**﻿Technical Task - Python**

We are building WIFI reputation tracking system.

This system will aggregate connected clients report on the security and bandwidth of the network.

Later, the analyzed data can be served as suggestion, of various network statuses, in client’s area.

Your task is to build backend RESTful API for network reporting and fetching.

The Code should be easy to understand (even without comments).

The submission should include the source code and execution instructions

1. Consider following contract:

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a. Wifi Network

{ "id" : "123456",

"auth": <can be either 'wpa' or 'public'>,

"avg\_throughput": <a float of average bandwidth in mbit/sec >

"devices":[{"id":"a1b2"},{"id":"c3d4"}]

}

b. API

i. fetch network by id

Request: GET http://my-service/api/network?id=123456

Response: JSON of wifi network

ii. connect device to network (if no such network exists, create new one)

Request: PUT http://my-service/api/network/connect

{ "device\_id": "a1b2",

"network\_id": "123456",

"auth" : "wpa"

}

curl -d '{"device\_id": "a1b2", "network\_id": "123456", "auth" : "wpa"}' -H "Content-Type: application/json" -X PUT http://localhost:8080/api/network/connect

iii. report network throughput

Request:

POST http://my-service/api/network/report

{

"device\_id": "a1b2",

"network\_id": "123456",

"throughput" : 500

}

Response:

ok/error

2. BONUS:

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build simple UI for model updating

3. Implementation Guidelines:

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a. You can choose any framework and tool that are appropriate for the task

b. Assume network and devices are mapped ONE-TO-MANY

c. Each device report affects the avg\_throuput of connected network

d. Assume throughput=0 upon connection to network

curl -d '{device\_id: "ad1",network\_id: "nnn",auth: "wpa"}' -H "Content-Type: application/json" -X PUT http://localhost:8080/api/network/connect

curl -d "{\"device\_id\": \"a1b2\", \"network\_id\": \"123456\", \"auth\" : \"wpa\"}" -H "Content-Type: application/json" -X PUT http://localhost:8080/api/network/connect

curl -v -X PUT localhost:8080/books/4 -H "Content-type:application/json" -d "{\"name\":\"Spring Forever\",\"author\":\"pivotal\",\"price\":\"9.99\"}"

curl -v -X PUT localhost:8080/api/network/connect -H "Content-type:application/json" -d "{\"device\_id\": \"a1b2\", \"network\_id\": \"123456\", \"auth\" : \"wpa\"}"

curl -v -X PUT localhost:8080/api/network/connect -H "Content-type:application/json" -d "{\"device\_id\": \"a1b2\", \"network\_id\": \"n2\", \"auth\" : \"wp2a\"}"

curl -v -X PUT localhost:8080/api/network/connect -H "Content-type:application/json" -d "{\"device\_id\": \"a1b2\", \"network\_id\": \"n2\", \"auth\" : \"wp2a\"}"

curl -v -X PUT localhost:8080/api/network/connect -H "Content-type:application/json" -d "{\"device\_id\": \"a1b2\", \"network\_id\": \"n3\", \"auth\" : \"wpa\"}"