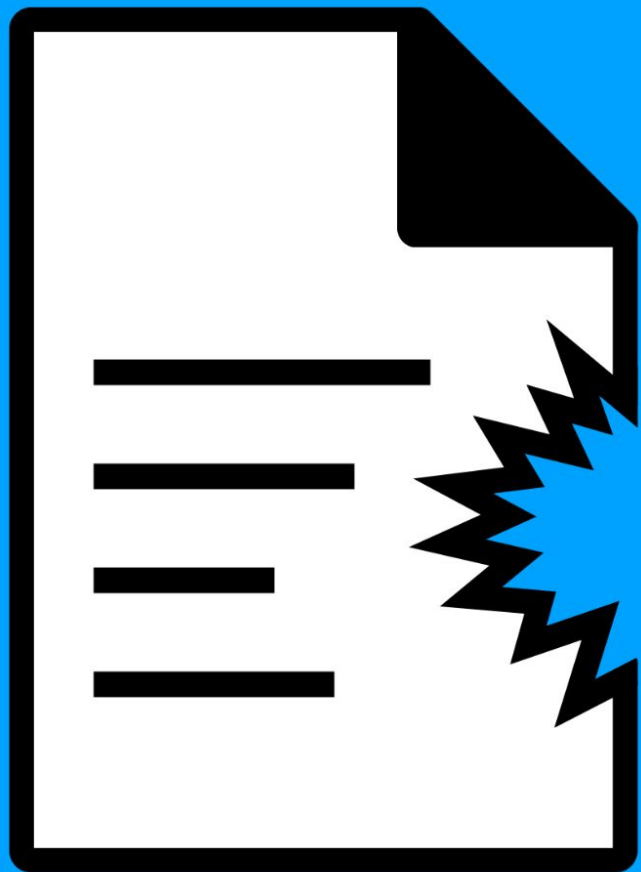




**Shark
Bytes**

Team Inventory

Jered Angous, Daniel Arden, Alex King, Anthony Narvaez



Team Shark Bytes

**Colorado River Area Biologists Computer Aided Knowledge Entry System
(CRAB CAKES)**

Team Mentor: Scott LaRocca

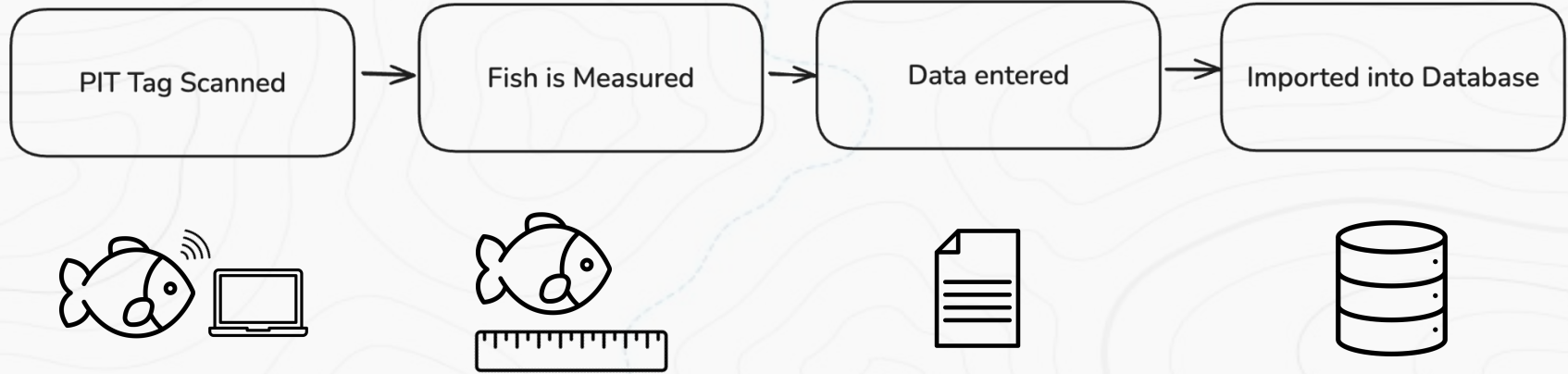
The Impact

- Biodiversity marks ecosystem health.
 - Especially in the Colorado River, the lifeblood of the Southwest
- Wildlife monitoring efforts are important for the health of the ecosystems, and the people that depend on them.
 - **Clients:** David Rogowski (AGFD), Mara Dzul (USGS), Pilar Rinker (USFWS)



The Workflow

SHOALS



The Pain Points

- Unmaintained since 2019
- Language may soon be obsolete
- Existing program is buggy
- Inconsistent app versions

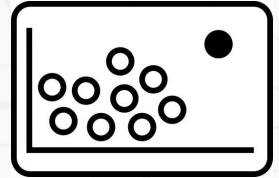
The screenshot shows a data entry form with the following fields and values:

- System (F1) | Sample (F2) | Specimen (F3) | VIE (F4) | Review (F5)**
- Trip_ID:** LF20200921
- SampleType:** 96 (LF T)
- Boat A/B:** A (BO)
- Crew:** JS, DR
- Gear:** EL (BOAT ELE)
- Buttons:** New Sample (F10), NFC (F11)
- Site ID:** -11.23R
- Start DateTime:** 09/15/2020 20:13
- Not required for monitoring sites:** RM_Start, RM_End, Side
- EF_Minutes:** 8
- EF_Seconds:** 52
- EF_AMPS:** 16.1
- EF_VOLTS:** 320
- Shore Habitat:** VS (VEGETATED SHORELINE)
- Hydro Unit:** GL (GLIDE)
- Substrate:** SA (SAND)
- Cover:** B (BOULDER)
- field_s_Cover:** ->B (BOULDER)<- [required]
- Sample Notes (0 of 255 characters):**
- Footer:** ctrl-Enter = Override | alt-Enter = -999

The Solution

A more streamlined data-entry system that will allow for:

- Built in data verification
- Modernized user interface
- Maintainable codebase
- Adaptable data fields



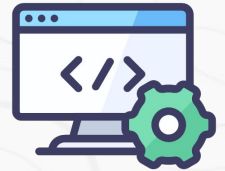
Development Plan

Goals:

- Gather client requirements for end product
- Incorporate the best of the original Shoals program
- Add functionality to improve user experience

Considerations:

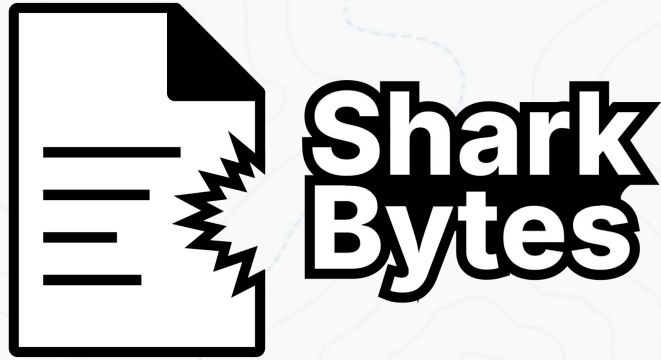
- Front end framework
- Bluetooth support
- Configuration files
- Auto-backup functionality
- Local database structure



Conclusion

- Developing an improved data-entry system
- We are committed to delivering a robust and adaptable data entry system for our client, and the broader research community
- Face challenges in developing feature parity in a short time

Thank You!



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