving left and right, and jumping.



Week 4

- Make collectables: Coins, Gems, and chests.



- Make buffs and debuffs.



Week 5

- Develop the task manager to keep track of the player's progress after every run.
- Assemble the menu (as shown "2.2 In-depth Core Loop").
- Make the menu functional by connecting it to the different scenes.

Week 6

- Add background music and special effects such as sound and lighting.

Week 7-8

- Testing the game for bugs and exploits.
- Fixing the bugs and exploits and getting ready for release.

⁴ <https://www.figma.com/community/file/1083405504805072401/sparkle-the-diamond-illustration-animation>

⁵ <https://medium.com/@christianbrown.0738/discovering-the-profound-potential-of-magic-mushrooms-three-unbelievable-benefits-69b70c74dd61>

⁶ <https://stock.adobe.com/search?k=bubble>

3.2 My Role in the Team

As a game designer and developer, I am responsible for both conceptualizing the overall game mechanics and bringing the vision of Endless Dreamer to life. This includes:

- The core gameplay
- Character abilities and their progression
- The crafting system
- The buffs and debuffs
- Managing the project timeline, ensuring tasks are completed according to the rough schedule.

3.3 Team Wishlist

To further enhance the game's development and ensure a polished final product, the following team members would be highly beneficial:

- 3D artist: To create the assets used in the game, such as the character models and the environment assets to reflect the intended dreamlike aesthetic.
- 3D animator: To bring the characters and in-game objects to life, such as running, jumping and the movement of tree leaves in the wind.
- Sound Designer: To compose atmospheric music and design sound effects that enhance gameplay.
- A small team of alpha testers: To playtest early versions of the game, offering feedback on gameplay mechanics, balancing, and overall user experience before public release.

4. Prototype Plan

4.1 Minimum Viable Prototype

Since I have completed most of the requirements for the prototype, I will be aiming for a demo. The demo of Endless Dreamer will include:

- One map
- One character
- A functional menu
- A functional task manager to store your values for later sessions
- Basic UI showing the coins, gems, distance, score, power bar, and potions to use
- A functional end screen pop up window
- A functional crafting system
- A functional story for ingredients and potions (purchasable with gems)

4.2 MVP Ticket Breakdown

As a player:

1. I can enter the game.

- [Art] Create the “Loading Screen” (1 day).
- [Code] Create the Task Manager (that will keep track of game progress) (1 day).
- [Art] Menu (1 day). (DONE)
- [Code] Make the menu interactable (1 day).
- [Sound] Add the menu background music (1 day).
- [Sound] Add clicking noise for the menu (1 day).

2. I can enter a run / game session.

- [Art] Create the background for the first map/dream (2 days). (DONE)
- [Code] Connect the map with the menu to be able to enter the run (1 day).
- [Code] Create boundaries to the map (not to run past the tunning track) (1 day). (DONE)
- [Art] Add the character model (2 days). (DONE)
- [Art] Add the running animation (1 day). (DONE)
- [Sound] Add the in-game background music (1 day). (DONE)
- [Art] Add distance and score counters (1 day). (DONE)
- [Code] Make distance and score counter track how far the player has run and connect it to the task manager (1 day).

3. I can avoid obstacles.

- [Code] Add movement controls (A & D/ left & right arrows) (1 day). (DONE)
- [Code] Add jumping (1 day). (DONE)
- [Art] Add jumping animation (1 day). (DONE)
- [Sound] Add sound for jumping (1 day).

4. I can collect coins and gems.

- [Art] Make the coin and add a coin material (1 day). (DONE)
- [Art] Make gems. (1 days).
- [Code] Make coin spin and disappear when collected (1 day). (DONE)
- [Code] Make gem spin and disappear when collected (1 day).
- [Sound] Add coin collection sound (1 day). (DONE)
- [Sound] Add gem collection sound (1 day).
- [Art] Add a coin counter (1 day). (DONE)
- [Art] Add a gem counter (1 day).

- [Code] Make coin counter go up with each coin collected and connect to the task manager (1 day).
- [Code] Make gem counter go up with each coin collected and connect to the task manager (1 day).

5. I can collect power-ups.

- [Art] Create power-up models (2 day).
 - Oyster mushroom with a golden outline glow.
 - A shield that looks and feels like a bubble.
- [Code] Code power-up abilities (2 day).
 - Gold glowing mushroom: Gives intangibility and speed for 5 sec.
 - Bubble shield: Gives a shield that prevents the next collision from ending your run.
- [Sound] Add collection sound effect (1 day).

6. I can crash into obstacles.

- [Sound] Add sound for crashing into objects (1 day).
- [Code] Add a timer for 3 seconds and connect the end of run window (1 day).
 - Crashing into objects will end your run unless a power-up is active to prevent it.
- [Art] Add tripping animation and black and white screen effect (1 day).
- [Code] Implement tripping mechanic (1 day).
- [Sound] Distort the music when tripped (1 day).

7. I can complete the run.

- [Art] Make the end of run window (1 day).
 - Portray the player's gains from the run.
 - Since the main goal of the game is to run as far as possible, the win magnitude depends on the score obtained at the end.
 - The loss is just the interruption of the score accumulation.
- [Code] Make buttons interactive and connect them to scenes (3 day).
 - Continue run: Costs a potion or if the player doesn't own any potions, 5 gems.
 - Play again: start the run again.
 - Menu: Go to menu
- [Code] Implement the continue game function (2 days).
 - Destroy obstacle that ended the player's run.
 - Freeze the screen with a time ticking down.
 - Give player intangibility for 3 seconds so they can readjust.
- [Sound] Add end of run sound (1 day).
- [Sound] Add continue run sound (1 day).

8. I can craft.

- [Art] Create icons for all potions (2 days).
 - Score multiplier potions: Yellow potion with star containing an “X2”.
 - Debuff removal potions: Green potion with a crossed-out skull on it.
 - Extra life potion: A red potion with a heart on it.
- [Art] Create icons for all ingredients (2 days).
 - Each map will have a stone, a flower, and a living thing collectable as ingredients to keep with the theme and not make it confusing to find fireflies in the desert.
 - For the default magical forest:
 - Stone: glow stone, turquoise and glowing at 50% capacity.
 - Flower: shimmering orchids, light lilac colour.
 - Living: Fireflies.
- [Art] Create the grinded down material icons (1 day).
 - (the ingredients found can be grinded down 1:1 into stone, flower and living dust so they can be used for potions no matter where you get them from.)
 - Stone dust = grey
 - Flower dust = light pink with shimmers.
 - Living dust = light blue with 25% glow
- [Art] Create the crafting scene (2 days).
 - Have 2 main tabs: Crafting and grinding
 - Have different sub tabs for each potion.
 - Have different sub tabs for each map's ingredients.
- [Code] Implement the grinding system (1 days).
 - 1:1 from the ingredients to its dust counter.
- [Code] Implement the crafting system (2 day).
 - Potion recipes:
 - Score multiplier potions:
 - 2 stone dust, 1 flower dust, 2 living dust
 - Debuff removal potions:
 - 1 stone dust, 3 flower dust, 2 living dust
 - Extra life potion:
 - 2 stone dust, 2 flower dust, 3 living dust
- [Code] Connect the crafting scene to the menu (1 day).
- [Code] Update the ingredient and potion changes to the task manager (1 day).
- [Sound] Add crafting sound and background music (1 day).

9. I can purchase items from the store.

- [Art] Create store scene (2 days).
 - Add tab for ingredients, ready potions, and characters
- [Code] Code the prices (1 day).
 - Ingredients: 250 coins per dust.
 - Characters: 2500 coins, 50000 coins, and 350 gems.
 - Potions: 4 gems per potion.
- [Code] Update the currency and inventory changes to the task manager (1 day).
- [Sound] Add purchasing sound and background music to the store (1 day).

Estimated development time:

- Code: 27 days
- Art: 27 days
- Sound: 13 days
- Total: 67 days

5. References

- <https://www.freepik.com/>
- <https://www.ditlep.com/dragons/cloud-dragon>
- <https://www.figma.com/community/file/1083405504805072401/sparkle-the-diamond-illustration-animation>
- <https://medium.com/@christianbrown.0738/discovering-the-profound-potential-of-magic-mushrooms-three-unbelievable-benefits-69b70c74dd61>
- <https://stock.adobe.com/search?k=bubble>