

Space-Invaders

JERKS Final Presentation

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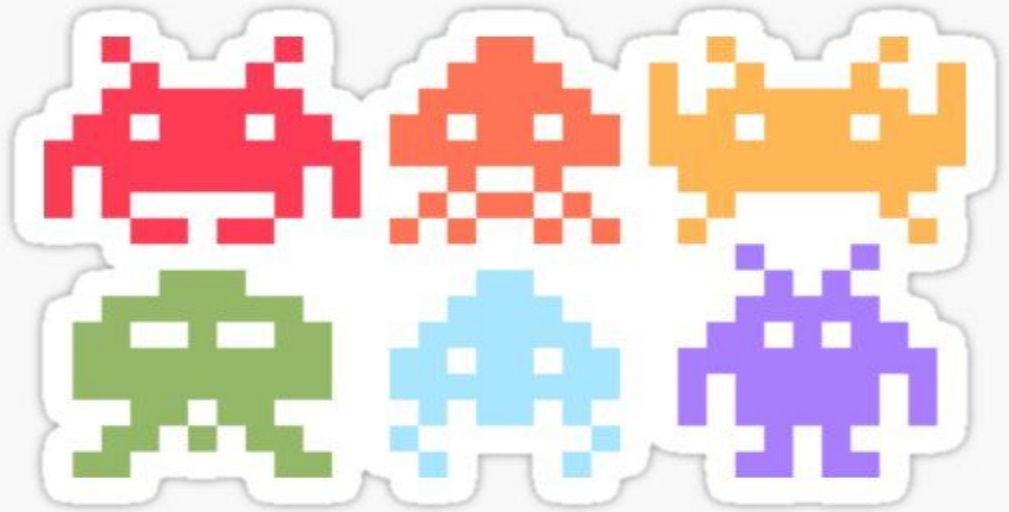
Presentation Contents

1 Project Background

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Project Background

Motivation

- Our goal was to create a web application to mimic and modernize the renowned, retro arcade game Space-Invaders
- All of our team members have been avid fans of the game since it was released

Functionality

- The modernized take on the game is through a login system to save previous progress as well as a profile page to view updates on your scoring

Implementation

- The implementation of our web application was through firebase for the backend/server as well as react, javascript, and HTML for the frontend

Asset Design

Image/Audio



Images

All of the sprites used in the game were handmade pixel by pixel using piskelapp.com



Audio

8 bit audio was created using <https://sfxr.me/>



Central Features

- 1 Dynamic Data
- 2 Upload Data from Client to Backend
- 3 Meaningfully Search Through Server-side Data



Dynamic Data



PFP Updates

- Displays custom profile picture (stored in backend) when opening the profile tab which user has the option to change



Choose File

UPLOAD

demo

csdemo@gmail.com

Who's record will you beat?



Choose File

UPLOAD

demo

csdemo@gmail.com

Who's record will you beat?

Upload Data from Client to Backend



Registration

- Saves user login information when they register an account and uploads to backend.

Sign up

SIGN UP

[Already have an account? Sign in](#)

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Meaningfully Search Through Server-side Data



User Login

- Searches through backend data to find user's login information and ensure it is correct, allowing them to keep a save of their profile information

Sign in

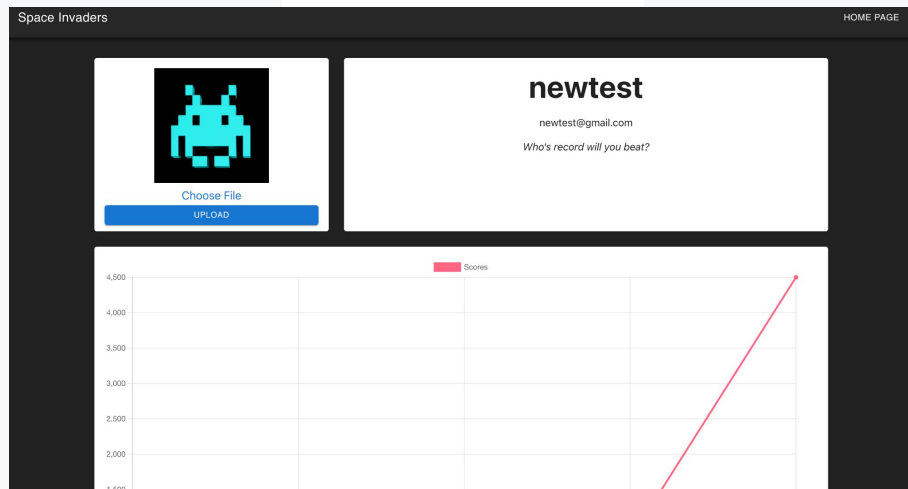
Email Address *
newtest@gmail.com

Password *

SIGN IN

[Don't have an account? Sign Up](#)

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Unique Features

- 1 Real-time Score & Armor Updates
- 2 Player/Alien Movement
- 3 Scoring History
- 4 Laser Shooting (Player/Alien)

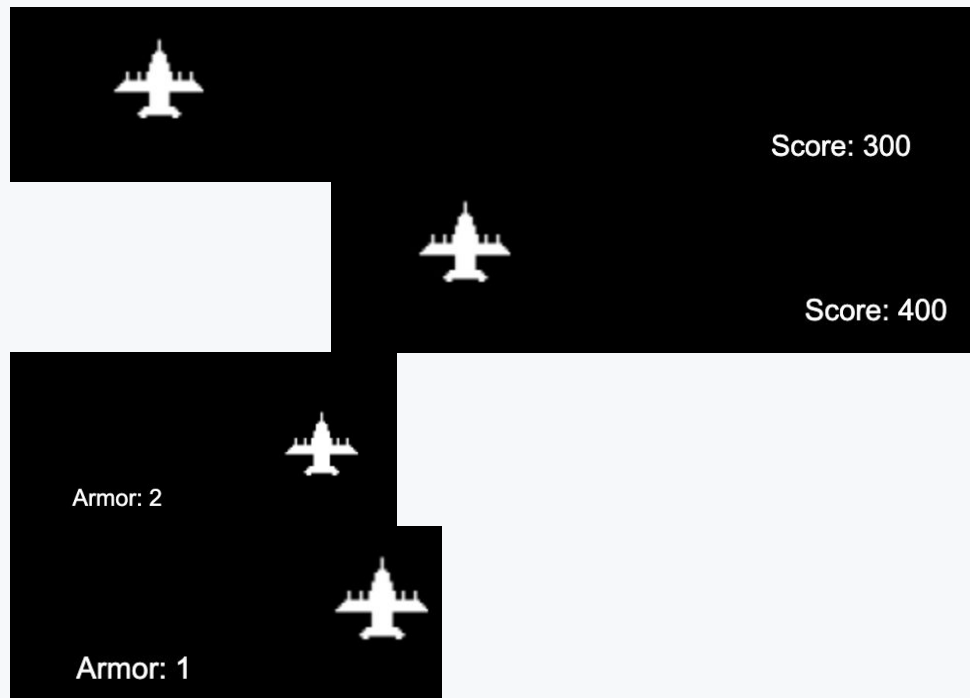


Real-time Score & Armor Updates



Real-time Updates

- Display real-time updates of score, based on # of aliens killed and waves progressed
- Updates armor left with every laser hit taken by the ship



Player/Alien Movement



Movement

- Enabled alien scrolling as a wave so that all the aliens are aligned and go to one end of the screen before descending towards the player
- Allowed player to move left and right using the keyboard

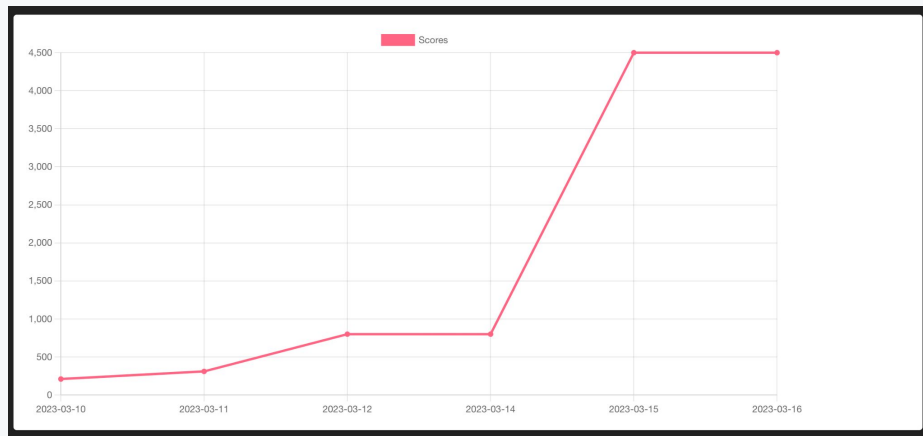


Scoring History



Scoring History

- On the profile page, we provide data on the history of the user's scores and create a line chart to visually represent it

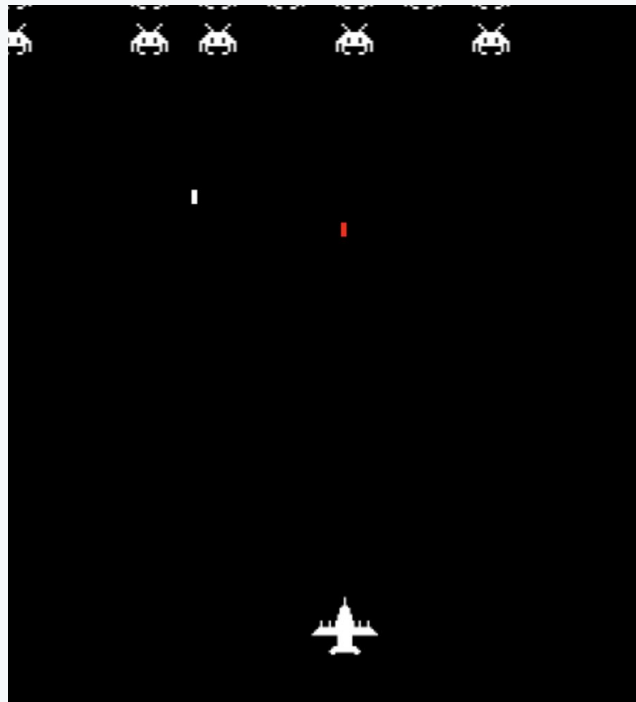


Laser Shooting (Player/Alien)



Projectiles

- Made it possible for the player to destroy aliens by shooting them with a laser projectile
- Aliens randomly shoot back at player to affect player "armor"
- Added sound to both lasers



The image features a dark gray background with three large, thin circles. A light blue circle is partially visible on the left edge. In the top right corner, a white circle and a blue circle overlap. The word "Demo" is centered in white text.

Demo