

# **ENDLESS SURF**

## **Idea: Endless Surf**

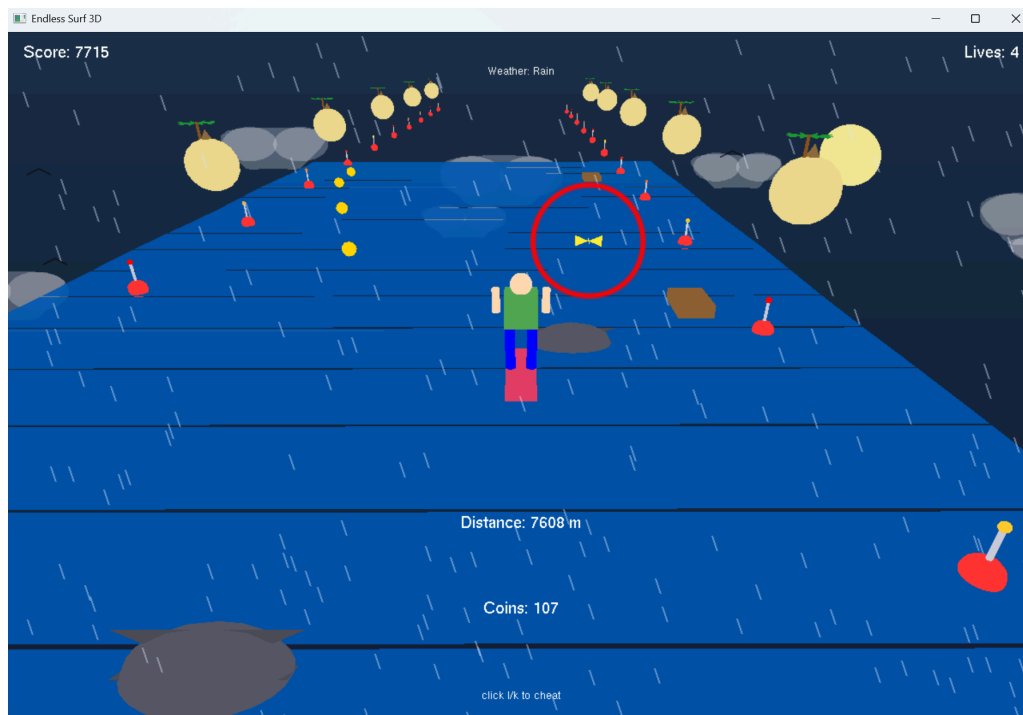
This project is a 3D surfing-themed game developed entirely with PyOpenGL and GLUT. The surf-man rides a surfboat across an endless ocean, avoiding obstacles, collecting power-ups, coins, and surviving against unique challenges.

The game blends casual surfing with thrilling chase mechanics, immersive environments, and player personalization.

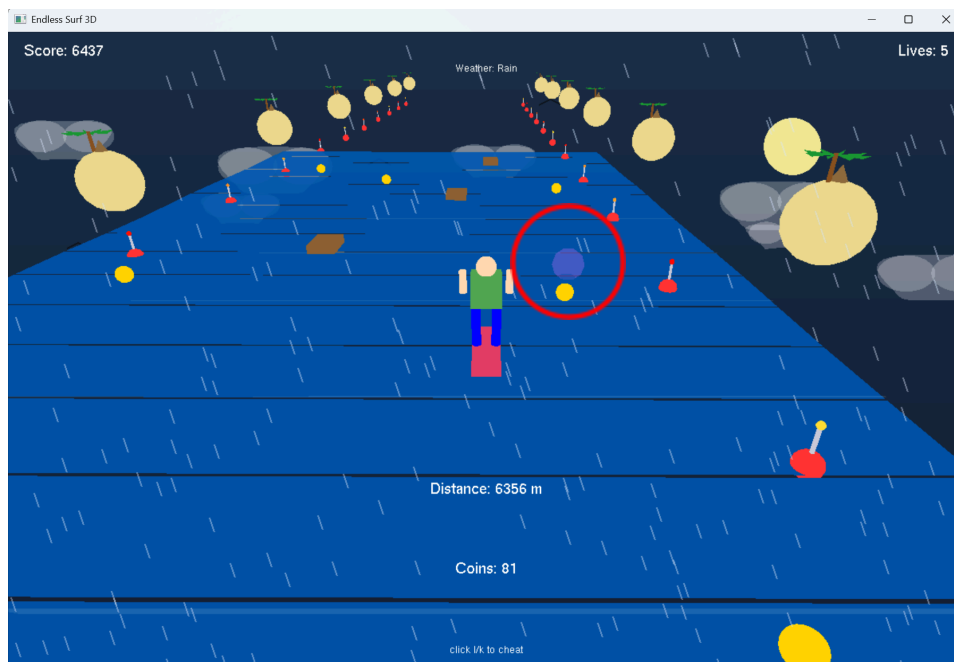
## **Key Features**

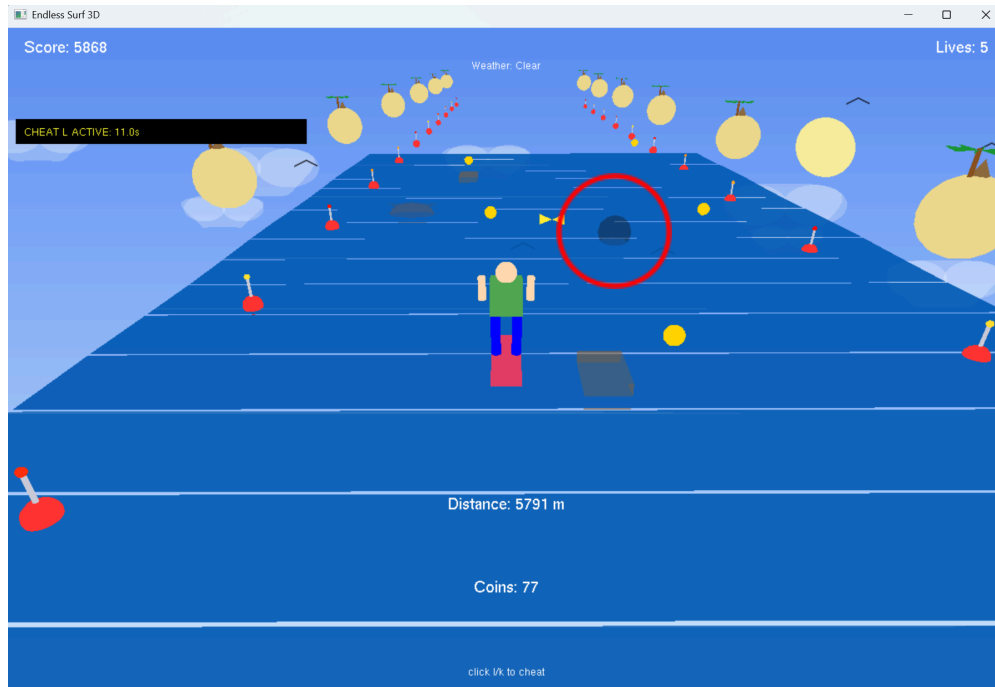
- **How to Play:** This section provides all the necessary instructions for players to understand the various modes and features.
- **Different Weathers:** In every 100m, the weather changes into 3 different modes -
  - ★ **Clear:** In clear weather mode, it is sunny and usual.
  - ★ **Rain:** In this mode, it is raining, and the environment seems dull.
  - ★ **Windy:** In windy weather, the surfboat moves along the wind direction, making it a little tricky for the player to collect the coins or power-ups.
- **Obstacles:** Several obstacles, such as sharks, logs, appear in the ocean. A collision will happen with the surf boat if not played carefully.
- **Chasing Mechanism:** On the first collision, instead of dying immediately, the player will retain two more lives.

- **Power-ups:** Special items appear that provide temporary advantages up to 20 seconds -
  - ★ Increases the speed of the surf boat
  - ★ Makes the obstacles harmless
- **Point System:** Players earn points based on survival time, collecting different coloured coins, and distance covered.
- **Different coins:** Player needs to collect and avoid coins based on colour -
  - ★ **Yellow:** +1 point is earned
  - ★ **Purple:** +5 points are earned
  - ★ **Black:** -10 points are lost
- **Camera Views(Key C):** The game includes different view angles -
  - ★ First-person view (Key 1)
  - ★ Third-person view (Key 2)
  - ★ Surf-man front view (Key 3)
- **Cheat Mode:** There are two hidden modes allowing players to bypass certain rules for fun -
  - ★ **K mode(Key K):** Converts all existing obstacles to coins, prevents new obstacles from spawning, and provides a 3x speed boost for 25 seconds.
  - ★ **L mode(Key L):** Makes obstacles harmless (they appear dim) and provides invincibility for 20 seconds.
- **Day/Night Toggle:** Players can switch day or night visuals for variety.
- **Death Animation:** On death, the surf-man drowns after losing all 3 lives.
- **Different Key Options:**
  - ★ To restart - Key R
  - ★ For play/pause - Key P
  - ★ To Quit - Key ESC

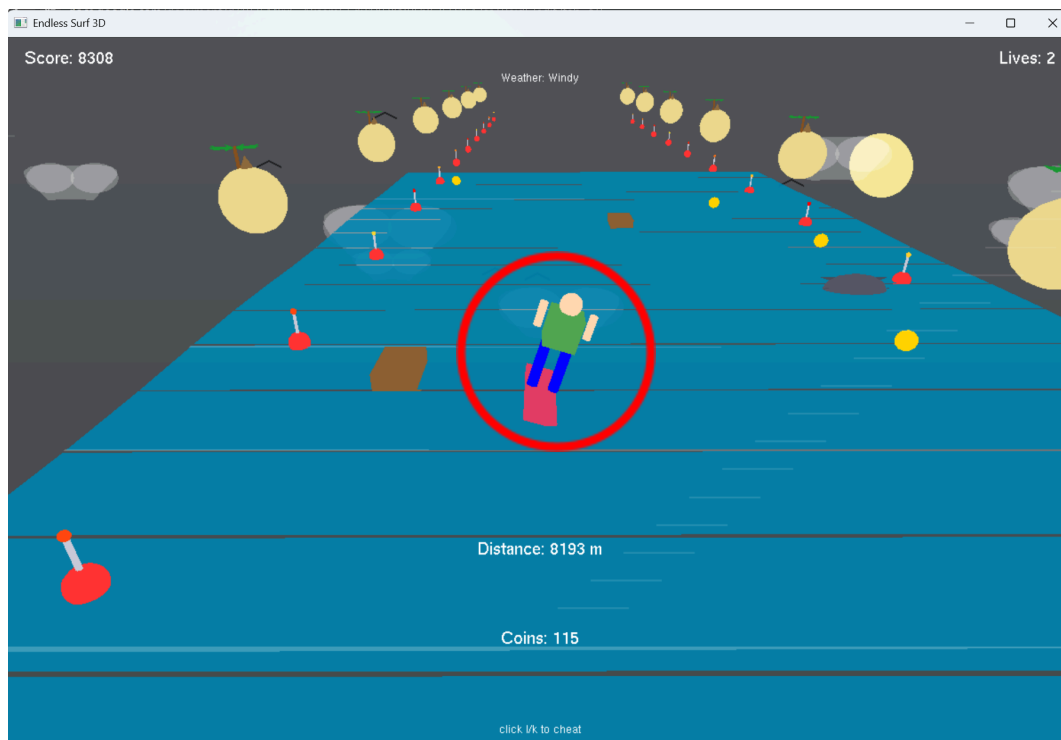


Power-ups are special floating items that players can collect during the game, each lasting up to 20 seconds. They can boost the surf boat's speed for faster movement or make obstacles harmless, allowing players to glide through hazards without taking damage.





Throughout the game, players will come across coins of different colors that impact their score. **Yellow coins** give a small reward of +1 point, while **purple coins** offer a bigger bonus of +5 points. However, **black coins** are dangerous and deduct -10 points, so players must be careful to avoid them.



In **windy weather**, strong gusts push the surf boat in the direction of the wind, making it harder to stay in control. This adds an extra challenge as players must carefully adjust their movement to collect coins and power-ups while avoiding obstacles.