

Main Centauri
Game Design Document

Copyright Information

Version History

Time	Author	Changes
10/02/2024	Judy Dunbar	template download Game Name, documentation for M1
10/05/2024	Judy dunbar	Project Management Schedule, Game Art, Technology, General Control System, Physical Characteristics, Game World, Story and narrative
10/08/2024	Isa Olivieri	Concept Art
10/14/2024	Judy Dunbar	Included Interactive Environment Name,
10/28/2024	Judy Dunbar	Mission/challenge structure, Gameplay, Game Progression, Main Menu Screens V1 & V2, Game Options, Visual Systems
11/04/2024	Judy Dunbar	Screen flow, Provided information on the Main menu, Options, and Story screens, Included Unreal Blueprints, Screen Walkthrough video of version 01, updated visual system
11/05/2024	Lucas Carr	Asset list provided
11/05/2024	Judy Dunbar	Flow Charts
11/13/2024	Judy Dunbar	Updated UI screens and included an updated asset list sheet
11/25/2024	Judy Dunbar	Updates to UI screens and add version05

12/01/2024	Judy Dunbar	Update UI Screen and add version06, navigation/movement, game options, License Considerations, Game Progression, Game options, AI Tool Assignment, Technology, Final Revisions
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Table of Contents

Contents

GAME NAME	1
Game Design Document	1
Copyright Information	2
Version history	2
Table of Contents	2
Game Overview	4
Game Concept.....	5
Feature Set.....	5
Genre.....	5
Target Audience.....	5
Game Flow	5
Look and Feel	5
Number of locations.....	5
Number of levels.....	5
Number of NPC's.....	5
Number of weapons.....	5
Gameplay and Mechanics	5
Gameplay.....	5
Game Progression.....	5
Mission/challenge Structure.....	5
Puzzle Structure.....	5
Objectives.....	5
Play Flow	5
Mechanics.....	5
Physics.....	6
Movement.....	6
Objects.....	6
Actions.....	6
Combat.....	6
Economy.....	6

Screen Flow.....	7
Screen Flow Chart	7
Screen Descriptions	7
Game Options	7
Story, Setting and Character	7
Story and Narrative	7
Back story.....	7
Plot Elements.....	7
Game Progression.....	7
License Considerations.....	7
Game World.....	8
General look and feel of world.....	8
Area #1.....	8
Characters.....	8
Character #1.....	8
Levels	9
Level #1.....	9
Synopsis.....	9
Introductory Material	9
Objectives.....	9
Physical Description.....	9
Map.....	9
Level Walkthrough.....	9
Closing Material.....	9
Interface	9
Visual System.....	9
HUD - What controls.....	9
Menus.....	9
Rendering System.....	9
Camera.....	9
Lighting Models.....	9
Control System	9
Audio.....	9
Music.....	9
Artificial Intelligence	10
Technology	10
Target Hardware.....	10
Development hardware and software.....	10
Development procedures and standards.....	10
Game Engine.....	10
Network.....	10
Scripting Language.....	10
etc.....	10
Game Art	10
Concept Art.....	10

Style Guides.....	10
Characters.....	10
Environments.....	11
Equipment.....	11
Management	11
Detailed Schedule.....	11
Appendices	11
Asset List.....	11
Art.....	11

Interactive Environment Overview

Interactive Environment Concept

Narrative: Abandoned because of an Alien ambush

Feature Set

We aim to create a mysterious and interactive environment where users can explore an abandoned spaceship. Elements of the interactive environment our team wants to achieve in its development include a narrative, hero asset, prop assets, menu displays, and a smooth UI/ UX.

Genre

Science Fiction

Target Audience

Teens and older

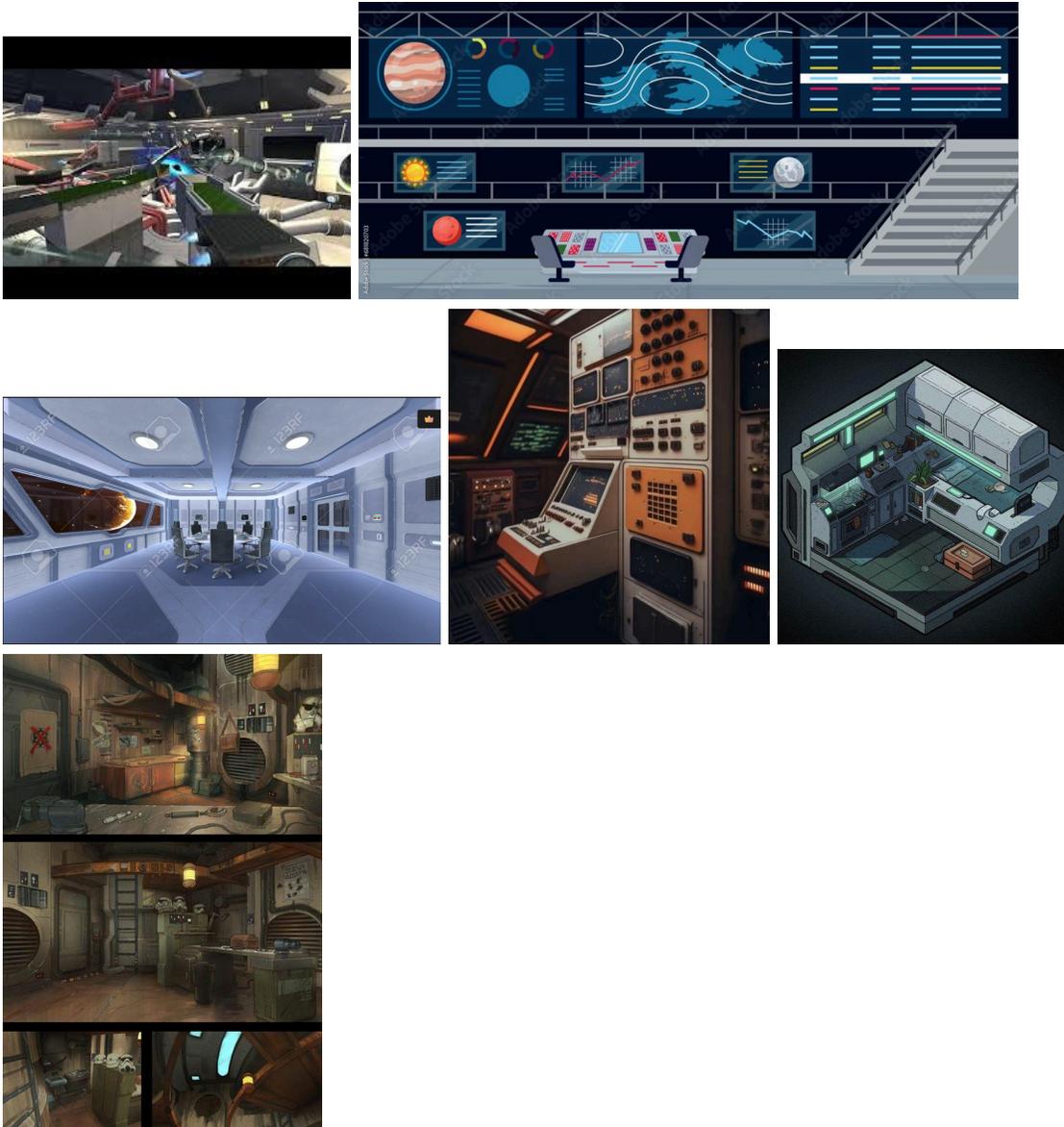
Game Flow

The player moves through the game in the first person.

Look and Feel

The basic look and feel of the game is the exploration of an abandoned spaceship environment accompanied by a narrative story to assist the player. The visual style of the interactive environment will portray a mysterious and eerie mood. This environment will incorporate complementary colors; blues and oranges, supported with darker-toned reds and yellows. Since the spaceship is abandoned, the surfacing will be old and rustic.

VISUAL IMAGES HERE:



Number of locations

Main Control room; with the main console and areas of interactive elements

Number of levels

One interactive level

Number of NPC's

8

Number of weapons

1

Gameplay and Mechanics

Gameplay

Interactive environment

Game Progression

This interactive environment will not include multiple game levels. The user will open with the main menu and enter the game.

Mission/challenge Structure

Objectives/interactive tasks

Puzzle Structure

Objectives

Interactive Elements include:

- The user clicks on a Manual to open and read
- The user walks close to a door and hears an alien/asteroid sound effects
- User clicks on charts or monitors to view information
- The user interacts with console control buttons to open up a menu window

Play Flow

First-person Perspective

Mechanics

Interactive Environment

Physics

Science Fiction

Movement

Keyboard WASD, mouse

General Movement

First-person character moving through the spaceship environment

Other Movement

Objects

Picking Up Objects

Interactive elements: picking up and reading the journal

Moving Objects

First-person camera, sliding doors

Switches and Buttons

Monitors and control panel

Picking Up, Carrying and Dropping

Interactive elements: Journal

Talking

Sound effects, audio, music

Reading

Narrative, Menu, Charts, Monitors, Maps

Combat

Low Priority

Economy

Science Fiction

Screen Flow

Screen Walkthrough:

[Version01](#)

[Version02](#)

[Version03](#)

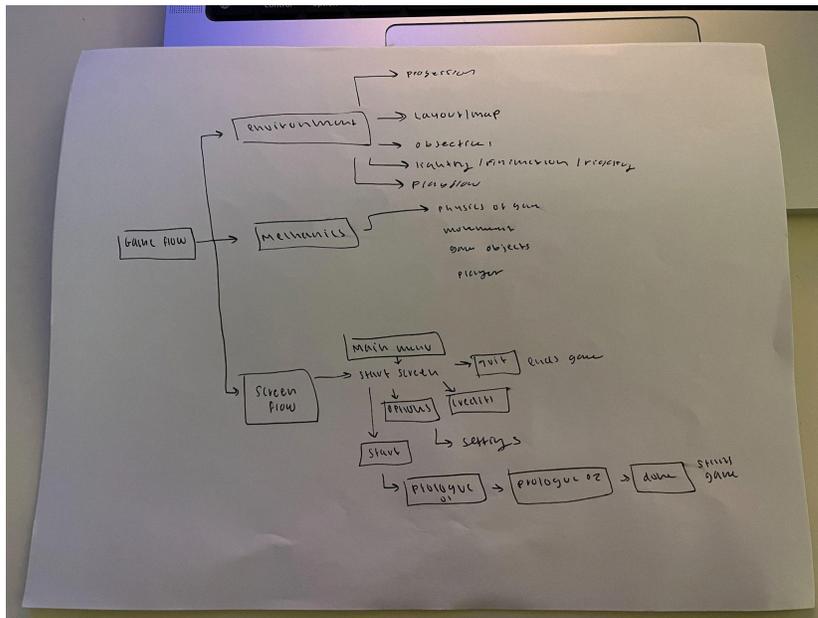
[Version04](#)

[Version05](#)

[BlueprintVersion05](#)

Screen Flow Chart

The purpose of each screen is to show different aspects and features within the interactive environment



Videos:

<https://www.youtube.com/watch?v=FXa3h3d6RT0>

https://www.youtube.com/watch?v=kB1_qxNUi9Q

https://www.youtube.com/watch?v=zB8xLcUR0v4&list=PL4qXABEjqJF6vHioP2Qy_i9_sKMjld4-B&index=14

Screen Descriptions

https://www.researchgate.net/publication/259740528_Human_Mars_Exploration_Research_Objectives (based on)

https://www.researchgate.net/publication/225637623_Twelve_tips_on_writing_a_good_scientific_paper

Research Paper 1:

TITLE- Human Main Centauri Exploratin Research

Research Paper 2: (based on Snatchers and the qualities of them)

Research Paper 3: (based on observations from snatcher comrades)

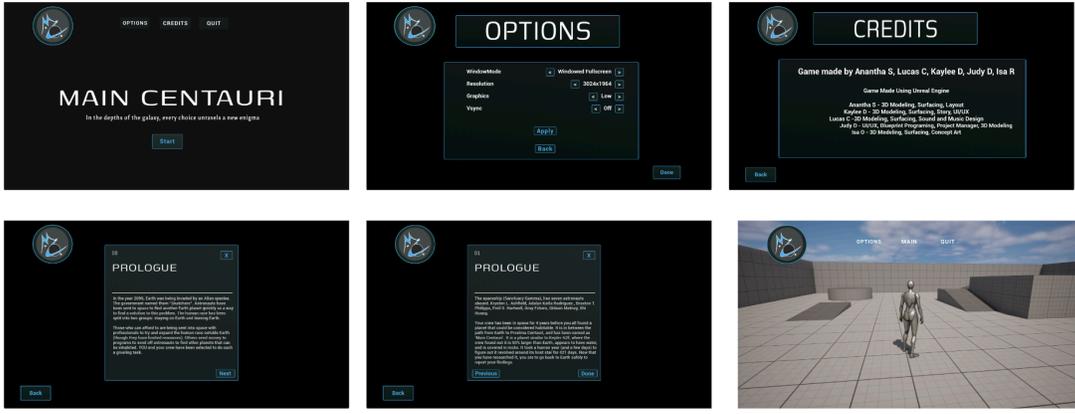
Journal (5 1/2 pages): (based on the journey to and back from main centauri)

Button:

Figma Prototypes to Unreal



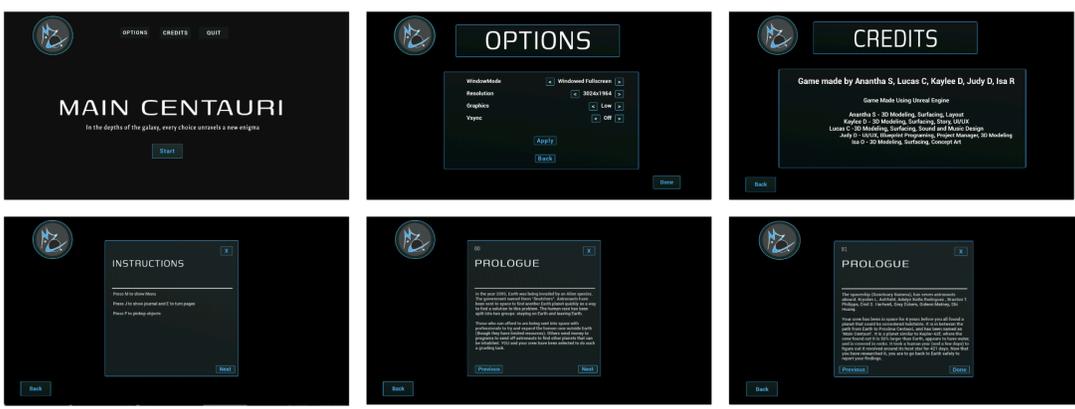
V4



Figma Prototypes to Unreal



V5



Figma Prototypes to Unreal

V5		
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Game Options

Start - allows the player to enter the game and begins instructions and prologue

Quit - the player to leave the game

View options - ability to alter players experience

View credits - information about the authors of the game

Resume - resumes the game

Press M to show Menu/pause the game

Press J to show journal and E to turn pages

Press F to pickup objects

Story, Setting, and Character

Story and Narrative

Users engage with an interactive abandoned Spaceship.

Back story

Exploration of an Abandoned Spaceship because of an Alien Ambush.

Narrative: Earth (Year 2099) was being invaded by an Alien species (Rapientes/Snatchers), and astronauts were sent into space to find another Earth planet quickly. Earth was divided between combating/hiding from the Snatchers and leaving Earth. The poor ultimately stayed behind, the rich that could would be sent into space (with limited resources, only very few actually manage to live outside of Earth. Like, three spaceships manage to carry humankind without ending up like this spaceship)

The spaceship (Sanctuary Gamma), had seven astronauts aboard. Krysten L. Ashfield, Adalyn Katla Rodriguez , Braxton T. Philipps, Emil S. Hartwell, Gray Eckers, Gideon Matney, Shi Huang.

We are playing as Grey Eckers.

In Sanctuary Gamma, this is their roles:

Commander (CDR): Emil S. Hartwell. Overall mission success, safety of crew and spacecraft, managed ascent, maneuvered Shuttle during entry.

Pilot (PLT): Shi Huang. Assisted the Commander in maneuvering the Shuttle.

Mission Specialist (MS): Gideon Matney. Mission is to find another Earth planet.

Mission Specialist (MS)/Communication and Technical Support (MS): Gray Eckers. Mission is to find another Earth planet.

Flight Engineer/Maintenance (FE): Krysten L. Ashfield. Mission Specialist with additional responsibility for assisting the Commander and Pilot during ascent and landing, tracking information from CAPCOM and calling out milestones.

Payload Commander (PLC)/Researcher: Adalyn Katla Rodriguez.

Educator Mission Specialist/Researcher & Health Assessor: Braxton T. Philipps. Technical experts who accompanied specific payloads such as commercial or scientific satellites with mission-specific duties.

In Sanctuary Gamma, the crew had been in space for 4 years before it found a planet it could consider habitable. It is in between the path from Earth to Proxima Centauri, and is called 'Main Centauri'. It is a planet similar to Kepler-62f, where the crew found out it is 50% larger than Earth, appears to have water, and is covered in rocks. It took a human year (and a few days) to figure out it revolved around its host star for 421 days.

Little did they know, Main Centauri was actually responsible for the origin of Snatchers. The reason why the planet was never discovered was because this planet had been created

approximately seven years ago. The Snatchers were a result of life being created in the rocks and materials in Main Centauri's 'water'. They are extremely intelligent and immensely sentient as they find a way to advance in such little time. Their main goal is to become the top race, thus why they take over humans' bodies. They ultimately are trying to become human and keep their unique qualities to usurp.

The crew figured out the days the planet had by sending two crewmates down in a secluded area of Main Centauri. They sent down Adalyn and Braxton, but around the time they were supposed to come back they were killed by snatchers. The two of them return to Sanctuary Gamma and blend in until Shi finds Adalyn out of character. They're all out in space trying to go back to Earth to report back, but the crew (outside of Adalyn and Braxton) suspects that a snatcher is on board (unaware that the planet they travelled to was festured with them. The Snatchers on the planet knew they were there around the midpoint and let them live to also research *them*.)

Ultimately, it only takes a month before they all do something since they were researching on the behavior of the snatchers, logs made of their behavior patterns and such (the snatchers had to research on themselves, but were given other tasks so that Krysten and Gray could actually do more of that research in order to find a way to kill them within the host's bodies). Killing a snatcher would prove to be hard because they shapeshift their bodies to fit inside the host, and if they're killed while in the hosts bodies their original bodies usually manage to avoid the attack to extract themselves (or their original bodies are resilient). Tests on Earth were done of this, and the only solution seemed to be to explode the body entirely to get rid of the two entities. Of course, since they were on a ship this was hard to do. They couldn't give up their evacuation pods because those were for emergencies.

On that fateful day, Shi, Krysten, Gray, Gideon, and Emil conjured up a plan to kill Adalyn and Braxton's Snatchers and their bodies. The plan was to lure the two separately in different rooms. They'd kill Braxton first in the main research area while having Adalyn in the medical area. The two rooms were distant enough, and the way to kill them would be through using the cryo chamber on board (it was used to keep the dead parts of a Snatcher.) The plan failed when Emil and Shi couldn't trick Braxton to 'clean' the inside of the chamber, and Braxton's body exploded to reveal the Snatcher inside. It kills Shi and Emil quickly before ruining the lab and emitting a sound wave from its throat that alarms Adalyn to also do the same and shed the skin to kill Gideon and Krysten. Gideon and Krysten use the escape pod to lure the snatcher in with them and essentially kill themselves, leaving only one aboard. Their last thoughts were thinking that Emil and Shi managed to kill the other, yet their sacrifices were in vain. Gray was supposed to be managing the ship in all this, but given his location was near the snatcher in the main research room, he encountered it. His body was the one the alien kept. The others were eaten.

Gray is 'attacked' by the Snatcher and last remembers needing to go back to space, sending the ship's locations to Earth. Earth is already full of Snatchers so the need to change the path of the ship didn't matter.

Where the game starts is that you as the player only remember snippets of memories. Memories of your crew and the mission to go back to Earth because you've all found a planet to inhabit. The alarm blaring inside only wakes you up because the ship is being attacked. Your soul is imbued with your brain and you essentially share the body with the Snatcher, though your soul is strong enough to control your body. You're trying to figure out what's going on, conclude it's an alien attack from the Snatchers and that your friends have all valiantly fought trying to defeat them. You are correct, since you are hearing noises near the glass frames, and your missions are to attack, make sure the ship is okay, and that you can continue going to Earth.

Throughout the entire interactive experience, the player can do 4 major things.

You can open the manual to see what to do and how to do them. You can go around and touch things (the jars you hear your own voice say lines like, "Snatchers... to think I'd have to fight them..") (charts you can see the research and the lore bits). You can also press buttons and move levers to keep the ship going to Earth or attack, resulting in the loudness of the sounds of the Snatchers outside. You can also pop open the menu window.

Overall, once the tasks are completed, you hear the sirens finally turn off, and see the sight of Earth nearing. Only, you see it's completely different. The last words you hear are, "Welcome Home" by your own voice, but it's not yours anymore. The screen goes black and you are sent a "Congrats! You made it to Earth! Mission Failed!"

YOU ARE A SNATCHER. YOUR BODY WAS SNATCHED AND YOUR SOUL IS TRYING TO COMBAT THE PARASITE IN YOUR BODY.



Final Back Story/Lore



In the year 2099, Earth was being invaded by an Alien species. The government named them "Snatchers". Astronauts have been sent to space to find another Earth planet quickly as a way to find a solution to this problem. The human race has been split into two groups: staying on Earth and leaving Earth.

Those who can afford to are being sent into space with professionals to try and expand the human race outside Earth (though they have limited resources). Others send money to programs to send off astronauts to find other planets that can be inhabited. YOU and your crew have been selected to do such a grueling task.

The spaceship (Sanctuary Gamma), has seven astronauts aboard. Krysten L. Ashfield, Adalyn Katla Rodriguez , Braxton T. Philipps, Emil S. Hartwell, Gray Eckers, Gideon Matney, Shi Huang.

Your crew has been in space for 4 years before you all found a planet that could be considered habitable. It is in between the path from Earth to Proxima Centauri, and has been named as 'Main Centauri'. It is a planet similar to Kepler-62f, where the crew found out it is 50% larger than Earth, appears to have water, and is covered in rocks. It took a human year (and a few days) to figure out it revolved around its host star for 421 days. Now that you have researched it, you are trying to go back to Earth safely to report your findings. Unfortunately, your ship is under attack and now you have to fight back, as well as learn the truth as to why you wake up alone.



Game Progression

Explore and interact with spaceship objects

License Considerations

Interactive Environment made using Unreal Engine

Game World

Art Bible

General look and feel of world

Theme: mysterious Eerie

Color pallet: complementary colors: blue and orange, white, reds, darks

The basic look and feel of the game is the exploration of an abandoned spaceship environment accompanied by a narrative story to assist the player. The visual style of the interactive environment will portray a mysterious and eerie mood. This environment will incorporate complementary colors; blues and oranges, supported with darker-toned reds and yellows. Since the spaceship is abandoned, the surfacing will be old and rustic.

Area #1

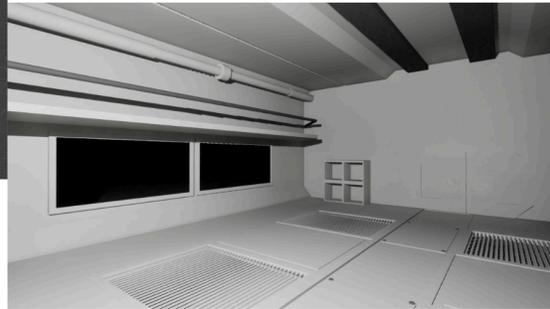
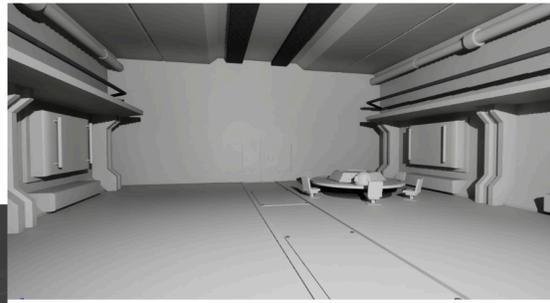
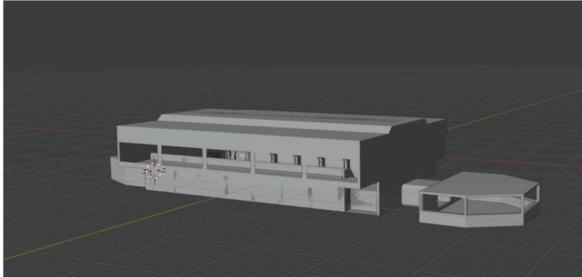
General Description

Spaceship, rustic, abandoned, damaged

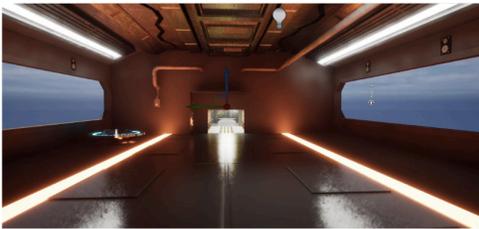
Physical Characteristics

Anantha Sathya

- Spaceship Layout and Design



Surfacing and Lighting



Levels that use area

Interactive Environment

Connections to other areas

Inspiration from real-world examples:

- 2001 A Space Odyssey
- Solaris

- Astroneer
- Journey to Savage Planet
- Interstellar

Characters

Robot/Astronaut command/leader

Character #1

Gray Eckers

Back story

He was born in the leftover state of Texas, its land inhabitable due to climate change and the exponential growth of Snatchers. He grows up in a low-income household but manages to get by in school and puts a hard effort to get into NASA. He becomes a proud American going to space to save humanity and his family from the Snatchers, but he ultimately becomes a host in his own body. He died once he got to Earth after trying to report Main Centauri's inhabitable status (it's not). Had he returned to Main Centauri instead, he still would die.

Personality

Kind, respectful, intelligent, strong, selfless, creative.

Look

[image]

Physical characteristics

Brown hair, peach skin, light beard, brown eyes, and a sort of well-built body.

Animations

N/A since you are him and can walk around.

Special Abilities

Intelligence

Relevance to game story

The main character the player is living through.

Relationship to other characters

Friend, coworker, Mission Specialist (MS)/Communication and Technical Support (MS).

Statistics

N/A

Levels

Level #1

Synopsis

Introductory Material

https://www.youtube.com/watch?v=pNVopBqZ_W4

clickable items:

- Journal
- Map
- Research papers (2)
- one button
- vent

Introduction from hologram:

“Hello, Gray, are you all better now? Great! The ship is being attacked. Our reports suspect another ship is attacking us. We have identified them as Snatchers. They are attempting to break in from the side. We have a few things for you to do.”

“The main console has a few controls for you to attack back. There is a row of buttons on the middle console. Press the red one to set off an attack.”

“In the middle of the ship, there is a vent that needs repair. Be sure to fix it to avoid further problems.”

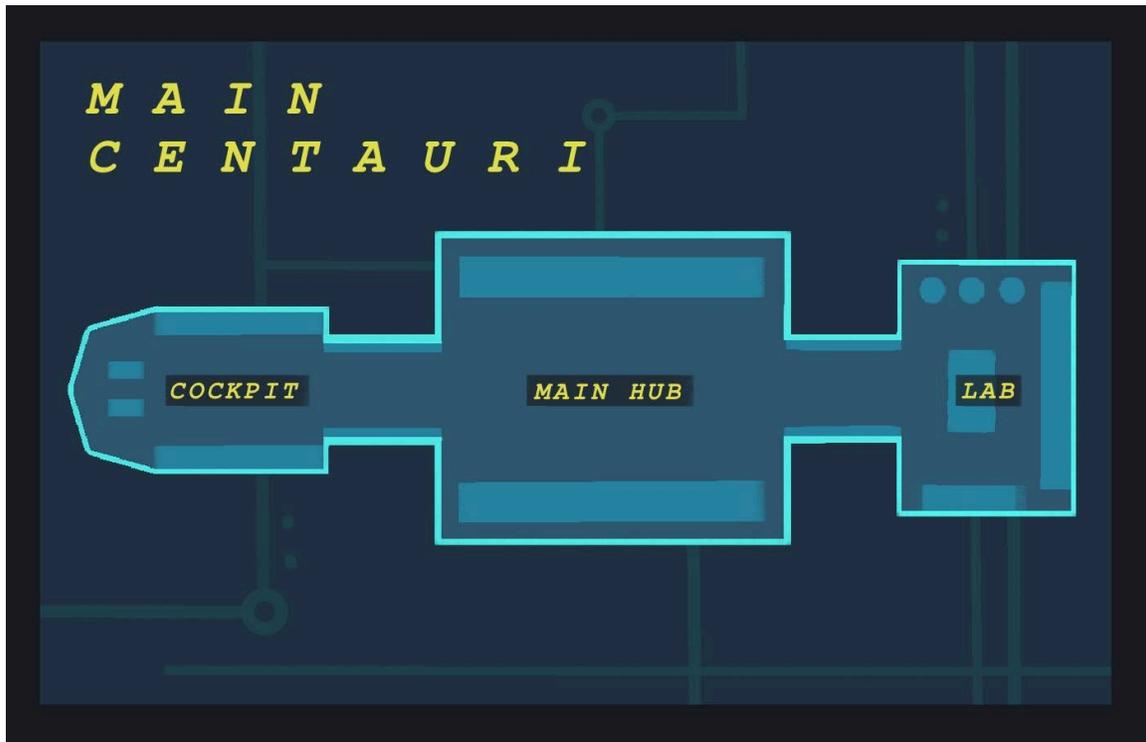
“Feel free to look around and also see what else you can do. Let me know if you need any help, Gray.”

Objectives

- Attack back using your ship (to the Snatchers)
- Maintain the ship in a good condition
- Go through research and find out the truth

Physical Description

Map



Level Walkthrough

TECHNICAL_DEMO

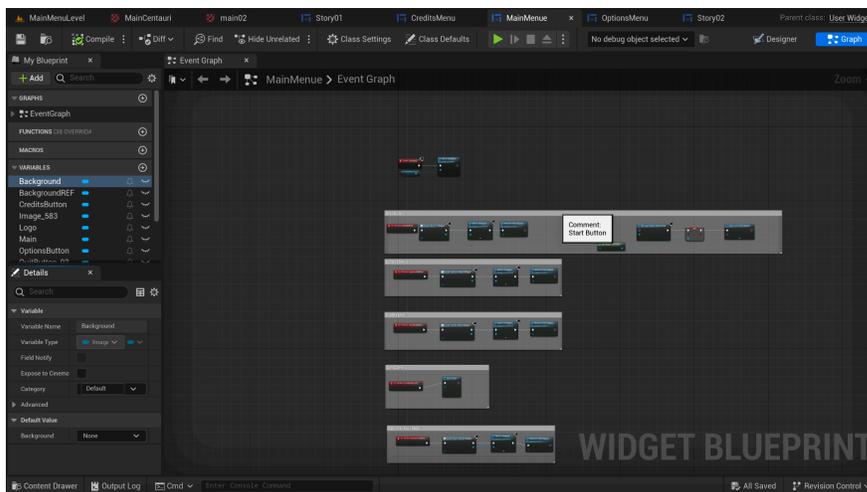
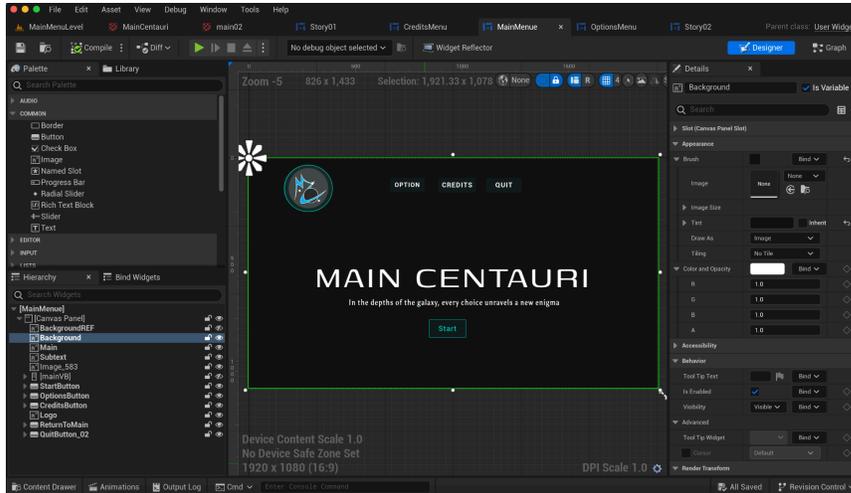
Closing Material

Credits Screen

Interface

Visual System

Unreal Engine Blueprint



HUD - What controls

WASD - user control/movement

Start - allows the player to enter the game and begins instructions and prologue

Quit - the player to leave the game

View options - ability to alter players experience

View credits - information about the authors of the game

Resume - resumes the game

Press M to show Menu/pause the game

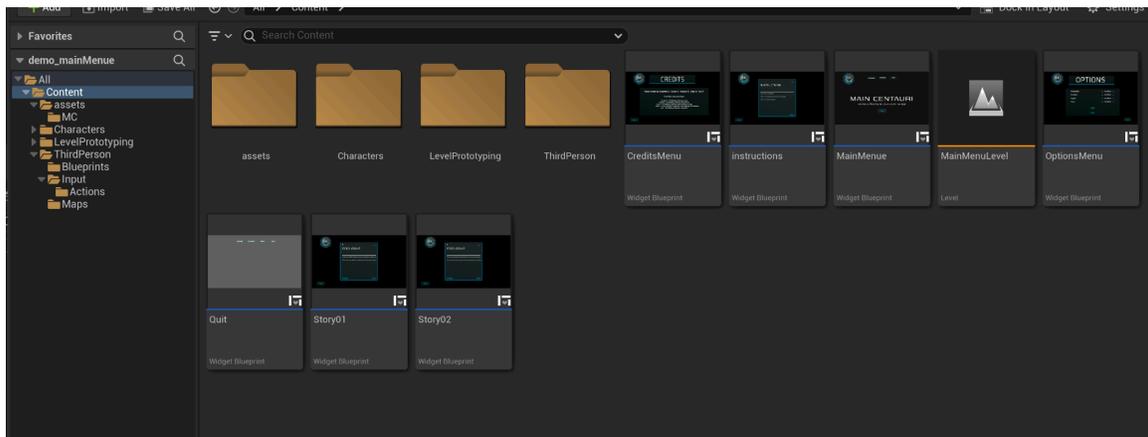
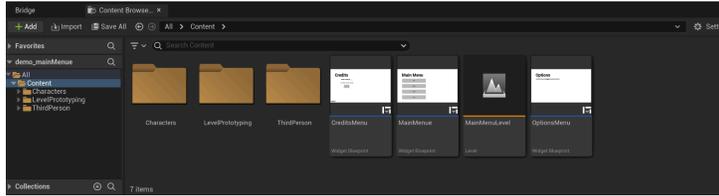
Press J to show journal and E to turn pages

Press F to pickup objects

Menus



Main Menu



Rendering System

Unreal Engine

Camera

First-Person

Lighting Models

Control System

Keyboard, WASD, Mouse

Audio

Music / Sound Effects

<https://drive.google.com/file/d/1XyV4AWmTWPXBydkplSOcoFA9mXY6ghxS/view?usp=sharing>

[Art Bible\(Chapter12\)](#)

Artificial Intelligence

[AI TOOL](#)

Technology

Target Hardware

Maya, Unreal Engine, Substance Painter

Development hardware and software

Maya, Unreal Engine, Substance Painter, Google Drive, Google Docs, Google Sheets

Development procedures and standards

TAMU

Game Engine

Unreal Engine

Network

TAMU

Scripting Language

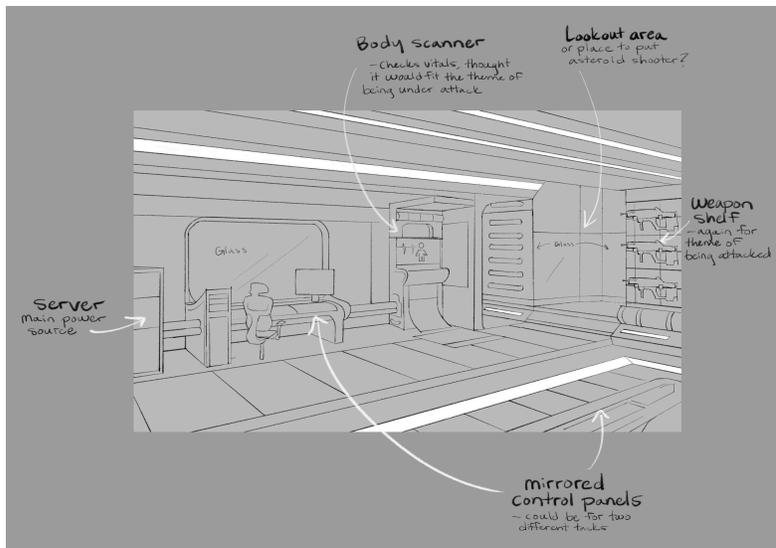
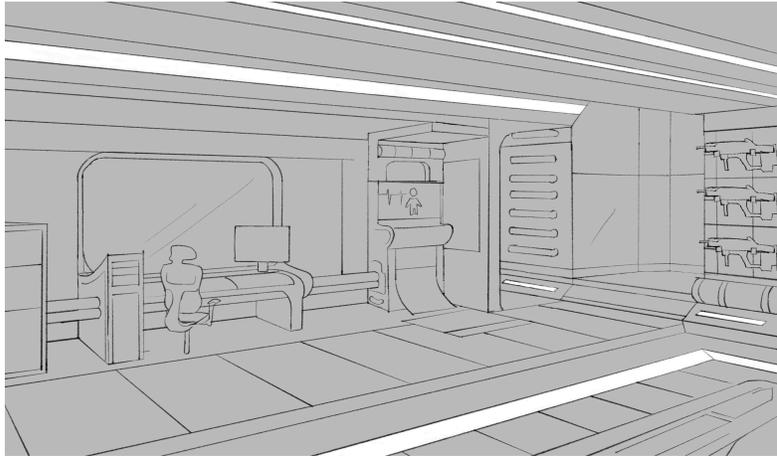
Python, C++

etc.

Game Art

[ART BIBLE LINK](#)

Concept Art

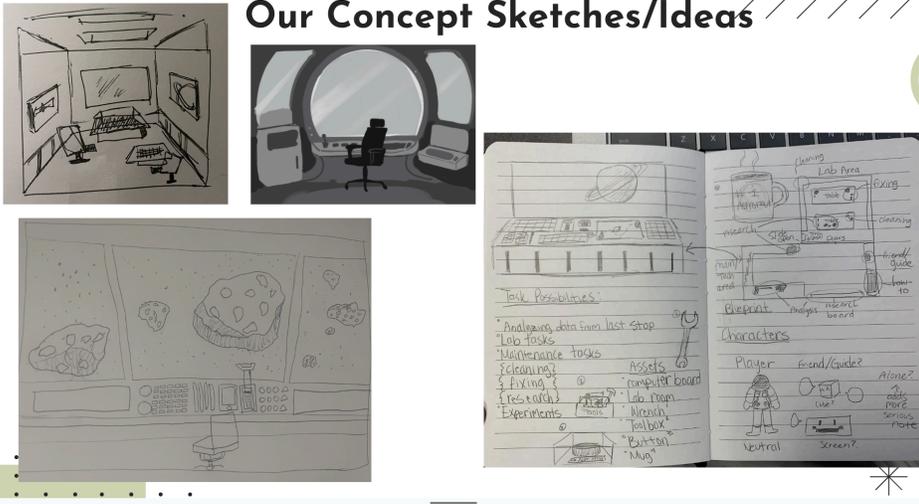


Style Guides

Semi-Realism

[Art Bible](#)

Our Concept Sketches/Ideas



Characters

Robot or Astronaut command/leader

Environments

Spaceship - cockpit

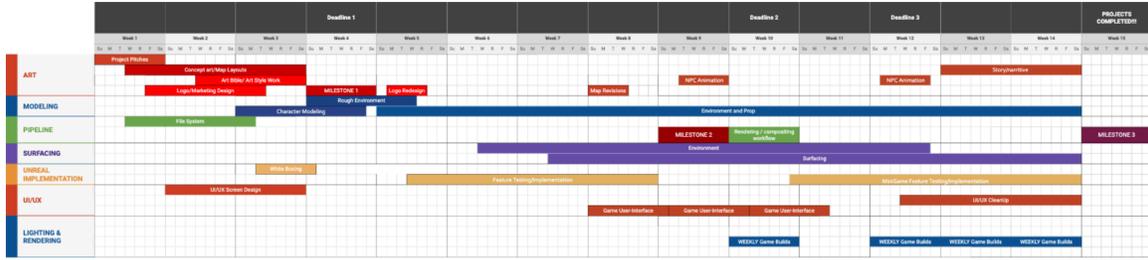
Equipment

Control Panel, Monitors, and Camera

Management

Detailed Schedule

[Production Schedule](#)



Spreadsheet

BID SHEET		KEY		TEAM MEMBERS	
Total Team Members	5	A (Highest Priority)		Anantha	
Total Work Weeks	15	B (Necessary Item)		Kaylee	
Course Credit Hours	3	C (Necessary Later On)		Lucas	
Total Hrs/Person Available	135	D (Lowest Priority)		Judy	
Total Hours Bid	24	DONE		Isa	
Current Average Hrs/Person	4.8	1 work week = 6 hrs in class + 6 hrs out of class = 36 hours		Everyone	

Category	ARTIST	ELEMENT/ASSET	IMPORTANCE	Week # 1		Percentage Spent
				Hours Consumed	Hours Left	
Project Management Documents	Judy	GDD Work	C	1	2	200.00
	Judy	Bid/Production Sched/Asset Setup	C	2	5	40.00
Story and Pitching Documents	Everyone	Pitch Slides Refinement	Done	1	1	100.00
	Everyone	Story and Gameplay Ideation	Done	2	2	
	Everyone	Reference Gathering/ moodboards	B	2	4	50.00
Concept Art	Everyone	Bakery/Space Art Concepts	A	2	2	100.00
	Everyone	Layout/ Character Concepts	A	2	4	#REF!
Rough 3D Models	Everyone	Draft Build	Done	1	2	50.00
	Everyone	Character Model	B	1	1	50.00
	Lucas	Music Design	B	1	1	100
						#DIV/0!
						#DIV/0!
						#DIV/0!
						#DIV/0!
						#DIV/0!
						#DIV/0!
						#DIV/0!

Appendices

Asset List

Main Control Room, Control panel, Windows, Chairs, Asteroid Shooter, Work Table, Manuel, Charts, Monitors

Asset Sheet

9	3D Assets						
10	MOD_ControlRoom_01.ma				EVERYONE		
11	MOD_MainConsole_001.ma						
12	MOD_Window_001.ma				Anantha		
13	MOD_MainCenterTable_01.ma	Modeled			Lucas	Isa	
14	MOD_Speaker_01.ma	Modeled			Judy		
15	MOD_Map_01.ma				Judy		
16	MOD_SpaceshipModel_01.ma	Modeled			Anantha		
17	MOD_AirTanks_01.ma	Surfaced			Isa		
18	MOD_Cabinets_01.ma	Done			Lucas		
19	MOD_Pipes_01.ma	Modeled			Isa		
20	MOD_ExtraSuitHelmet_01.ma	Done			Lucas		
21	MOD_WeaponRack_01.ma				Anantha		
22	Cockpit: -Main Consoles (3; two each side and one main in						
23	MOD_MainConsoles_01.ma				Anantha		
24	MOD_CockpitSpeaker_01.ma	Modeled			Judy		
25	MOD_Light_01.ma						
26	MOD_Chair_01.ma	Surfaced			Isa		
27	Labratory				Kaylee		
28	MOD_01.ma				Kaylee		
29	MOD_01.ma				Kaylee		
30	MOD_01.ma				Anantha		
31	MOD_Clipboard.ma	Done			Lucas		
32	MOD_ClipboardPap.ma	Done			Lucas		
33	MOD_Jar.ma	Done			Lucas		
34	MOD_Cabinets_02.ma	Done			Lucas		
35	MOD_Switch.ma	Modeled				Lucas	
36	MOD_OxygenSystem.ma	Modeled				Lucas	
37	MOD_Generator.ma	Modeled					

72	Main Menu Screen						
73	MENU_mainscreen_001.png	Done			Judy		
74	MENU_credits_001.png	Done			Judy		
75	MENU_options_001.png	Done			Judy		
76	MENU_story01_001.png	Done			Judy		
77	MENU_story02_001.png	Done			Judy		
78	MENU_quit_001.png	Done			Judy		
79	MENU_instructions_001.png	Done			Judy		
80	MENU_resume_001.png	Done			Judy		
81							
82	MENU_logo_001.png				Lucas		
83							
84	Intro Screens						
85	INTRO_prologue_001.png				Judy		
86	INTRO_prologue_001.png				Judy		
87	INTRO_text01_001.png				Kaylee		
88	INTRO_text02_001.png				Kaylee		
89	INTRO_instructions_001.png				Judy		
109	Music						
110	MUS_intro_001.mp4				Lucas		
111							
112							
113							
114							
115	Audio						
116	AUD_wav				Lucas		

Art

Model and Texture List

Oxygen system, generator, cabinets, chair, clipboards, extra helmet, jar, speaker,...

