Zoo Project 2016

Data Representation and Querying

by

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I designed my Application for Dublin zoo. It allows web uses or zoo visitors to search for different types of animals in the zoo and displays information about them. The animal database can also be edits, added or deleted by the staff at the zoo.

They following document contains the steps I took to create my single-page application for data representation and querying.

# GitHub

Created a new repository: DataProject2016

# MySql

Downloaded and installed MySql version workbench 6.3 CE

Created a sample database named ‘zoo’. Created a Table, ’Animals’ and populated

the table with sample data. See Database.sql

# Python

Downloaded and installed python. Used script get-pip.py to install ‘pip’ and

‘setuptools’ and used pip to install ‘virtualenv’.

Virtualenv: Used virtualenv to create a virtual environment ‘venv’. Activated

Venv in a command prompt using: venv\scripts\activate

# Flask

Flask install: Used pip to install Flask: pip install flask

Flask: app: Created view and templatefiles for flask: Hello.py and

Templates\index.html.

The view (Hello.py) uses flask.ext.mysql to create a connection to the

Database. It then runs a database query to return all the records in the Animals table

And stores the results in a variable.

The root url of the web app is mapped to a function hello world, using the flask

@app.route decorator. When the user opens the web app, this function is called.

It calls render template and passes the results of the database query to the template,

Index.html loops through the results of the database query and outputs them to a table.

Css: Added a simple style sheet to improve the style of the style of the page:

Static\style.css

Testing: Used builtin development web server to test. Before starting it, the environment

Variable FLASK\_APP needs to be set to the view file: set

FLASK\_APP=Hello.py

The command: python –m flask run, will start builtin web server

at 127.0.0.1:5000

Open a browser at this url to see the application running.

Finally I uploaded it to github.

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The following instructions are for a new user to get the app up and running…

Install MySql: Downloaded and installed MySql version workbench 6.3 CE

Created a sample database: Create a new Database named ‘zoo’.

Use the script Database.sql to create the ‘Animals’ table and populate it with

Sample data.

Create a ‘myproject’ folder and get the flask project files from

Github: <https://github.com/Jomzi/DataProject2016>

\Hello.py

\templates\index.html

\static\style.css

Update the database login details in Hello.py to correspond to your MySql server’s login.

(Search for the section under ‘MySql Configurations’)

Download and install Python and Flask, pip, setuptools, virtualenv.  
See: <http://flask.pocoo.org/docs/0.11/installation/#installation>

Start flask's builtin server:  
First you need to tell your terminal the application to work with by exporting the FLASK\_APP environment variable: set FLASK\_APP=Hello.py

Then: python -m flask run

You should see: Running on <http://127.0.0.1:5000/>

Open a browser at <http://127.0.0.1:5000/>