Georgian

BDAT 1004 – Data Programming

W2021

BDAT 1004 Computer Studies

Final Project

A client has asked you to build a proof of concept "Web" application to demonstrate your abilities as a team/company. They are prepared to contract your team for several years however, they have many other bids to review. You need to show them why your team is right for the job

The Job

XYZ has asked to see a 15-minute presentation that incorporates the following:

- Produce a presentation using presentation software
    - Show the Project Summary
    - Talk about your team and skills
        - 1 Developers - develop the software front and back end
        - 1 Project Manager - manage the deliverable of the project, works with Business Analyst to build the documentation for proposal
        - 1 Business Analyst - build documentation for proposal
        - 1 Data Analyst - acquire data, build data models and database if needed
- Demonstrate your application using a URL that can be accessed outside of the classroom and your computer
    - Use a cloud server such as Microsoft Azure/GoCloud/Amazon AWS
- Allow time for questions from the class

Project Summary

XYZ Corporation is a multinational corporation. They sell to a wide range of industries and consumers. XYZ has several projects available for the biding process. The key points they would like to see in your presentation are:

1. Demonstrate the acquisition of a data source from a remote source (URL)
    - Use a data set that is meaningful and would demonstrate your understanding of the type of data XYZ would be interested in
    - Use Python to acquire data and store into a database
2. Store acquired data in a database
    - Use a cloud database you choose the type of database you feel is most appropriate (RDMS: SQL, PostgreSQL, mySQL or noSQL: MongoDB, Firebase, Cassandra, or something else you want to try)
    - Use Python to run a pseudo-batch process that runs every 24-hours to acquire data and store in this database

- Describe how your process functions

3. Display results on a Web Site
    - Use a web application framework like Flask or Django, server-side code will be python
    - Use JavaScript on the client side to display a dashboard visualization of the data using charts and graphs (for example using Google Charts)
    - Conduct a fit gap analysis

Bonus

1. Build an API that serves data from the live cloud database
    1. Get all items
    2. Get a range of items
    3. Get item by ID
    4. Class should be able to use a URL to access the API and test

Rubric

- Presentation (30 Marks)
- Knowledge of Task (10 Marks)
- Level of Effort (10 Marks)
- Complexity of Project (10 Marks)
- Coding Quality (5 Marks)
- Use of Python (10 Marks)
- Use of Google Charts or other JavaScript Chart Implementation (15 Marks)
- Use of live cloud server (5 Marks)
- Website Quality (5 Marks)
- Bonus (15 Marks)