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CST 324 Database

Final Database Project

ToTheRescue! is an education learning game web app. Users are assumed to be parents or educators, and log in with an email and a password. Children of Kindergarten age then select a profile and get to navigate to and play minigames that teach them math or reading skills appropriate for their learning level. These minigames are found on a map where they get to work towards rescuing an animal, who then joins their sanctuary as a trophy. If they move quickly through games, the difficulty slowly gets harder, and if they take a while or effectively fail, the difficulty might get easier. Javascript game code is stored in the database, as well as all images and sounds used by the program, so that everything comes from one source.

The CST\_324\_Lake\_Robert schema for this project is the ToTheRescue! database without the changes required for the asp.net login services. The CST\_324\_Lake\_Robert database is much larger in comparison however, we have filled the Users column with over 3000 rows, and 6000 rows in the Profiles table. Related rows to the Profiles table have also been filled accordingly.

Our Profiles and Animals tables became our many-to-many relationship with the obvious reasoning that one profile could have many animals attached to it, and one animal could have many profiles attached to it.

Our views also followed a basic understanding that we would want some quick and functional statements to quickly check our database. Our animals\_view allows us to see all of the animals for every profile. This of course, can be compounded with a where clause that allows the call of the view to see every animal for a certain profile. On a similar note, the names\_view allows us to view every profile associated with a user so that we can quickly see which users have what profiles.

Our indexes were chosen with the basis of this database being an integral part of

the ToTheRescue! web application. We first put an index on Profile.sUserID in an effort to

reduce the total time a user is waiting for the profile select screen to populate their

available profiles from a database with potentially hundreds of millions of profiles.

The second index we created was on ProfileProgressHistory.ProfileID, which is arguably

a column that is read from more than any other column in our database due to the nature

of the ToTheRescue! web application

Creation scripts are in the main folder of the project with the rest of the documentation. To populate the data, you need to change the variables DB\_USER\_NAME and DB\_USER\_PWD in ProductDB.cs, and then the script will do the rest. It is currently assumed to be running from within the debug folder of the project.