X Marks the Spot

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X MARKS THE SPOT

- Geography learning game site
- Users can participate in or start a multiplayer quiz game session to learn new geography concepts
  - Earn points based on accuracy, speed, and question difficulty
  - A bonus is awarded to the game winner
  - Questions are randomized
- User's points at the end of the game go towards their account total
  - Earn tokens for every milestone they pass based on points accumulated in their account and can view their collection in their user dashboard

Job Assignments

- Gargi: Frontend + User dashboard + User Auth + Backend

- Areebah: Frontend + Backend + Database + Game Logic

- Fariha: Frontend + Backend + User Auth + Database + Game Logic

Milestones with Deadlines

- M1 (2/5 - 2/13): Finalize Design + Features + General UI

- M2 (2/14 - 2/29): Database Setup + User Authentication

- M3 (3/1 - 4/5): Game Implementation

- M4 (4/6 - 4/20): User Engagement Features

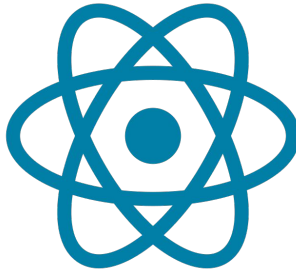- M5 (4/20 - 4/25): Internal Testing
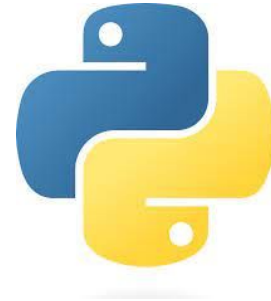
Technologies

- **Frontend:**
  - HTML
  - CSS
  - React
  - Tailwind

- **Backend:**
  - Flask
  - Python
  - MySQL

Algorithms Used in Core Engine

- The algorithm will determine how many points a player earns per question based on:
    - A base number of points the player will get per question
    - The correctness of the player's answer
    - The speed at which the question is answered
    - The difficulty of the question

- $c * (b/t * d)$

- Time Complexity: O(1)

Market Space

- Geared towards users who are interested in learning geography
- "According to the Nation's Report Card, the largest continuing and nationally representative assessment of academic performance in the U.S., only 25% of American students in the eighth grade scored at or above NAEP (National Assessment of Educational Progress) proficient in geography."
  - Helps improve student proficiency
- Helps users remember geography facts in a fun and interactive manner
  - Game and site is focused towards the type of content being learned
  - Multiplayer allows users to learn with others
- Users can earn tokens as performance overall improves, which provides incentive to learning

What's Been Accomplished

- Creating a timeline with milestones
- Brushing up and familiarizing ourselves with the technologies
- Started working on the diagrams needed for the Project Design Specification:
  - Wireframes
  - Database ERD
- Finalized our features, such as the login and logout feature, the token collection feature, the quiz game features, and more

What We're Looking Forward To This Semester

- Creating a project where I will be able to apply the coding skills I've learned
- Reinforcing skills required to be successful on a programming project/team
- Strengthening my technical skills by applying my coding skills and learning new technologies, and strengthening my teamwork skills by working and communicating with a team