Assignment 5

Due Date: April 11, 2023 at 7:00 PM

Overview

This assignment will be worth **8%** of your total grade. You cannot use the HTTP module, only Express. If the HTTP module is used instead of Express you will receive a 0. If you use the ES6 import statement **instead** of the CommonJS require for node modules taught during lecture, you will lose 10%.

Specifications

Rich Barton, the CEO of Zillow, needs your help developing a simple API to determine the Zestimates of houses as well as fetching housing data easily.
For this assignment, you will write an API Server that listens on the **port provided by the first argument to your program** to provide details about a home.

JSON API Server

Write a server called zillow.js that serves JSON data when it receives a GET request to the path '/v1/zillow/zestimate'. Expect the request to contain a query string with a keys 'sqft', 'bed', and 'bath' all of which will be **required** integers. The Zestimate is calculated as follows: Zestimate == sqft * bed * bath * 10 and you should return to the use JSON in the following format: {zestimate: Number }
For example: /v1/zillow/zestimate?sqft=2000&bed=3&bath=4
The JSON response should contain only the 'zestimate' property:
For example: {"zestimate": 240000}

Add a second endpoint at the path '/v1/zillow/houses' that accepts an **optional** parameter 'city'. If city is provided as a parameter, the return all houses that match the given city. If no city parameter is provided, then return an empty array []. If a city is provided and the city is not found, return an empty array []
You will not connect to a real database, but to simulate one, use this array of objects:
   [{ price: 240000, city: "baltimore" }, { price: 300000, city: "austin" }, { price: 400000, city: "austin" }, { price: 1000000, city: "seattle"}, { price:

325000, city: "baltimore" }, { price: 550000, city: "seattle" }, { price: 250000, city: "boston" }]

For example: /v1/zillow/houses?city=baltimore
The JSON response should contain only the the list of houses in baltimore.
For example: [{ price: 240000, city: "baltimore" }, { price: 325000, city: "baltimore" }]

For example: /v1/zillow/houses?city=raleigh
The JSON response should contain: []

For example: /v1/zillow/houses
The JSON response should contain: []

Add a third endpoint at the path '/v1/zillow/prices' that accepts a **required** parameter 'usd'. This will return all houses equal to or under a given price. If no houses are under the given price, return an empty array: []
For example: /v1/zillow/prices?usd=30000
The JSON response should contain: [{ price: 240000, city: "baltimore" }, { price: 250000, city: "boston" }]

For example: /v1/zillow/prices?usd=10000
The JSON response should contain: []

Please return a 200 status code if the request is correct and a 404 if the request is not correct (invalid endpoint, arguments, etc.)

Submission

Please submit the following on Blackboard:

- zillow.js