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SoftDev

P05
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TARGET SHIP DATE: 2025-06-06

Design Doc V0
Roguelike Oregon Trail: Devo Trail

Overview

- Screen will have a map detailing the route which progresses over time.
- Will be fully customizable to suit the user's interests.
- Implement parallax effect (multi-layered images to create sense of moving) when travelling
- Game cycle will be a lot shorter than the original (~20 min), enforce repeating playthroughs with some permanent progression.
- Player profile detailing stats, maybe leaderboard

APIs

- Map API: Draw the route, calculate travel distance, provide a minimap
- AI API: For dynamic event generation or character interactions
- Calendar API: Incorporate time or changing seasons into gameplay
- GIF API: Add visual flair or reactions during events

Program Component Connections

- Home Page: Introduction, start game, and navigation hub
- Profile Page: Displays player statistics and potential leaderboard rankings
- Map Page: Main game view with real-time progress along a visual route
- Action Page: Player interacts with events; includes:
  - Parallax background (Parallax is used to simulate 3D environments in 2D spaces by layering backgrounds. Each layer scrolls at different speeds to give the illusion of depth as the character or camera moves.)
  - Choice box for player actions
- Settings Page: Customize characters, choices, and upload backgrounds. Option to reset to default.
- Login/Register Page: Create or enter your account information
- CSS: Makes everything look super pretty :)
- JavaScript: Incorporates smoother functionality and flowing elements for awesome UX

Database Organization(SQL)

- Database connects user profiles and progression across all pages
- Map API interacts with the Map and Action Pages
- AI & GIF APIs enhance Action Page events and visuals
- Settings Page updates customization data in the database

UserProfiles

Attribute	Type
user_id	INT
username	VARCHAR
stats	JSON
progress	JSON
custom_settings	JSON

MapData

Attribute	Type
map_id	INT
route_name	VARCHAR
distance	FLOAT
checkpoints	JSON

EventLogs

Attribute	Type
log_id	INT
user_id	INT
event_type	VARCHAR
action	VARCHAR
outcome	VARCHAR

Assets

Attribute	Type
asset_id	INT
user_id	INT
asset_type	VARCHAR
file_path	VARCHAR

GameData

Attribute	Type
game_id	INT
people	INT
supplies	INT
food	INT

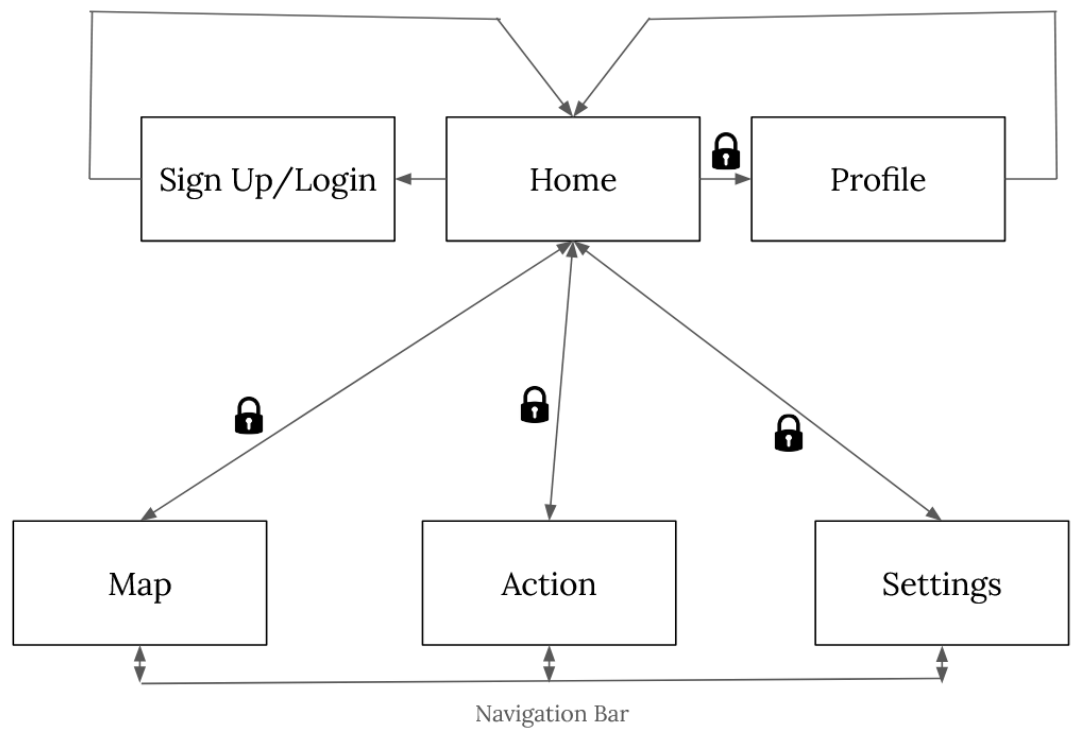## API Output Map/SQL Database

- User Profiles Table: Username, stats, past runs, custom settings
- Map Data Table: Route info, location states, distances
- Event Log Table: Actions taken per game, outcomes
- Assets Table: User-uploaded images, selected backgrounds
- Game Data Table: People, Supplies, Food (Things so game can operate)

Component Map

```
                                        ┌─────────────┐
                                        │  JavaScript │
                                        └─────────────┘
                                                │
                                                ▼
        ┌─────────────┐                 ┌─────────────┐
        │    Flask    │◄───────────────►│  HTML, CSS  │
        └─────────────┘                 └─────────────┘
                │
                ▼
┌─────────────┐    ┌─────────────┐
│  Database   │◄──►│   Python    │
└─────────────┘    └─────────────┘
```
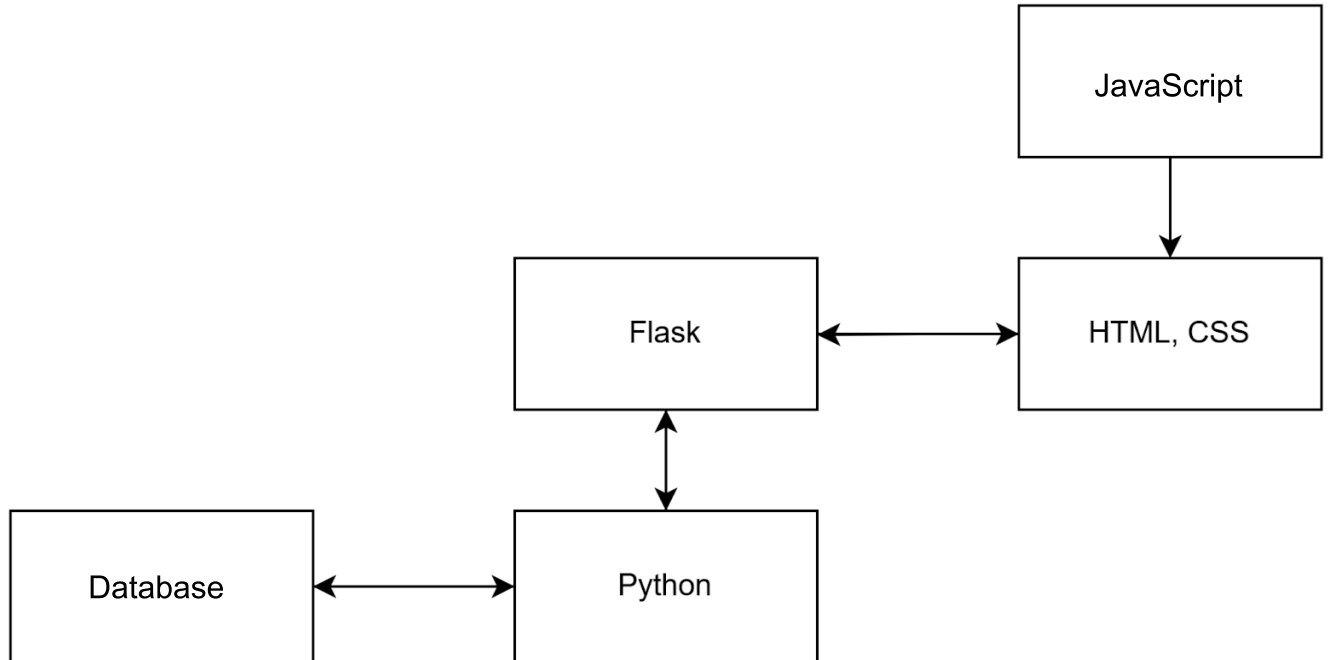
Site Map

🔒 Required to be logged in
(Redirects you to "Sign Up/Login" otherwise)

```
        ┌────────────────┐   ┌──────────┐   ┌──────────┐
        │  Sign Up/Login │◄──│   Home   │🔒─│ Profile  │
        └────────────────┘   └──────────┘   └──────────┘
                                  │
              🔒           🔒           🔒
        ┌──────────┐   ┌──────────┐   ┌──────────┐
        │   Map    │   │  Action  │   │ Settings │
        └──────────┘   └──────────┘   └──────────┘
              ◄──────────────┴──────────────►
                     Navigation Bar
```

Home Page:

- Instructions, Sign In, Start Game, Load Profile, Settings, and Leaderboard.

- Minimalistic UI with quick navigation.

Profile Page:

- View player statistics (games played, wins, losses).

- Access the leaderboard.

- Button to reset progress or customize profile.

Map Page:

- Displays current location, past checkpoints, and upcoming destinations.

- Animated parallax effect during travel.

- Interactive markers for events or challenges.

Action Page:

- Dynamic event panel with player choices.

- GIF or image reactions for added visual appeal.

- Options to make decisions, manage resources, or interact with NPCs.

Settings Page:

- Character customization: Name, appearance, background.

- Choice customization: Modify difficulty (randomness, possible outcomes), event frequency.

- Background customization: Upload custom images.

- Reset to default settings.

Database

Task Breakdown

Abidur:
- CSS (Tailwind), HTML

Christopher:
- HTML, Login/Logout, Flask/Python

Ivan: PM
- Flask/Python, Game code, Database

Jackie:
- Javascript

Front-end Framework

Framework: Tailwind CSS for styling and responsiveness.
JavaScript: For dynamic content and interactive elements.
HTML: Structuring the UI components.

Sample Movement GIF: (we know you can't see it move lol)