LEARN 2 SWITCH™

Game design document

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Game Overview

Title: Learn2SWITCH™

Platform: PC Standalone, Steam Deck

Genre: RPG Simulation, Educational Game

Target: High School Students; 14-18 years old

Perspective: Third Person

Mode: Single Player, Multi-player

Experience Learn2SWITCH™, a thrilling 3D RPG game set on Mars, where players must master 6 key skills: Literacy, Communication, Adaptability, Leadership, Problem-Solving, and Professional Etiquette. Being successful in theses areas is essential for securing a position within the mission crew returning to Earth. Players must master each skill to progress and qualify for job opportunities.

Goal of the game

Get one of the crew member jobs and return to Earth.

Gameplay

Objectives

- Qualify for Mission Jobs
- Defeat Aliens
- Get back to Earth

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Genius

If a player gets stuck during gameplay, they can ask for help from the Genius, simply use your bracelet to contact the Genius, who will provide a clue regarding your ongoing mission. If no mission exists, the Genius will offer a hint and designate a new mission to pursue

Game Mechanics

Players have different way to increase their skills (Stats or Pillars) The main one is through the different quest in the world.

Quest

Each time a player finishes a quest the skills required to do the mission increase. The more they finish quests, the more their skills increase. The skills use in the quests are indicated next to the quests in the HUD.

Enigma

Each Type of enigmas increase skills by example the hacking guiding enigma increase the leadership skills. But regardless the type of puzzles, they all increase the Problem-Solving skills.

Combat

The last way to increase your skills is through combat. Unlike the other way which increase the Pillars Skills, they increase the stats of the player such as attack, defence, dexterity and speed.

Game Logic

To know how much you have to increase the player skills, you have to look at the time they make to finish the mission / enigmas. The fastest they are, the more they gain. Each quest or enigmas must have 3 times level and the score and the skills

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depends on that. Each time has to be test during the test phase of the game during the development.

The Genius provide hints. To know which hint gives to the players, you look at the actual position of the player in the quests. If you use the Genius more than 1 times in the same quests you have time penalties. The penalties are not show to the player but the timer for the quests has to use it to adjust the reward.

Characters

At the beginning, the game let you choose between 2 characters male or female. The two characters are named Tony and Aza. As the game is in third person, the game should allow a bit of character customization such as the hair, the eyes, the skin colors, the mouth, …

NPC important character

Flinn

Flinn is responsible of you for ORION. He works at ORION Headquarters and will give you the necessary equipment for the game. He'll also be here to give you details on the Phoenix program if you need. This character is very supportive and is here to help you. He wants you to success and join the crew.

Victoria Stomider

She is the mayor of Cydonia Oasis. She's straight but fair. She always knows which decision make. She'll be a great friend for your missions but don't really help you in your quest.

For every other NPC you can create in the game I recommend to use procedural generation for the look and random or AI for the name and jobs it will really be time saver.

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As a warning pay attention that the name you generate doesn't exists in the real life. Or if you want at the beginning of the game you can write "This game is purely fictitious. Any resemblance to existing characters or persons is purely coincidental."

Story

In response to the depletion of Earth's resources and unlivable conditions, ORION (Organization for Research and Innovation in Outer Navigation) created Project Gemini as an emergency effort to prevent humanity's extinction. The outcome of this project resulted in people relocating to Mars for the last century. However, a recent breakthrough conducted by unmanned explorers shows that Earth now possesses the ability to support life. As a result, the Phoenix mission has been initiated by the government to send a team of qualified members back to Earth to rebuild civilization. Aspiring participants must endeavor to improve their abilities to secure a position on the Phoenix mission.

Character Starting

The character the player play was born on Mars, he never went on Earth and the only things that the character know about Earth is teach at school. But the character is a dreamer and loves Space. His ancestors came from Earth, they were the last generations on the planet. The character often come to the museum to learn more about Earth and it's in the museum that the character will see an advertising for the Phoenix mission.

Level Design

Mars is mostly No Man's Land. In this desert, players can find different types of Aliens who want to steal your resources.

To survive, humanity create 3 main cities in different regions of Mars. Each city is under a dome:

- Cydonia Oasis: located in the Cydonia Region also known as "The Face of Mars". It's recognizable for his unique Rock Formation. It's the main residential city, and also where players live.

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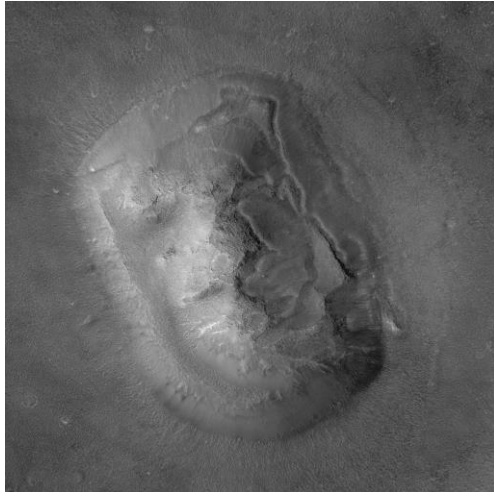
- Olympus: located on Olympus Mons. It's the largest and also the highest place on Mars. This is the government city. Here you can find some habitations for the members of the government. We also find fountains and an artificial lake below the 3 Towers. In these 3 towers, we can find the strategic buildings.
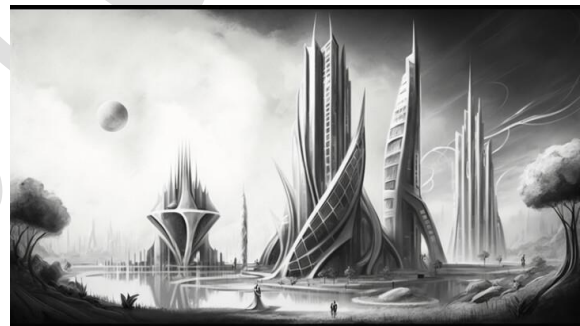
- Valles Marineris Haven: located in the canyon system Valles Marineris. This is a place for exploration where ou can find farmers and miners. You can find farmers and miners. This is the zone where all the energy needed is generated and transfered to each zone.
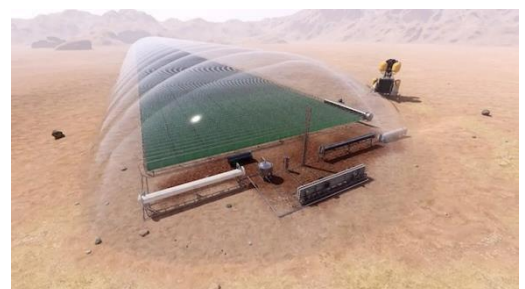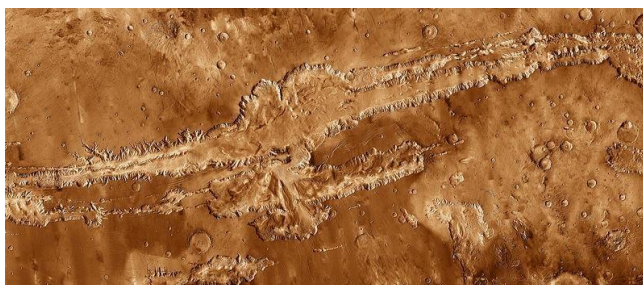
All images from Mars are real Locations.

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Important Locations

- Museum: located in Cydonia. Place where you can learn the Story of Earth and the backstory of the game.
- Work Station: Located in Cydonia. Place where you have to work. You'll perform some of the missions in this Locations.
- Senate: located in Olympus. Place where all the rulers debate and will present you and your team to the whole government.
- ORION Headquarter: Located in Olympus. Locations where your weapons will be given to you and where the Genius stand. It will also be the last place before the end of the game.
- Solar Panel Station: Located in Valles Marineris Haven. This is where all the energy is generated and transferred to the other domes.
- Farm Station: Located In Valles Marineris Haven. Place where the food is grown.

Career Path and Jobs

- Aerospace   o   Engineer Operator
     - o   Commander

- Oil and Gas o Resource Technician o Operator
     -
Technology   o
Developer
     - o   Programmer

- Medical Team o Nurse o Doctor

How Jobs Work

Each player is responsible for mastering a chosen job path that they will select at the beginning of the game. To choose the career path, they'll have to read the description of the jobs carefully to comprehend the requirements needed to master the job. Players will have to complete missions and enigmas to increase their skills and reach a minimum score for each skill (Player Statistics and Pillars). The Players Statistics represent 4 stats: Attack, Defense, Dexterity, Speed). The Pillars represent 6 stats: Literacy, Communication, Adaptability, Leadership, Professional Etiquette, Problem-Solving. The minimum score of each skill will depend on the specific job.

To increase your skills, you have to complete missions given by ORION and will be visible on their bracelet. The bracelet will open a menu players can view all available missions, their skill level, and the terrain map. The bracelet is also a communication tool and ORION will give each player each task through a call on the bracelet.

The game is won once players reach a mastery level for all their selected job path's skills and complete all the missions required by ORION. Players must perform their effectively and efficiently to be able to return to Earth as a crew member on the Phoenix.

Prototype of the Quest HUD

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48%

Quests

✓ Meet Flynn in ORION Headquarters

✓ Train to use the spaceship at ORION Headquarter

✓ Speak to Victoria at Cydonia Oasis

Meet Flynn in ORION Headquarters

Skill used:

- Communication
- Professional Etiquette

Required Levels

- Communication: 5
- Professional Etiquette: 8

Prototype of Skills Menu

Generate Resume

Pillars

Leadership | Communication | Adaptability | Problem-Solving | Literacy | Professional Etiquette

Stats

Attack: 16

Defense: 30

Dexterity: 23

Speed: 12

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Combat

In No Man's Land, gamers can battle extraterrestrial beings by apprehending them in order to acquire valuable resources. Taking down opponents require STUNNING them through various methods, but it's also possible to flee if you're quick enough.

Name	PV	Speed	Detection Zone	Damage	Movement
Zephyrians	50	90%	10m	15	Fly
Solarians	70	110%	7m	30	Run
Crystallites	20	150%	15m	5	Run
Verdorians	100	50%	10m	50	Walk

Enemy speed is expressed as a percentage of the player's speed.

Weapons

Celestial Flash Emitter

The Celestial Flash Emitter is a device designed to release a flash of light that can incapacitate foes so that the wielder may escape with ease. Once fired, it disorients enemies for a period of 2 to 3 seconds.

Net Launcher

A Net Launcher is a device that can immobilize enemies, thereby granting the wielder opportunities to either retreat or scavenge valuable resources.

Course of the game

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- To begin the game, players must create their character by selecting a first and last name, education level, and gender.
- Next, players choose a career path from four options: Aerospace, Energy, Technology, or Medical
- The game start with the player spawning into the museum of Cydonia Oasis, where players can explore to learn more about the backstory of the game
- The payer received a call from a representative of ORION and now has to go to Olympus to meet him.
- The player drives to Olympus.
- ORION will give the player the necessary equipment to succeed (net launcher, celestial, bracelet)
- Players are free to explore Mars to complete each quest.
- When all quests are completed and you get the job, you go back to ORION where you meet your team
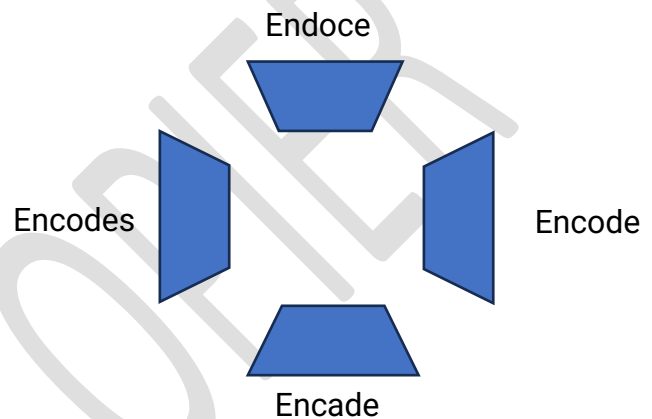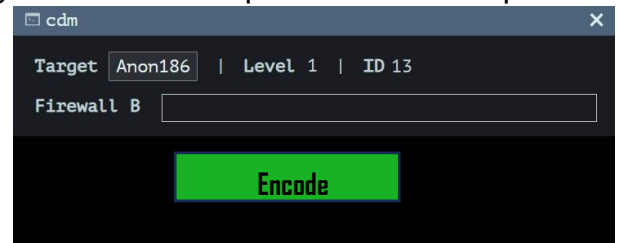- You will then leave Mars in the Rocketship as a Hero

Enigma

Enigmas are a type of quest that requires problem-solving skills to complete. By successfully completing these quests, players can develop their skills and abilities. In addition, there are three different types of enigmas that require specific skills to solve.

There are 3 types of puzzles:

- Maze: Maze enigmas are very popular and can be found in every city. Some of them may be required to complete quests and others may be hidden. Players must use their Problem-Solving and Adaptability skills to solve these mazes.

- Guiding Enigma: Requires players to guide non-playable characters (NPCs) through a Top-Down view by giving them instructions. For instance, players may have to help an NPC unlock a door by guiding them to the lever. Completing this types of enigmas can develop a player's Leadership, Communication, Adaptability, and Problem-Solving skills.

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- Hacking Enigma: Hacking Enigmas appear as computer code. These types of puzzles require players to fight cyber attacks by recognizing words and certain commands then choosing the correct response from multiple choices using their controller. Successfully completing hacking enigmas can improve a player's Literacy, Communication, Problem-Solving, and Dexterity skills.

```
□ cdm                                                    ×
  Target  Anon186   |  Level 1  |  ID 13
  Firewall B   [                                    ]

              [   Encode   ]
```

Endoce

Encodes   Encode

Encade

Features

Important features of the game include:

- Skill badges: Players will have the chance to earn a Skill after successfully completing each of the 6 Pillars. However, if a player fails to complete a quest, a rocket will crash and a "MISSION FAILURE" message will appear, providing tips to improve chances of success on future attempts.
- NPC interaction: a Hero must not stun the colony inhabitants, and players who do so will receive a warning. If they continue violating this rule, penalties such as losing recently obtained resources, losing 50% of their life, and even restarting the mission might occur.
- End of game summary: After finishing the game, players will receive a summary of how many times they had to call for help during the game.
- Resume Builder: The achievement screen also provides a link to a website where players can generate a resume based on their successful completion of each of the game's 6 Pillars

Data Collection

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To provide players everything they need and to improve the game we collect data during the game such as:

- The time spent on each quest: It allow us to know what quest is the hardest or the easiest.
- Common errors among players: this let us know which mistakes players do the most
- How many times players call the Genius: It allow us to know what quest is the hardest or where do they need the Genius
- How many aliens did they catch/stunned: to determine if they really fight aliens or if they flee the fight.

Audio Features

The main theme of the game has to be calm to reminds Space. For example, the 30 first seconds of the official soundtrack of Surviving Mars - Link to Youtube

We can hear the main theme in the Main menu, during the credit of the game and during the last minutes of game while the rocket takes off.

Each zone of the game has a theme. Here is some examples for each zone:

- Olympus. CityScape of Mars - Link to Youtube
- Cydonia Oasis. Futuristic city - Link to Youtube
- Valles Marineris. Eve - Link to Youtube – For this music the video should start at 4:40.
- No Man's Land. Eternity - Epic Space Music Mix - Link to Youtube

Visual Features

The general style of the game is realistic without a lot a shader so the game can be play on the lowest performance computer. By default, the preset qualities are set on medium and players can adjust different parameters as they want such as postProcessing, antialiasing, shadow, light effect, … The game must be run at a minimum of 60 fps (120 max).

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During the 3D modeling, maximize the Retopology process. The challenge of the game is to have decent graphism but to keep the game the more optimize as you can.

The game integrates a Day/Night cycle which change the lights effects in the different cities.

Game Controls

Players will use a controller to play the game.

Movement: Left Joystick

Camera: Right Joystick

D-Pad: Enigmas

L1-R1 (PS) / LB-RB (Xbox): switch weapons

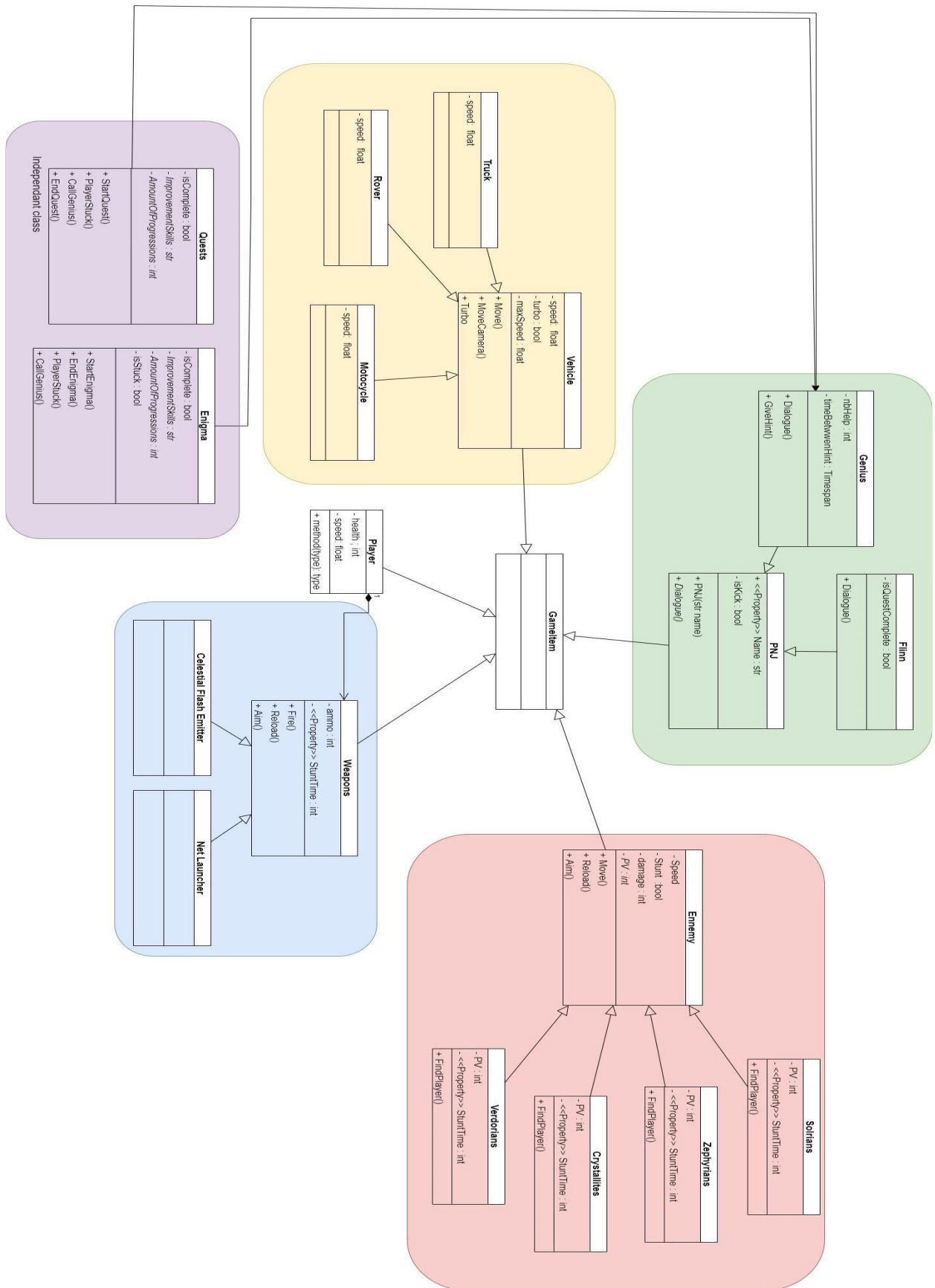L2 (PS) / LT (Xbox): aim

R2 (PS) / RT (Xbox): Fire

TRIANGLE (PS) / Y (XBOX): Open Bracelet

SQUARE (PS) / X (Xbox): Speak to PNJ

X (PS) / A (Xbox): Interact

O (PS) / B (Xbox): Exit Menu

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