Benchmark 1

1. **Space Dog**
2. **Select a game name and reserve a Firebase URL** - Note that you'll need to deploy your work to Firebase for all 4 stages. Your site URL should include the game name. Note that your final game should have just the game name and firebase in the title, but in the meantime, benchmarks should be there as well. So, for example, if I were to make a game called **Spiked Acid**, my four URLs would be:

   ○ **https://spiked-acid.firebaseapp.com/benchmark1** - your game design document Web page
   ○ **https://spiked-acid.firebaseapp.com/benchmark2** - your first deployed build, will include core gameplay and a complete user interface
   ○ **https://spiked-acid.firebaseapp.com/benchmark3** - your second build, will include a complete basic level and sound and music
   ○ **https://spiked-acid.firebaseapp.com** - your completed game, with all required levels and lots of fun

3. **Define your Game Design** - before you get started making your game you need to come up with a **game design document** to specify what it's all about. You should be describing your levels at this time as well. For this you should create a single Web page game design document using the **Spiked Acid Game Design Document** as your model. Note that you'll also need to add User Interface wireframes to this page as described in the next section. Your game design page should completely describe every detail about your game. Story, gameplay, and rules. The more detail, the better. Pretend to actually play it while authoring this document. Visualize how it will work.

4. **Game GUI** - Use a User Interface Mockup tool (like **Moqups**) to wireframe your game's full User Interface. Include your wireframes as images in your game design Web page. Note that your game application should have the following:

   ○ **Splash Screen** - when the game first loads it should welcome the user in with a graphic that intrigues/attracts the user. It's supposed to tempt a player, getting them to want to play the game. Clicking on that screen should bring the user to the main menu.
   ○ **Main Menu** - this screen should let the user start the game as well as go to a levels selection screen, a controls screen, and a help screen.
   ○ **Levels Selection Screen** - this screen should nicely present the playable levels such that the user may select one to play. Note that levels will have to be unlocked in the final version of the game. Meaning, the user will have to complete the first to play the second, but for the first two builds you'll want to navigate at will. For the final released game the user will be able to go to this screen to navigate to levels they've already completed as well as the next one up.
   ○ **Controls Screen** - this screen should neatly explain what user input should be used (i.e. keyboard and mouse) to play the game.
   ○ **Help Screen** - this screen should tell the backstory for the game, including explaining about any important characters. It should also specify who the game developers are.
   ○ **In-Game Screen** - must have a means for pausing/unpausing the game as well as whatever in-game controls are necessary.

   Note that all of your screens should be designed with a common aesthetic/theme and navigation between them should be seamless, including the in-game screen.

5. **Setup Version Control** - note that you'll be working together on a project for 7 weeks. You'll need a repository to help you share and merge code. Create a **Bit Bucket** repository for your team to collaborate. Once your project repository is created, invite the **SBU.CSE380@gmail.com** account and all team members.

Reference: http://www.sloperama.com/advice/specs.html
https://www3.cs.stonybrook.edu/~cse380/hw/SpikedAcidGameDesignDocument.html

Easy Basics for Phaser:

https://www.youtube.com/watch?v=88DS3Z8nOdY (looks exactly like how our homeworks have been right now)

Interestingy enought: platformer might be easier looking at this. Look how easy that was 4to get him to jump from 8:27 - 8:48

Space Dog

Game Design Document

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Introduction

This document describes a game called "Space Dog", which is designed to be a simple, 2d side scroller. The game will employ sprite-based animation, titled backgrounds and scrolling, collision detection, physics, AI, gravity, memory managements and more basic 2D game techniques

Technology

Space Dogs will be developed using the Phaser framework. Phaser is a free desktop and mobile HTML5 game framework used to develop games. Phaser uses both a Canvas and WebGL renderer internally and can automatically swap between them based on browser support. This allows for lightning fast rendering across Desktop and Mobile. All artwork and music is originally designed by our team's artist!

Back Story

It is the year 3000 and earth is slowly becoming inhabitable. There has been long talk of finding a new home, a new planet, a place where humans could continue to remain except now we must do it. The government comes across an area 51 experiment and decides to execute it. Dogs with embedded chips that contain vast amounts of AI will embark on a mission across galaxies exploring for a new home. These dogs will expose the AI systems to new planets which in term will analyze if it is habitable. The Problem arises when extraneous forces take effect on these space dogs' capability and the whole operation now lies on YOU… GET THE SPACE DOG TO SAFETY BEFORE IT'S TOO LATE...OUR SPECIE DEPENDS ON IT!

Objective

Gameplay

The user will be able to control the actions of the space dog such as walking left, right and jumping up or duck down as the space dog explores the spaceship. The space dog will need to be smart on paths/ actions it takes as there will be limited oxygen left in its spacesuit. The space dog must try to avoid spikes, traps,

and paths that will loop back to the same place as these will significantly lower the oxygen levels. The space dog will be able to refill an oxygen bubble if it encounters a Geyser. There will be hidden barkeroids which will allow the space dog to walk faster for a limited amount of time.

Controls

- **A/<-** - Walk left
- **D/->** - Walk right
- **W/↑** – jump up
- **S / ↓** – Duck down
- **B -** Bark
- **SPACE** - hold down to run
- **ESC** - This will bring the user to the Help screen where the user can decide to continue to play or choose one of the options provided.

Graphical User Interface

Splash Screen: When the game is initially loaded, a splash screen will appear. It will show the player character, space dog, and the logo for the game with the option of pressing "space" to continue. However, this is a rage game, so you have to click the actual word "space" to continue onto the next screen.

Main Menu: The main menu will display after the user has navigated from the splash screen. The following options will appear:

- **Start:** To start the game. The user will be sent to the **level select** screen.
- **Controls:** To learn the controls of the game. View the controls section to learn the controls.
- **Help:** To display the story of the game and its credits.
- **Exit:** To exit the game.

Level Select: The level select will display a lighter color purple to display that the level is available for the user to play. The locked levels will be reversed colors to the unlocked levels. They will have no function if clicked on.

In Game GUI: The game will display our space dog ready to depart from the start of the selected level all the way to the left side. There will be a short three second timer before the game starts. On the right hand side, there will be a "bubble timer" that notes the oxygen levels of the space dog. This can be filled throughout the level, but if all the bubbles are popped, the space dog will lose its life. There will be a life counter in the top left of the screen. The option to pause will be on the bottom left of the screen.

Artwork

All artwork will be original. The following needs to be created:

- **Space Dog:** need animations for:

- Walking Left/Right
- Jumping
- Ducking
- Crawling
- Running Left/Right
- Taking Damage
- Dying
- Barking
- Dancing
- **Barkeroids:** Space Dog's favorite snacks. Animations:
  - Bounce
  - Collected
- **Bubbles:** The in game "timer" that displays Space Dog's oxygen levels
  - Static Frame
  - Warning: Will Pop
  - Popped
- **Geysers:** Where space dogs can refill his oxygen levels.
  - Blowing Air
- **Spikes and Other Elements that cause damage:** These elements will both be hidden and visible throughout the level where the space dog has to avoid hitting into these.
- **Floor & Wall Tiles:** Contain multiple patterns to where Space Dog can walk and jump on to. They will be rough, porous surfaces that mirror a moon's/planet's surface.
- **Background Image:** Will remain static throughout the level, but each level will have a different background.

Sound Effects

Some sound effects that would be needed:
- **Jumping**
- **Walking**
- **Level Countdown Timer**
- **Collecting Items**
- **Barking**
- **Refill Oxygen**
- **"Click" Sound:** A soundbyte whenever the GUI is interacted with this particular mouse event.
- **Dying**
- **Level Completed**

Music

Link to original music and sound effects for game:
https://www.bandlab.com/band/band7225762910710500