

MICHIGAN STATE

UNIVERSITY

Project Plan Presentation

ERP Reserve Preservation Platform

The Capstone Experience

Team Evolution

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*From Students...
...to Professionals*

Functional Specifications

- Main goal is aiming to make the lives of those living and working on the reserve easier
- ERP will be provided a platform to integrate all security tools and reserve management systems with a user-friendly interface
- User login and authentication with verification quizzing system for new users and a scheduling system
- Security alerts and security live stream footage of the reserve available
- Drone footage with a video system to display, save, delete, and organize videos
- GPS tracking of elephants and rhinos can be viewed

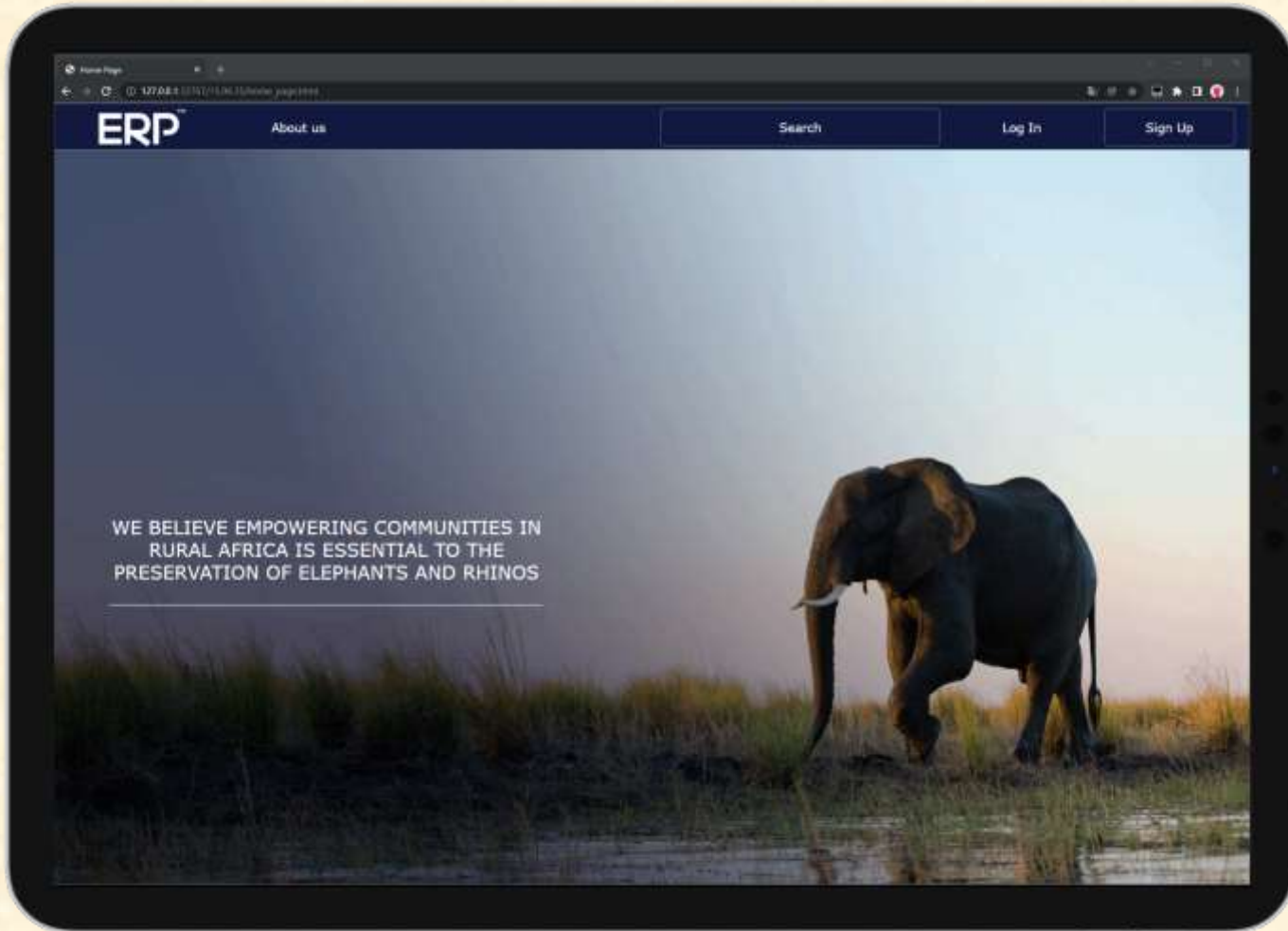


Design Specifications

- Platform is available on the web
- Dashboard houses all tools in a single pane of glass view
- Sidebar gives users access to quickly switch between tools
- Quizzes (assessments and question editing) utilize modal boxes
- Video system displays videos in a simple grid
- Complies with the ERP Branding Standards Guide



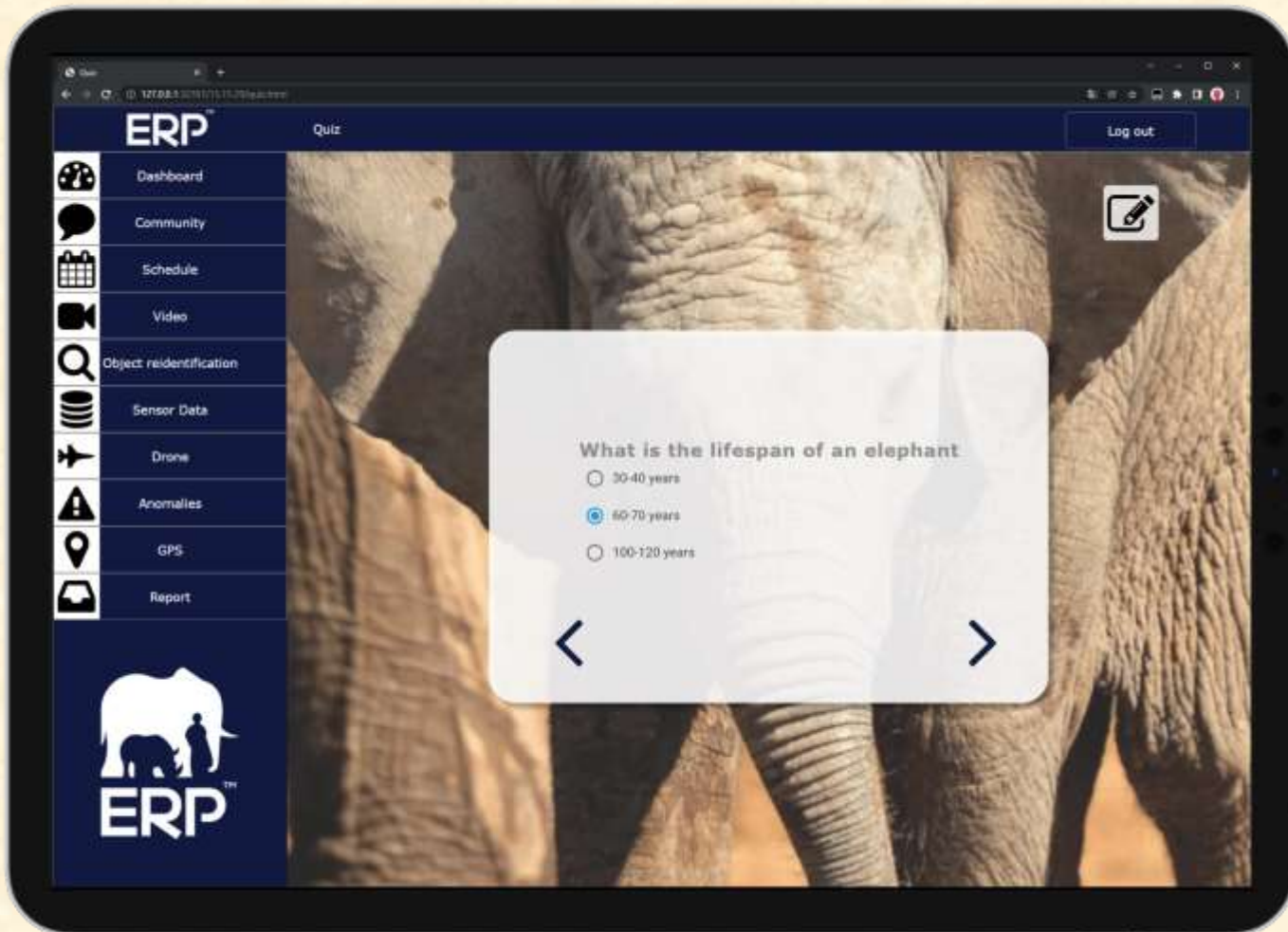
Screen Mockup: Homepage



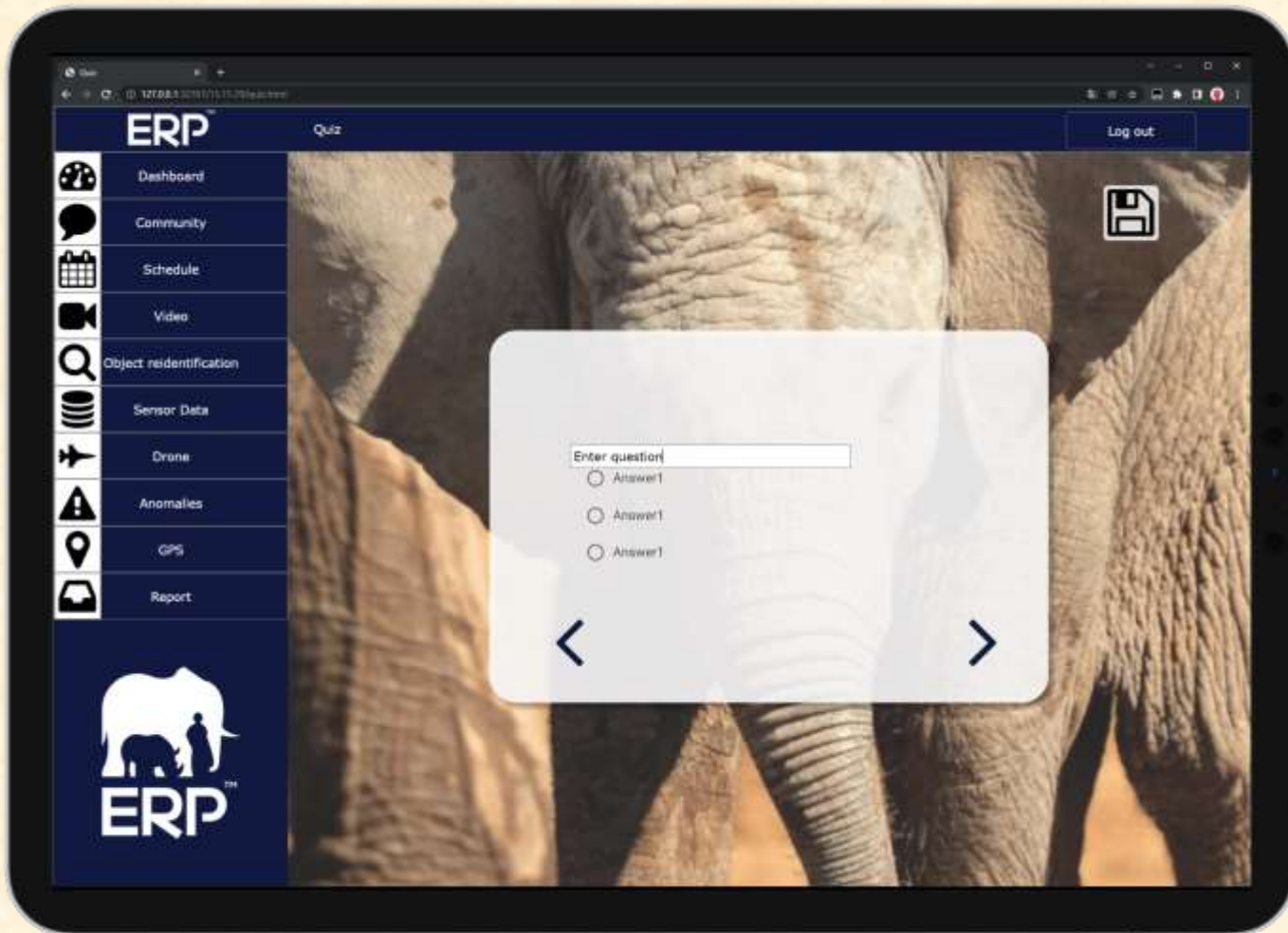
Screen Mockup: Dashboard



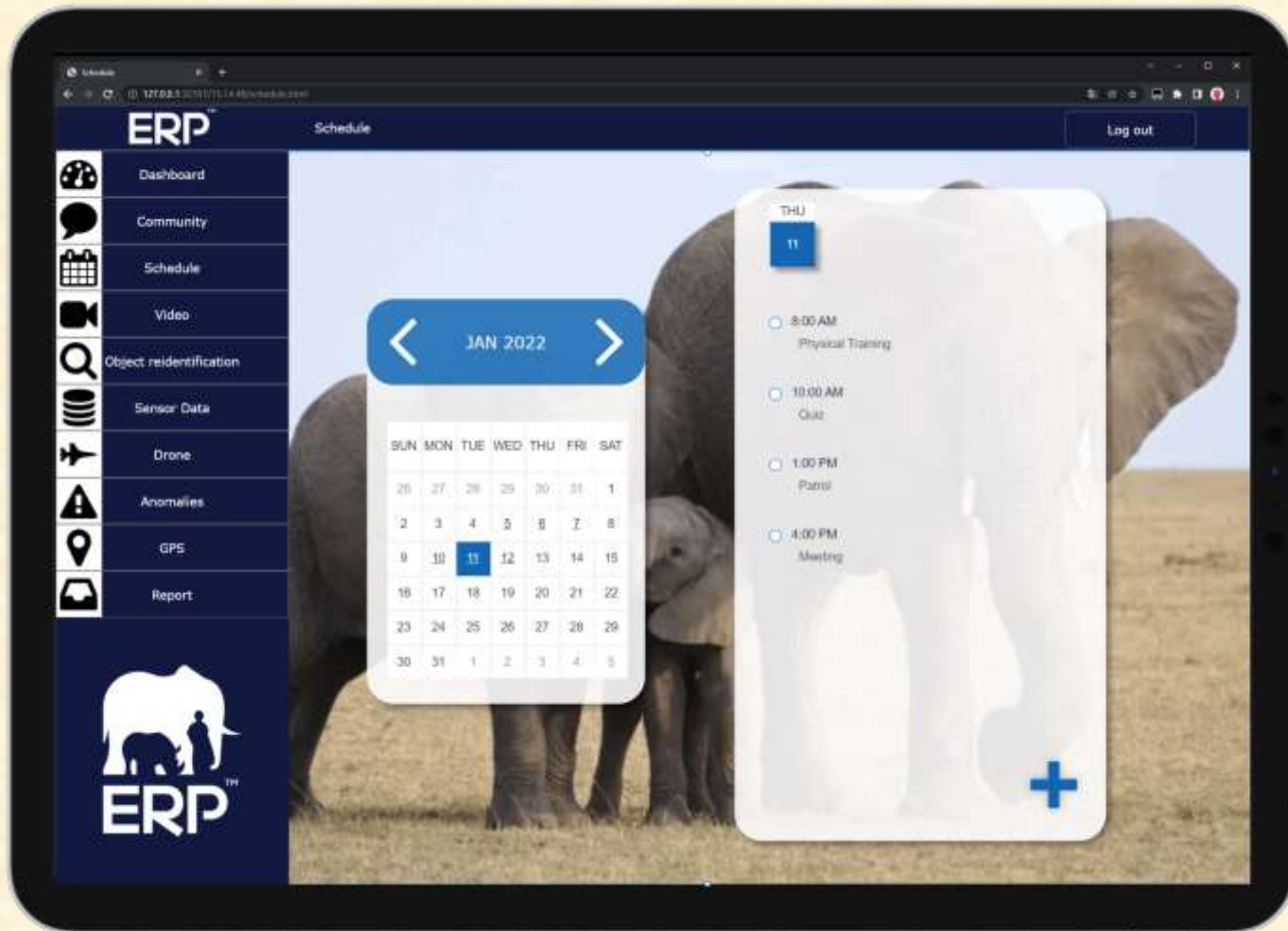
Screen Mockup: Quizzes (Viewing)



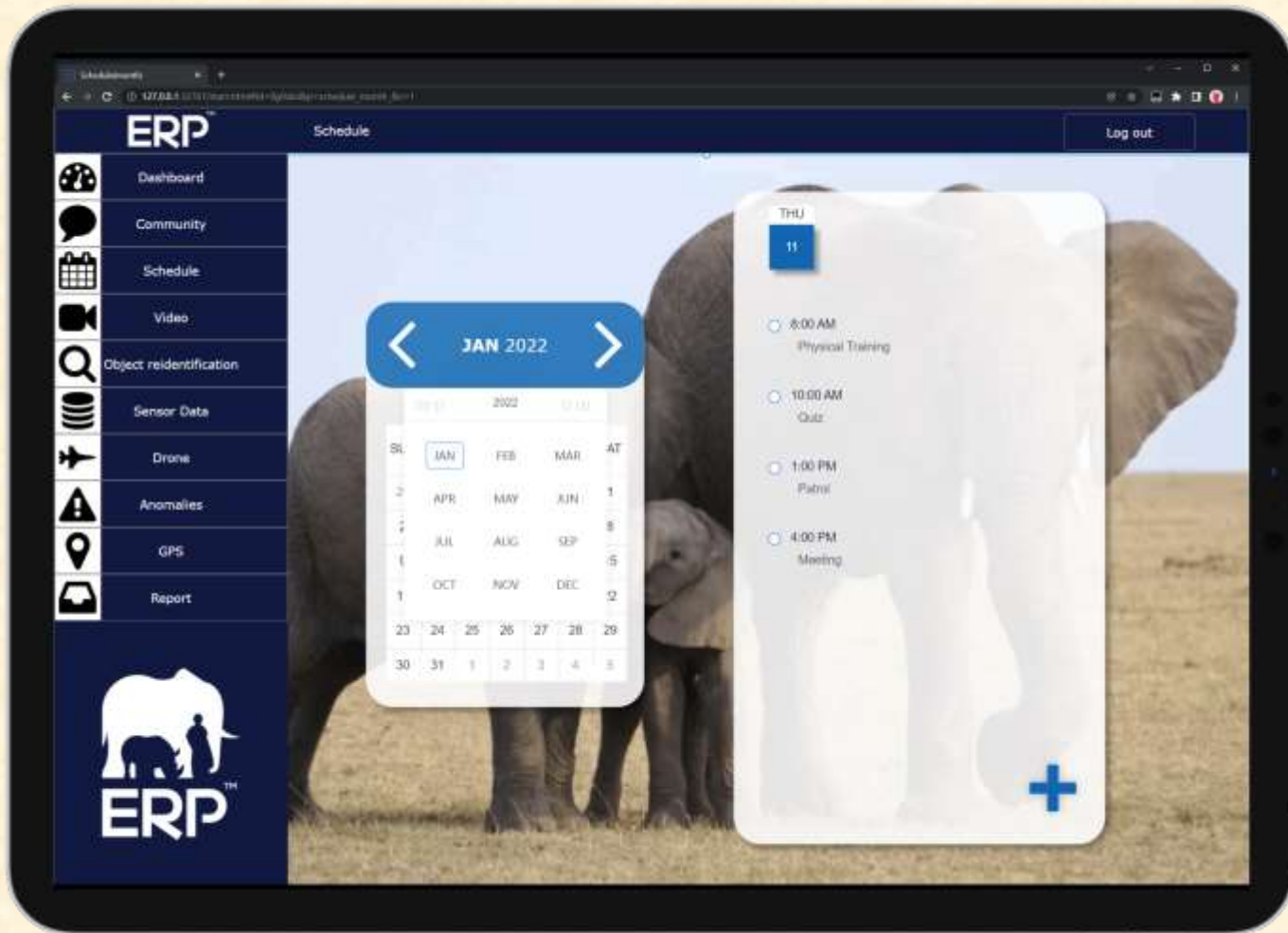
Screen Mockup: Quizzes (Editing)



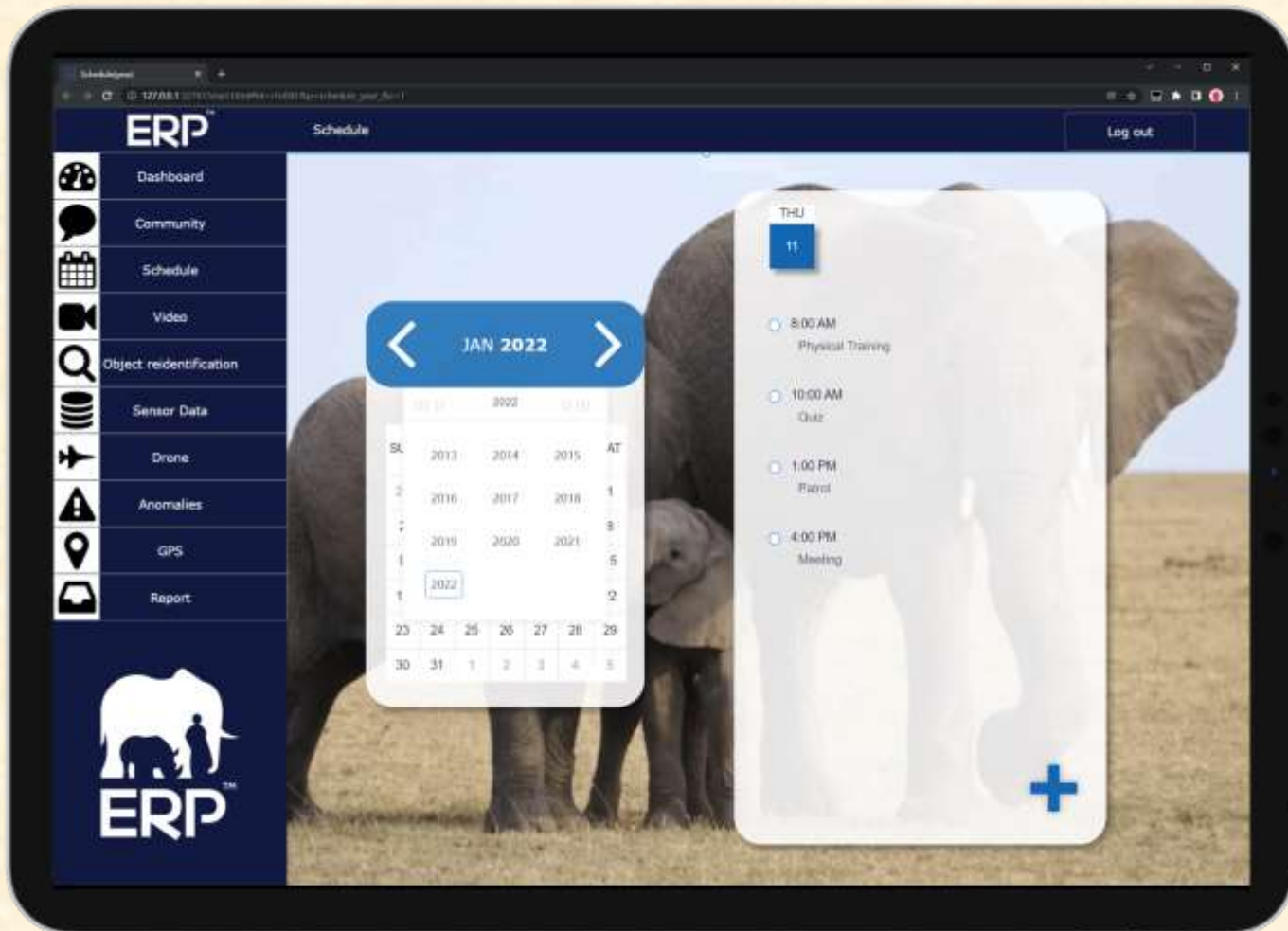
Screen Mockup: Schedule



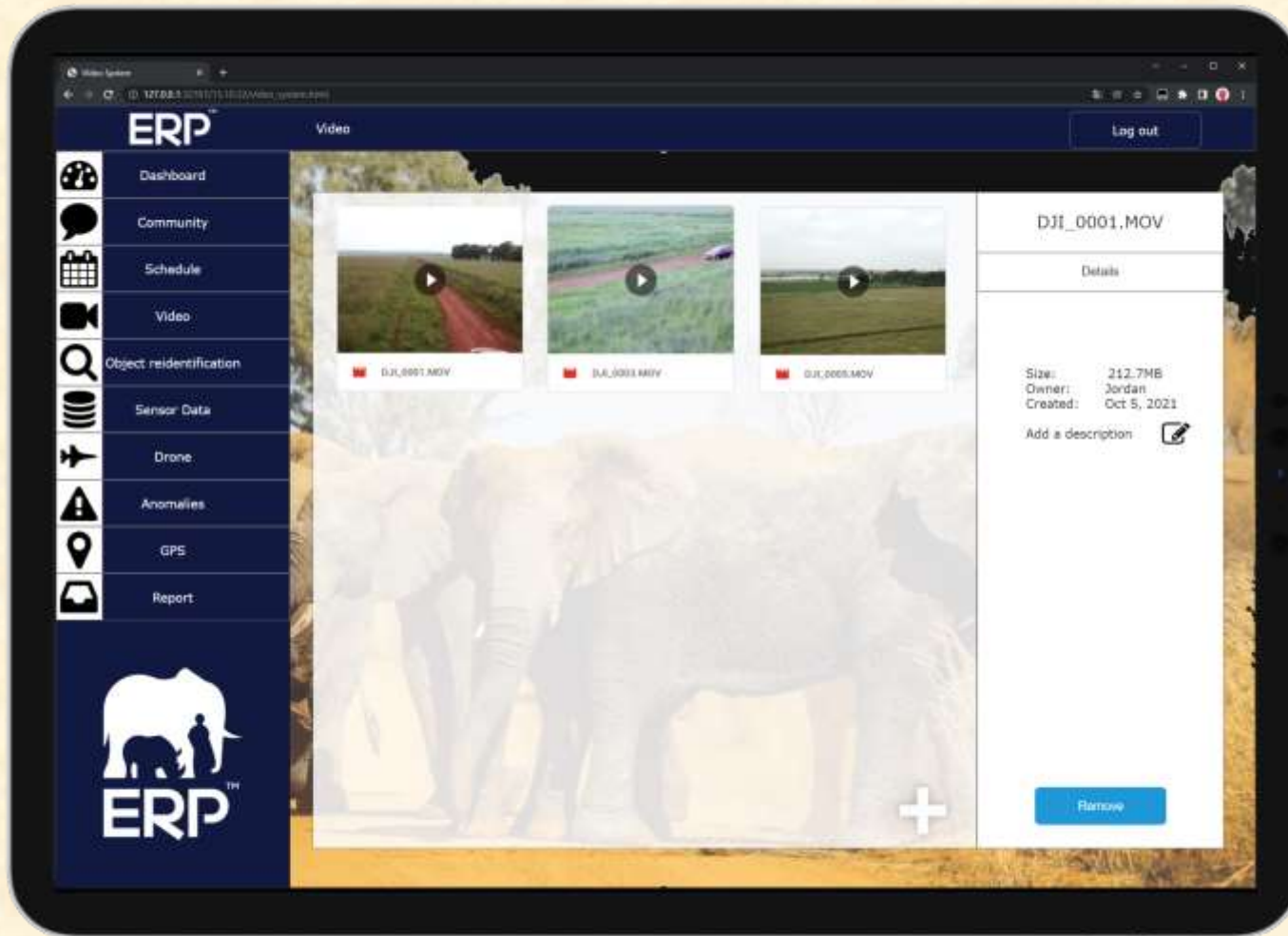
Screen Mockup: Schedule (Month)



Screen Mockup: Schedule (Year)



Screen Mockup: Video System

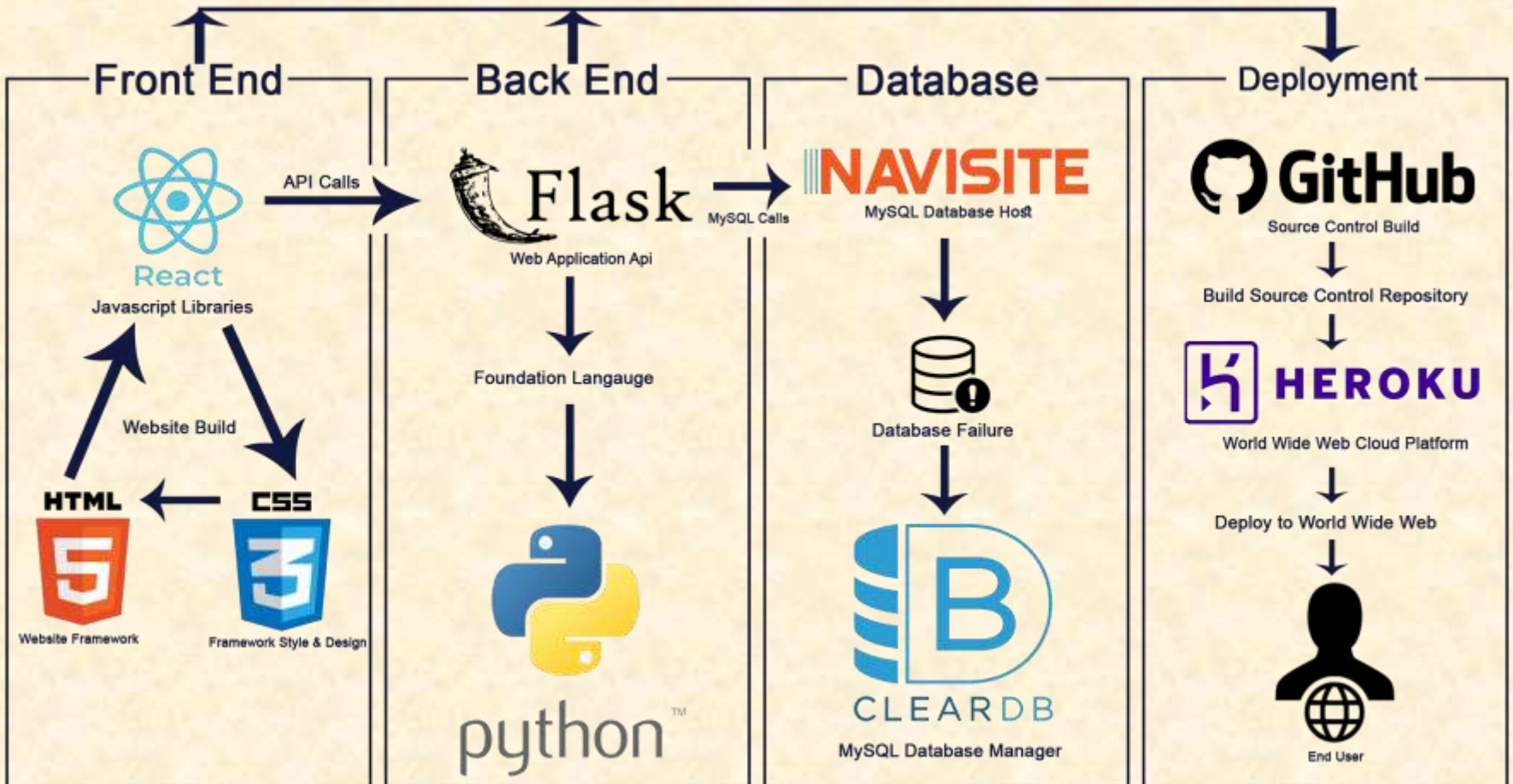


Technical Specifications

- Python version 3.9, with Flask version 2.0
- The Flask framework provides a simplistic set of endpoints from which the frontend React framework can pull from (e.g., user-tailored queries and information).
- Frontend React framework to quickly and dynamically create HTML/CSS components from JavaScript
- User data is hosted on a MySQL Database Service, e.g., user login information, scheduling, certification progress, videos, etc.
- GitHub + Heroku for deployment. Using the ClearDB extension service for database hosting and metrics.



System Architecture



System Components

- Software Platforms / Technologies
 - React
 - Hyper Text Markup Language
 - Cascading Style Sheet
 - Python
 - Flask
 - Heroku
 - Github
 - Navisite
 - ClearDB



Risks

- Data Limitations
 - Much of the data reflected on our platform is not provided
 - Fabricated data will need to be accurate and realistic to gauge effectiveness
- ERP Branding
 - Limited frontend and design experience within the group
 - Consistent talks with client to ensure the platform aligns with their end vision
- Data Security
 - Data relating to Rhino and Elephant locations can be dangerous in the hands of the wrong people
 - No public facing data, user authentication, selective access and administrative rights
- Power Outages / Data Retention
 - Parts of Africa can have long term power outages
 - Ensure pages do not break when video footage may not be available



Questions?

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