

CO565
Web Services
Coursework 1

Web Service Project

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Summary

A	Research	2
1	Technology - Wider Context	3
2	Web Services Technology	4
3	REST as an alternative to Web Services	5
4	Examples of Web Services	6
B	Project Report	7
5	Project Proposal	8
A	Project Name	8
B	Overview of the Project	8
C	External Web Services	8
D	Data Exposed By The Service	8
E	Database Schema	9
F	User Interface Ideas	9
6	Engineering Approach	10
7	Project Management	11
8	Development	12
A	Requirements	12
B	Design	12
C	Implementation	12
D	Testing	12

Section A

Research

Technology - Wider Context

Web Services Technology

REST as an alternative to Web Services

Examples of Web Services

Section B

Project Report

Project Proposal

Project Name

The name for the project is CryptoStats

Overview of the Project

The aim of the project is to provide users with relevant information regarding cryptocurrency exchanges. By analysing the data provided by the external API on the values of the cryptocurrencies, the service will provide the user with information about the patterns in the value of the cryptocurrency and data such as the average number of days that the currency's value declines and increases in one go, if there is any resemblance in the fluctuation between the currency and other major currencies.

The goal with the project is to be able to provide users with enough information to help them make informed decisions when doing an exchange for a particular coin, and also gather information about what makes cryptocurrencies fluctuate in value. Rather than just showing the value of the coin, the service aims to provide way more valuable information by analysing the data in the currency's history, which allows the user to possess very important and essential information when trading coins.

The information processed will be presented to the users in two different ways: The first in a web site that will display the data in a user-friendly manner, built using ASP.NET Core 2 for the back-end and Angular and Bootstrap for the front-end. The second is by presenting the processed information to the user through a RESTful API with a JSON response, in order to facilitate the integration of the information with other applications or services.

For the submission of the project, I only intend to provide information for major coins such as Bitcoin, Ethereum, Monero and Ripple, since they are the most known and there is many information and exchanges that trade these coins.

External Web Services

In order to obtain information about the coins, I will be using the HitBTC exchange API.

Data Exposed By The Service

The service aims to expose the following data:

- Average fluctuation for the hour

- Average fluctuation for the day
- Average fluctuation for the week
- Average time when in growth
- Average time when in decline
- Difference between highest value and current value
- Resemblance with other cryptocurrencies

Database Schema

User Interface Ideas

Engineering Approach

Project Management

Development

Requirements

Design

Implementation

Testing