

Enhancement One - Software Design and Engineering

- Add 'Delete Animal' button
 - Include confirmation pop-up
 - Add backup database
- Add dropdown filters to sort data set
- Add login screen with username and password

Enhancement One - Course Outcomes

- ▶ Build collaborative environments
 - ▶ Thinking about the user experience and expanding user interface
- ▶ Professional communication
 - ▶ Dropdowns and delete button provide better, more up-to-date information
- ▶ Using well founded techniques
 - ▶ Check for user intention, backup database, login screen
- ▶ Security Mindset
 - ▶ Principle of least privilege

Enhancement Two - Data Structures and Algorithms

- ▶ Decrease initial loading screen time by making 'Dogs' the default view
 - ▶ Cut animals that need to load from 10,000 to 5,600
- ▶ Update database to include category for 'rescue_type'
 - ▶ Create index on this category
 - ▶ Radio button callback will only have to search the ages of the animals, rather than check every animal in the database
 - ▶ Search time complexity will go from $O(n)$ to $O(1)$
- ▶ Create method to automatically update animals that fit the criteria as they're inserted or updated
 - ▶ This will be included in the AnimalShelter class

Enhancement Two - Course Outcomes

- ▶ Building collaborative environment/professional communication
 - ▶ Improved search times will allow users to use the dashboard more efficiently and give it a more professional feel
- ▶ Designing and evaluating computing solution
 - ▶ Trade-off of additional space in each document that contains a rescue animal and added time to insert/update for increase speed when using the dashboard
- ▶ Well-founded techniques
 - ▶ Object-oriented programming with one method being used in both insert() and update() methods to check for and assign rescue types

Enhancement Three - Databases

- ▶ Add insert animal function to dashboard
 - ▶ This will involve dropdowns, calendars, and maps to control what data can be entered
 - ▶ Only manual entry will be for 'name' category, with a data validation check associated
- ▶ Add update animal function to dashboard
 - ▶ Same data control/validation techniques as insert function

Enhancement Three - Course Outcomes

- ▶ Build collaborative environment
 - ▶ All users will have access to the most up-to-date data
- ▶ Professional communication
 - ▶ The look and feel of the dashboard will be improved
- ▶ Well-founded techniques
 - ▶ Data control and validation
 - ▶ Object-oriented programming by using one method for data checks on both inserting and deleting
- ▶ Security mindset
 - ▶ Principle of least privilege

Thank You