**Challenge Project: Mysterious Organism**

**Overview**

This project is slightly different than others you have encountered thus far on Codecademy. Instead of a step-by-step tutorial, this project contains a series of open-ended requirements which describe the project you’ll be building. There are many possible ways to correctly fulfill all of these requirements, and you should expect to use the internet, Codecademy, and other resources when you encounter a problem that you cannot easily solve.

**Project Goals**

Context: You’re part of a research team that has found a new mysterious organism at the bottom of the ocean near hydrothermal vents. Your team names the organism, *Pila aequor* (*P. aequor*), and finds that it is only comprised of 15 DNA bases. The small DNA samples and frequency at which it mutates due to the hydrothermal vents make *P. aequor* an interesting specimen to study. However, *P. aequor* cannot survive above sea level and locating *P. aequor* in the deep sea is difficult and expensive. Your job is to create objects that simulate the DNA of *P. aequor* for your research team to study.

As you progress through the steps, use the terminal and console.log() statements to check the output of your loops and functions.

**Setup Instructions**

If you choose to do this project on your computer instead of Codecademy, you can download what you’ll need by clicking the “Download” button below. You’ll need to open and work in **main.js** in a text editor. To edit **main.js**, use your text editor of choice. If you need a recommendation or help to install an editor, we recommend looking into our [article about setting up a text editor for web development](https://www.codecademy.com/articles/visual-studio-code) (Follow along until you get to the section: “Practice: Let’s Make a Project”). To run **main.js** on your computer, you will need to install Node.js. If you need help installing Node.js, read our [article on installing Node](https://www.codecademy.com/articles/setting-up-node-locally).