Join us in Saving the North Atlantic Right Whales!

CS 3200: Introduction to Databases
Prof. Rachlin / Northeastern University

Introduction

Boston's New England Aquarium needs your help! The marine biologists have redesigned their North Atlantic Right Whale Catalog as part of a public outreach effort. They've added features to make it possible to "Adopt a Whale." When an adopted whale is sighted by an observation team, an email will be automatically sent to all users who adopted that whale. ("Fluke was sighted in Cape Cod Bay on June 11th, 2021! By the Center for Coastal Studies")

1. Open whale_SETUP.sql.   Run this script in a ROOT connection.   The whale database will be created for you. The resulting model for this database is diagrammed below. Not all tables are actually populated with data.

2. Open whale_QUERIES.sql.   Write a SQL query that effectively answers each question. Most of these queries require use of JOIN queries which we will cover in class.

3. Record your output to each query. Consolidate all query outputs to a file named: YourName_whale_OUTPUT.pdf.   Please save your document as a PDF, NOT a Word Docx.

What to Submit:

Your queries.   Rename this file to: **YourName_whale_QUERIES.sql**

Your query output. **YourName_whale_OUTPUT.pdf**

whale
- whale_id INT NN
- name VARCHAR(50) NN
- dob DATE
- gender ENUM('F', 'M')
- mother_id INT

Indexes

photo
- image BLOB NN
- dt DATE NN
- whale_id INT NN

Indexes

identifiedWith —>

calf

Mother

sighting
- researchteam_id INT NN
- whale_id INT NN
- dt DATETIME NN
- latitude DOUBLE NN
- logitude DOUBLE NN
- is_certain_ident TINYINT NN

Indexes

researchteam
- researchteam_id INT NN
- name VARCHAR(50) NN
- affiliation VARCHAR(50) NN
- pi_lastname VARCHAR(50)
- pi_firstname VARCHAR(50)
- pi_email VARCHAR(255) NN
- pi_phone VARCHAR(20) NN

Indexes

A research team
reports a whale sighting.

adoption
- user_id INT NN
- whale_id INT NN
- dt DATE NN
- auto_renew TINYINT NN
- for_child TINYINT NN
- charge_amt DECIMAL(5,2)

Indexes

Users adopt
0 or more whales

user
- user_id INT NN
- user_lastname VARCHAR(50) NN
- user_firstname VARCHAR(50) NN
- address VARCHAR(100) NN
- city VARCHAR(50) NN
- state CHAR(2) NN
- country VARCHAR(50) NN
- zipcode VARCHAR(10) NN
- telephone VARCHAR(20) NN

Indexes

PK/FK

paysWith —>

creditcard
- user_id INT NN
- creditcard_num VARCHAR(20) NN
- type ENUM(...) NN
- expiration_month INT NN
- expiration_year INT NN

Indexes