Team Members:

- Luke Soderquist
- Adam Poppenhagen
- Alice Gurkova
- Josh O'Leary
- Michael Jordan

Project Name: Space Defenders

User Acceptance Tests:

State of users table for test cases:

user_id	username	password
1	"defenders"	"defendersPassword"

1. Login
    a. User can login if credentials are correct
        i. Account usernames and passwords can be viewed through the PostgreSQL CLI. If a username/password pair that is in the users table in the database is entered in the username and password fields, a "Login successful!" message is displayed and the user can continue to the main game page.
            1. Test case: username "defenders" password "defendersPassword"
    b. "Incorrect username or password" message displayed if credentials are incorrect
        i. If a username/password pair is entered in the username and password fields that is not in the users table of the database, the "Incorrect username and password" message is displayed.
            1. Test case: username "Notdefenders" password "defendersPassword"
2. Signup
    a. If user tries to create an account with a username that already exists, their account creation is denied
        i. If a username that is already in the users table of the database is submitted by the create account button, the error message "This username has been taken" is displayed.
            1. Test case: username "defenders" password "Password"
    b. If user tries to create an account with a username that has not yet been taken, their account will be created and inserted into the users table or our database
        i. If a username that is not in the users table of the database is submitted by the create account button, the message "Account created successfully!" is displayed and the user can continue to the main game page.
            1. Test case: username password

"NewUsername" "NewPassword"

3. Unity game
    a. A user can start and play the game until colliding with a game over barrier
        i. The game starts
            1. Luke embedded the game to the website. Used Docker and localhost to ensure it loaded correctly on all our machines
        ii. The Astronaut is controllable
            1. During gameplay testing, turned off all other prefabs to isolate Astronaut movement
        iii. The background images move
            1. Used shift speed in Unity engine and isolated speeds for each parallax layer
        iv. The background images remain consistent throughout the game
            1. Added several prefabs of the same type to the game area to see exact x position for immediate spawn and adjusted default spawn to exact edge of first prefab
        v. The electric obstacles move at a reasonable speed
            1. Play test repeatedly while adjusting the shift speed of "pipe" prefab to a reasonable level
        vi. The scoring zone between the obstacles is wide enough to be fun, yet competitive
            1. Play test repeatedly to adjust gravity coefficient and tapForce on Astronaut to ensure that the opening between the obstacles was fair but challenging
        vii. The score increments
            1. Anchored score on screen and ensured the score zone spanned the entire gap
        viii. The high score saves
            1. We will backtrack and see why the script won't update the string in high score
        ix. The high score saves to the database
            1. Will hook a dbmanager to the Unity game and connect it to the PostgreSQL database. From there we can use mocha to ensure Unity returns a score and to make sure the db only saves the highest
        x. The user's high score is imported on game start up
            1. Mocha can test to make sure the db returns an integer
        xi. Game replays properly
            1. Ran scenes in a loop to make sure they proc in the right order
        xii. Game over screen procs correctly
            1. Died. Repeatedly. As will you when you play

Individual Contributions:

- Luke: Helped Adam and Josh with writing all unity game scripts and developing the game. Troubleshooted problems that us three ran into while developing the game. Embedded our updated, (almost) finished game into our html for the website. Wrote UATs for the login and signup pages.
    - Latest GitHub commit: https://github.com/CSCI-3308-CU-Boulder/3308SP21_section014_1/commit/eed66a2ec62068ee24a996cfcbe41d135dc46664
- Adam:Finished parallaxer script for background and pipes. Completed Awake in GameConfig. Composed and added sound effects. Attached sound effects to astronaut in game. Adjusted volumes. Tweaked astronaut gravity and force. Fixed an issue where mouse input was analog instead of digital. Play tested for optimal challenge/success ratio. Finished drawing game assets and uploaded them. Added red effect to Game over screen. Deleted very last background layer for clarity. Ensured all layers spawn immediate in correct position and default in correct position. Fixed aspect ratio to 10:16 to play on website correctly. Started power point presentation. Made a list of things left to do.
    - Most Recent Commit: https://github.com/CSCI-3308-CU-Boulder/3308SP21_section014_1/commit/35c45d961af74f11708a5d50fdd78e96dd0b4cf5
- Alice: Was sick for most of the days since our last project milestone was due so couldn't do any work unfortunately. However, I did organise our Jira sprints and boards and helped with this milestone document. Also will be helping with the last parts of the game (storing high scores and navigating to the high score page).
    - Most Recent Commit: https://github.com/CSCI-3308-CU-Boulder/3308SP21_section014_1/commit/26fbd4c0b71b2f3deb5786a39bccce959bd30b4a
- Josh: Implemented the background music into the game, adjusted volume levels to make sure they weren't too loud or overpowering, added descriptors on where to click for play and replay, organized all the files in github to have the same name style, cleaned up unused additional files, updated the readme on how to play, changed port from 3000 to custom 3001 to ensure there were no interruptions with other ports.
    - Most recent commit: https://github.com/CSCI-3308-CU-Boulder/3308SP21_section014_1/commit/b62d9828e351ad216d41fd8dbf1d8f458101fb44
- Michael: Helped to figure out adding sound to the game through finding and explaining tutorials. Helped to create a presentation structure that suits required timeframe. Bug-tested the Unity game.
    - Most recent commit: https://github.com/CSCI-3308-CU-Boulder/3308SP21_section014_1/commit/0714b762b5c5e712f910b701ee54bd5c65e35f17