***Game link:****http://localhost:59700* ***Design Document: Lost in Lunar🌙***  
  
**Gameplay description:**The core mechanic of the game is a survival-adventure where player take on the role of an astronaut lost on a moon with gravity difference. The player must explore their surroundings, solve puzzles, and gather resources to survive with limited oxygen and ultimately escape back to Earth. The game will feature a combination of 2D comic book-style narrative sequences (similar to into the spider verse theme, but in 2d) and 3D exploration and puzzle-solving segments.

**Input:**

I’m planning to include the arrow keys for player moment and mouse for changing the view (& left click for shooting). Keys like O(oxygen), B(Boost) for special moves

#Shooting with laser effects (vfx movement)

#Story telling with 2d animations with comic book type: just write text in a UI box for this level to just keep working

**Visual Style:**

The visual style of the game will be a mix of comic book-inspired 2D art and 3D graphics. The 2D segments (book animation) will feature vibrant colors, dynamic panel layouts designs to convey the narrative aspects (story progress) of the game. The 3D environment will lets us to progress forward in the story to immerse players in the survival experience.

**Audio Style:**

The audio is not too loud, but plain & tense to create fear in a vacuum. Have to think about this after game starts working. Especially sounds for jumping, combat, radio transmission audio in intervals. I’ll work on this after reaching minimum target.

**Story/Theme Description:**

In our game, players will play the role of an astronaut who crash-lands on a moon after a failed mission. Being alone, the player must navigate the lunar terrain, search for resources, and solve puzzles to survive. Along the way, they will uncover clues about the mission’s secret which was doomed to fail and the fixing the space craft (after finding all the resources, thinking of keeping a Boolean where space craft will start working). The ultimate goal is to repair their damaged spacecraft and escape back to Earth. Next level would be just like flight simulator like assignment 3, riding the spacecraft to the end.

**Feature Set Targets**

**Low-Bar:**

- Interactive 3d lunar environment.

- final spacecraft (will develop this separately to attach to the game at the end)

- Gravity handling and resource collection

- Minimal audio (will try to achieve this at the end of low-bar goal)

- Navmesh to travel around, UI bars.

**Target:**

- Player finishes the level on lunar surface and flies the space craft way back to earth

- Challenging puzzle solving

- Matching sound effects

- UI bars like oxygen, resource levels, fuel meter.

- character dialogues in the story mode (2d)

**High-Bar:**

-- Comic book style 2d animation with vibrant details

- Dynamic weather and day-night cycle

- Appropriate audio for the functions performed.

- Possible easter eggs and meaningful puzzles.

- Lunar to Spacecraft transition (possible level 2)

Smooth player movement

**Timeline**

Week 1:

- Collect the resources and materials to build this game

- Basic player movement and a moon surface

Week 2:

- Design initial level layouts and puzzle concepts

- resource collection in the game and combat sequences with AI bots

- spacecraft animation, which I’ll combine them together at the end.

Week 3:

- 2d art for comic book styles theme and filter

- UI elements like score card, start and end screens

- Enhance visual effects and environmental details

- Implement additional gameplay features such as dynamic weather (high bar)

- basic game should be playable by achieving low bar goals

Week 4-5:

- Fix graphics, player movement and audio

- Test and debug gameplay mechanics

- Documentation and presentation

**CheckList:  
1. Terrain surface, game objects like player**

**To do: Smooth player movement and mouse to change angle.**

**Terrain solid to make object not fall into that. (fix character controller)**

**UI bars for oxygen and fuel and think about how to collect them**

**Fix camera for player movement**

*References:*

Moon landscape: <https://assetstore.unity.com/packages/3d/environments/landscapes/lunar-landscape-3d-132614#description>

Youtube:   
<https://www.youtube.com/watch?v=SwmRPR3ykVg>

Spaceship movement:

https://www.youtube.com/watch?v=fZvJvZA4nhY  
  
Player movement mixamo:  
https://www.youtube.com/watch?v=Bzw\_OOQoH\_E

2d mini games in unity 3d:  
<https://forum.unity.com/threads/help-implementing-a-2d-mini-game-in-3d.1258296/>

Start menu:  
<https://www.youtube.com/watch?v=-GWjA6dixV4>

Spacecraft for level 2:

<https://assetstore.unity.com/packages/3d/vehicles/space/free-sf-fighter-11711>

scene switch:  
https://www.youtube.com/watch?v=9lPCv9kkbSI

space skybox:  
https://assetstore.unity.com/packages/2d/textures-materials/deep-space-skybox-pack-11056

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VFX:

<https://www.youtube.com/watch?v=jO088TP5WD4>

<https://assetstore.unity.com/packages/vfx/particles/cartoon-fx-remaster-free-109565?aid=1011lffiq&utm_campaign=unity_affiliate&utm_medium=affiliate&utm_source=partnerize-linkmaker>