Zero-G Fitness

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Overview

Concept

As reference for the NASA APP Challenge: Galactic Games - Fun in a Microgravity Environment, the concept of the game revolves around maintaining the physical and mental health of astronauts in microgravity environments such as the International Space Station. The game provides an interface for astronauts feeling the effects of weightlessness and the physical effects on their body such as decrease in bone density, muscle mass etc to find a way to exert and preserve cardiovascular and mental health through a gamified AR fitness application.

Reference Games

Beatsaber, Minecraft VR,

Genre

Fitness AR game. Space themed

Target Platform

Android

Project Management

clickup

Game Flow

Astronaut sets up the camera and selects a game mode which is designed specifically to target a muscle group.
The minigame starts moving objects and hurdles towards the astronaut and the astronaut moves physically to avoid said obstacles.

Mechanics

- Full Body Workout: Warmup Sessions, Stretching, Workout Circuit,
    - Stretching: 5mins
    - Warmup:
        - Arm Rotations(30sec)
        - Neck Rotations(30sec)
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Use Cases

Built specifically for astronauts living in a microgravity environment to enhance their physical and mental health quality.

Screens

Main Menu Screen (used for selecting minigames)
Minigame Screen (A short demo of the selected minigame, suggested duration and highscore)

ART

3D obstacles and hurdles, 2D UI and NPC companion.

Effects

SFX

Destroy Sound effect, hurdle cleared Sound effect, High score sound effect, Damage taken sound effect, main menu music.

VFX

Destroy effect, hurdle cleared effect, High score effect, Damage taken effect.

Animation

Minigames animations, destroy and damage animation.