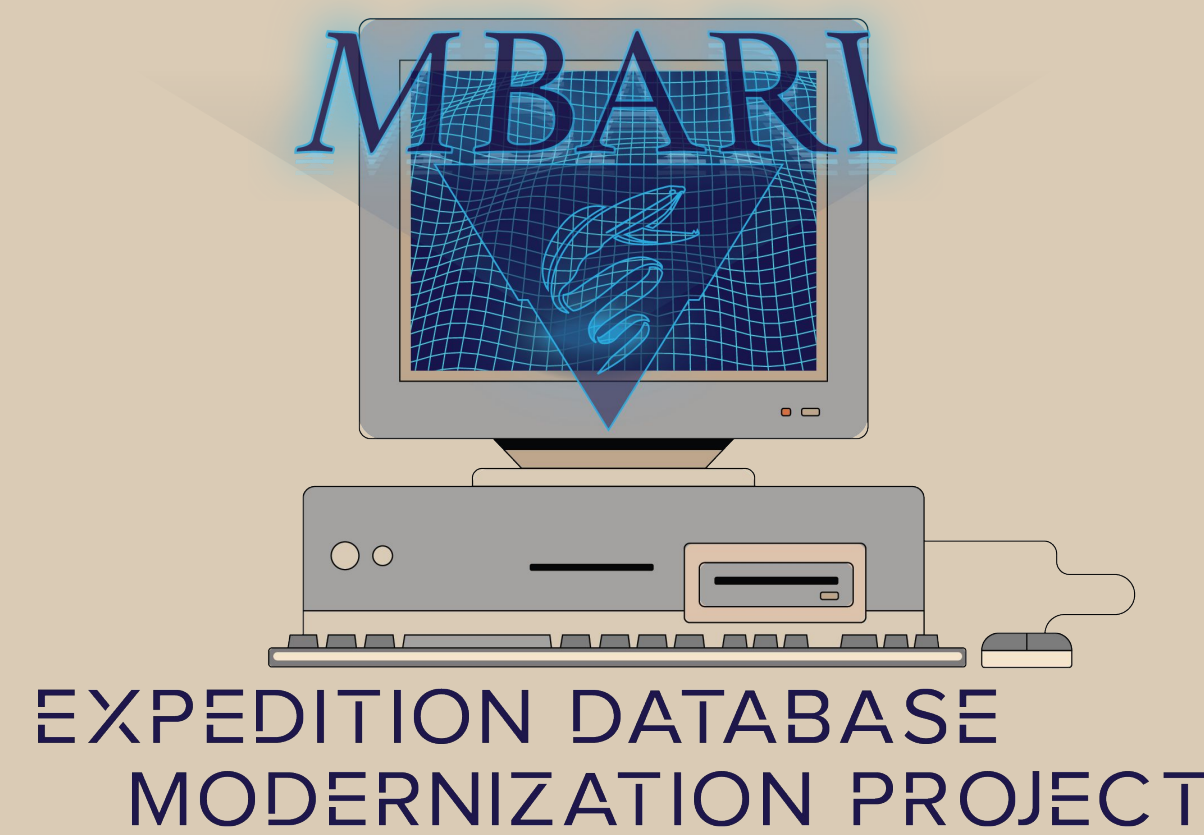




MBARI Expedition Database Modernization Project



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Motivation / Objective

The MBARI Expedition Database is mission critical software. The current program is at the end of its life, and costs \$25,000 a year in legacy software support. Our goal was to rebuild this database and app from the ground up using a modern software stack. Ensuring that MBARI continues to have access to this vital tool.

Approach

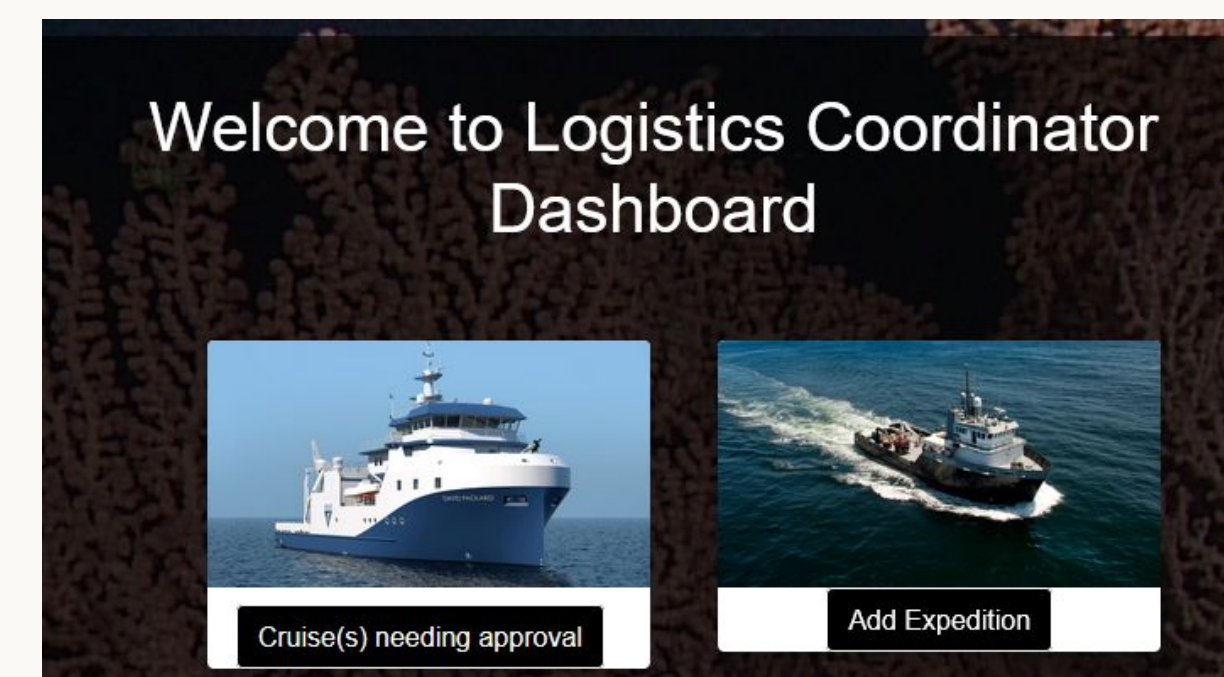
Backend: Node JS

Frontend: Bootstrap / HTML

Database: MySQL

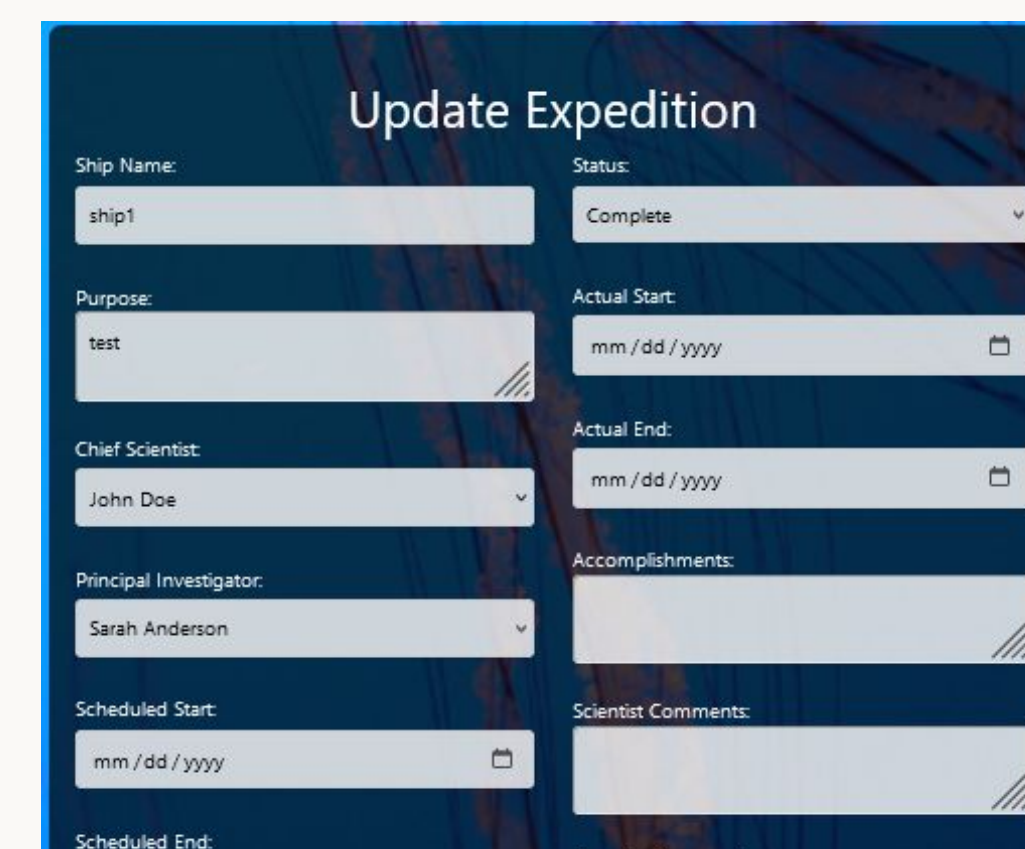
We chose this approach because these are all commonly used which will allow MBARI to support this app for years to come at a greatly reduced cost. This modern software stack also provides a smoother user experience.

Results



Add an Expedition

The precruise form adds a new row to the expedition table and marks it as planned.

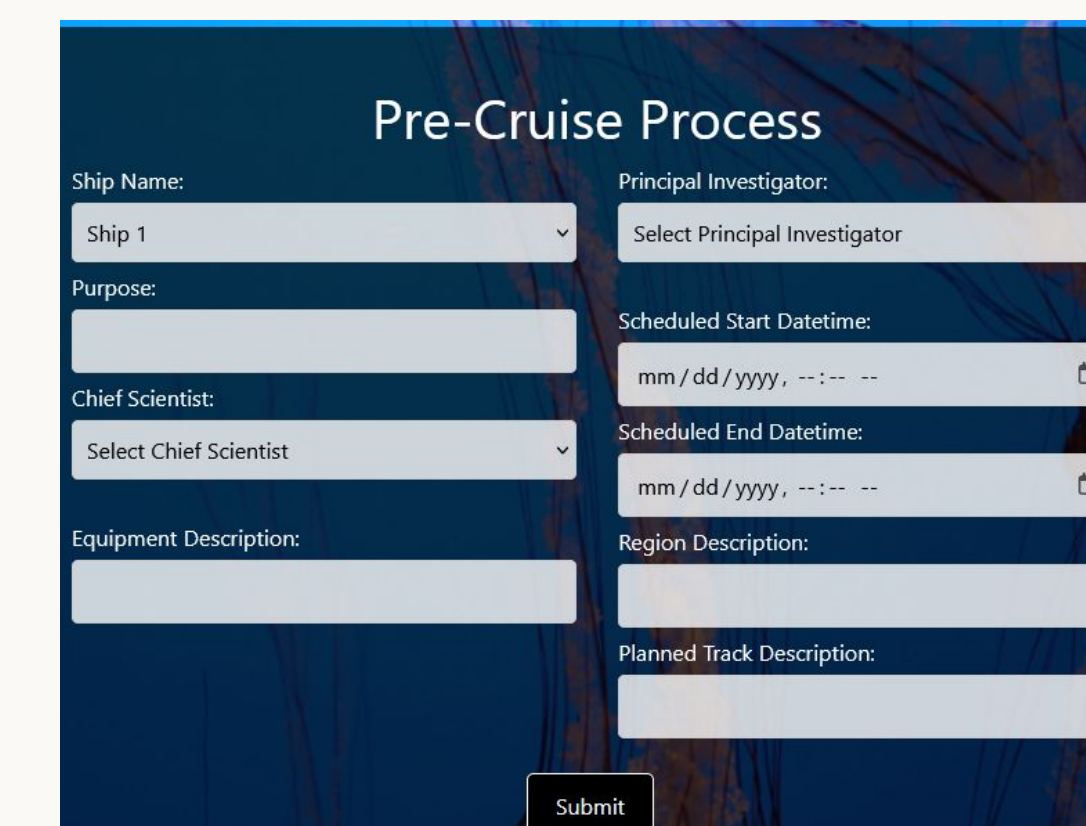


Search

Any user can search the database via the search form. The results will show information on each expedition as well as dives done during that expedition.

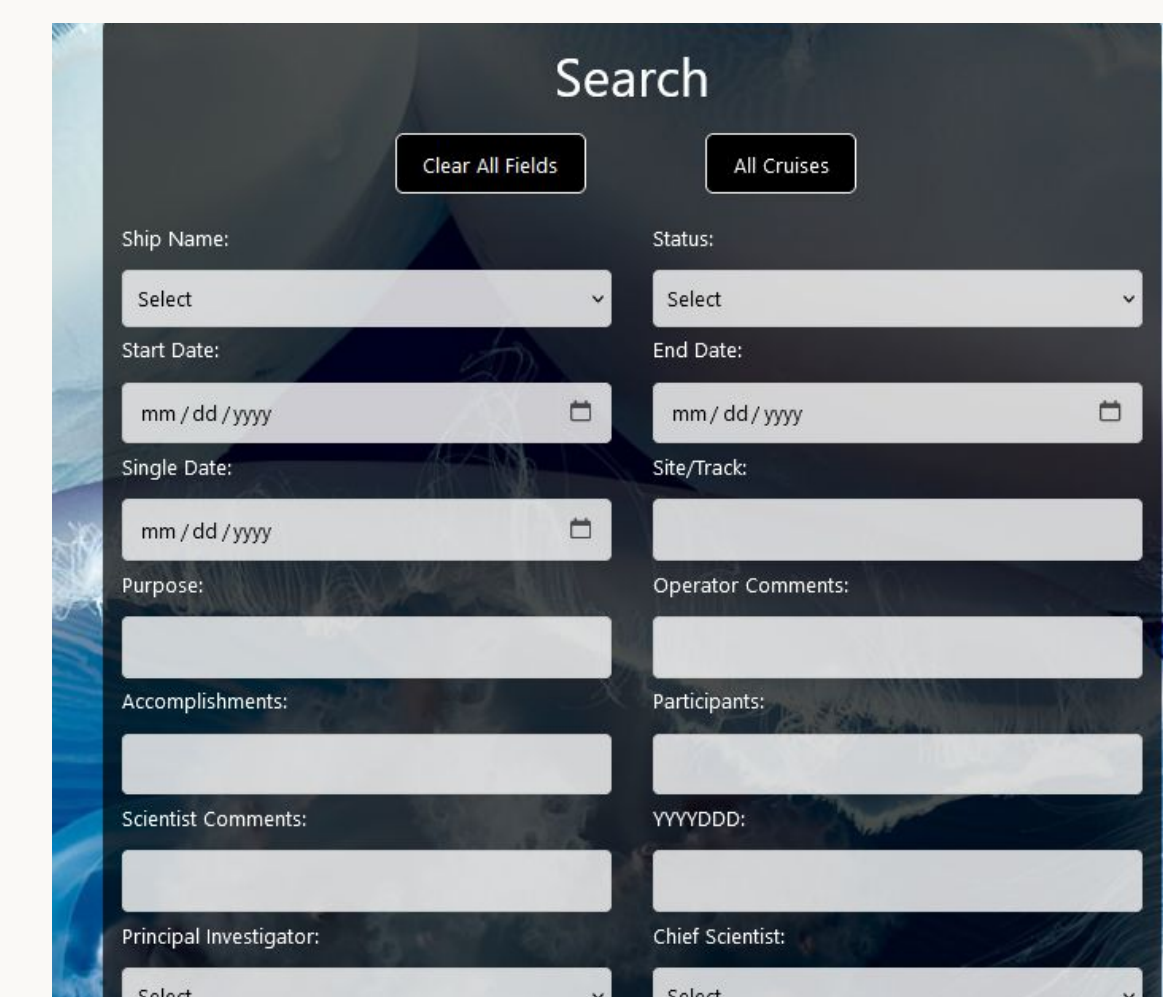
Dashboard

Each employee type has its own dashboard with different functions

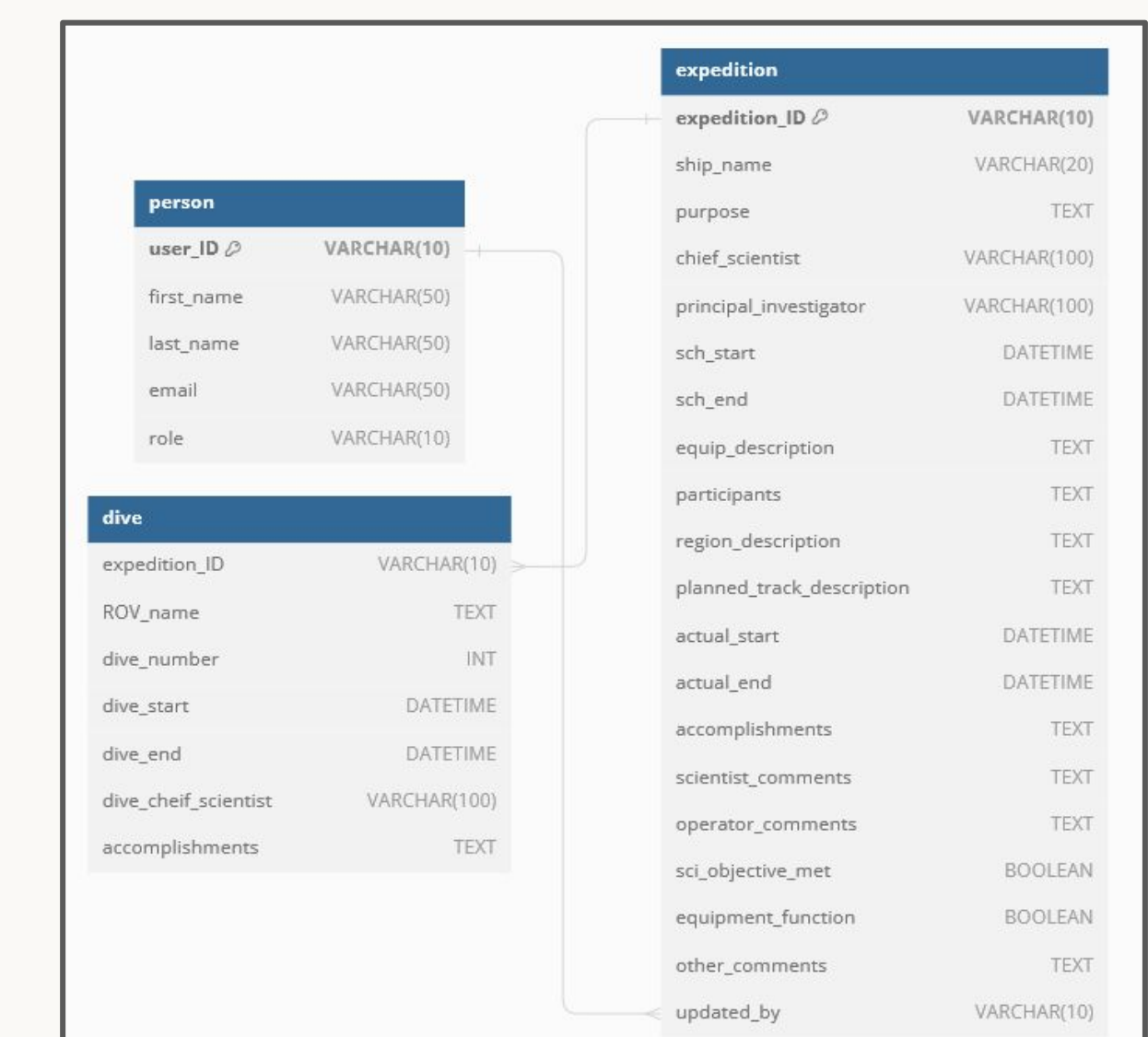


Update Expedition

Cruises can be updated via this form. This also updates the database.



Database



Expedition: Tracks everything about an expedition from start to finish.

Person: Stores information about the users accessing the database.

Dive: Keeps track of the ROV dives done on an expedition

Future Work

- An inbox system for requesting and approving cruises.
- Implement smoother database editing.
- Full testing with Selenium.
- Taking the website live rather than running it locally.

Thank you to our Mentor Mike McCann and the whole team at MBARI!