

COSC 3380 Project Document

1. Project Document

1.1 Types of Data

The database application allows for the addition, modification, and editing of the following types of data:

- Administrator information which includes being able to modify Admin Credentials.
- Animal information including types (e.g., Giraffe, Dolphin) and their statistics.
- Customer information including phone numbers, age, email, address, etc.
- Employee details such as names, addresses, and salaries.
- Event details to track the start, end, organizer, event name and other information.
- Food and Gift Shops to track data related to inventory management including item names, quantities, prices, and any other relevant information.
- Habitat information about animal habitats within the zoo, including habitat types, sizes, conditions, and any specific features.
- Health records of animal health including medical histories and any ongoing health concerns.
- Transaction details of transactions made within the zoo, including purchases of tickets, food, gifts, and any other goods or services.
- Vet information about veterinary services provided at the zoo, including vet names, contact information, schedules, and medical records for treated animals.

1.2 User Roles

The application supports the following user roles:

- Employees (Staff): Have access to specific functionalities for managing zoo operations and querying the tables to see necessary information for daily tasks, but no access to employee or admin tables.
- Administrators: Have the most privileges, including the ability to update information in tables.
- Visitors (Customers): Have limited access compared to employees and administrators and can view their own information.

1.3 Semantic Constraints

Semantic constraints are implemented as triggers within the database to automate updates based on specific events. Two triggers are defined:

- **Trigger 1:** Updates **animal_status** and sets **patient_checkup** in the **vet** table whenever a new health record is inserted. Additionally, it updates the **animal_health** and **animal_status** fields in the **animal** table, with **animal_status** defaulting to 0 for new entries indicating that the animal needs its first checkup.
- **Trigger 2:** Prevents the deletion of animals from the **animal** table if they have associated medical records in the **medical** table. This ensures that medical records are retained even if an animal leaves the zoo so that they may be transferred to another Zoo to continue the animal's medical care.
- **Trigger 3:** This trigger notifies the user whenever updates are made to the employee table, ensuring that changes are documented and preserved for auditing purposes.

1.4 Queries/Reports

The application supports various types of queries and reports, including:

- Querying for animal types and their statistics.
- Retrieving employee details.
- Counting visitors and tracking purchases in the gift store.

2. Hosted Web Link and User Credentials

The project is hosted on Render. Below are the login credentials for different user roles:

- **Administrator:**
 - Username: [admin]
 - Password: [a]
- **Employee (Staff):**
 - Username: [employee]
 - Password: [e]
- **Visitor (Customer):**

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- Username: [demo123]
- Password: [umadb123]

3. Submission Files

The submission files, including the project document and associated resources, are available on Google Docs. You can access them using the following link:

[Google Drive](#)

If you would like to access the files through the GitHub, here is the link for that as well:

[Github](#)

Go to command line, 'cd' into a folder or directory. Then you can download all the files using the 'git clone' command, and once you have specified where on your laptop you want to clone the repository then you can use 'git pull' to download/pull all the files.