**Overview of Project Echo**

* **Purpose**: Project Echo focuses on mapping and analyzing data to assist with region-based animal tracking.
* **Key Features**:
  + Region-Based Mapping: Categorizes inputs into predefined regions.
  + Projected Movement Visualization: Predicts and displays movement patterns over time.
  + Data Management: Stores and organizes data for efficient retrieval.

**Design Components and Their Usage**

**Region-Based Mapping**

* **Description**: Allows users to upload data (e.g., coordinates) to categorize and display mapped regions.
* **Steps to Use**:
  1. Navigate to the *Region Mapping* section on the interface.
  2. Enter or upload relevant data (e.g., coordinates or region identifiers).
  3. Click **Submit** to view the mapped region on the interface.
* **Outputs**: Displays the assigned region name and mapped visualization.

**Projected Movement**

* **Description**: Predicts future movements based on given coordinates and parameters like time and movement factor.
* **Steps to Use**:
  1. Navigate to the *Projected Movement* section.
  2. Input the current coordinates, movement factor, and time duration.
  3. Click **Calculate** to view the projected future coordinates.
* **Outputs**: Displays updated coordinates and projected movement paths.

**Navigation Guide**

* **Home Page**:
  + Provides an introduction to the system and links to all major features.
* **Gallery Page**:
  + Displays all uploaded data with associated outputs for easy reference.
* **Documentation Section**:
  + Access the user guide and technical specifications.

**Accessibility Features**

* Mobile-Friendly Interface: Ensures compatibility across devices with responsive design.
* Error Handling:
  + Provides prompts for invalid inputs (e.g., unsupported file formats).
  + Clear error messages guide users to correct mistakes.

**Troubleshooting Tips**

* **Issue**: Upload button not functioning.  
  **Solution**: Ensure the file meets the required format and size limits. Refresh the page if necessary.
* **Issue**: Data not displaying correctly.  
  **Solution**: Check if all required fields are filled before submission.

**Future Enhancements**

* Multi-language Support: Expanding accessibility for global users.
* Expanded Mapping Features: Adding dynamic user-defined regions.
* Enhanced Documentation: Including FAQs and video tutorials for better understanding.