Chapter II

Introduction

Cisco is the worldwide leader in IT and networking. Cisco helps companies of all sizes and people to connect, communicate, and collaborate. Many companies have provided public APIs as a means for others to access their infrastructure. During the realization of this project, you can practice with API and make your own app or program. You must develop solutions that will use real-time intelligence gathered from the UNIT Factory Wi-Fi network to enable people and their devices to interact more effectively through real-time contextual information related to such parameters as locations, availability of users, or mobile device assets.

In this project, you need to use the Mobility Services Engine (MSE) APIs to enhance and personalize your applications by leveraging the capabilities of the different components of the Cisco Connected Mobile Experiences (CMX) solution. Business uses CMX and MSE to send targeted messages, this technology increases customers satisfaction and sales by offering new revenue models through notification messages and promotional campaigns focused on people passing by. Also, CMX can help to build heatmap, collect statistics about your visitors.

Chapter III

Goals

This project aims to make you familiar with:

- Network/ Mobility/ Wireless Programmability
- Product mindset
- Creating useful program or app
- Cisco RESTful API

Chapter IV

General instructions

- This project will be evaluated only by humans
- This project must use the Cisco Mobility Services Engine REST API version 10.3
- The app/program must detect your own device (mobile phone, computer, tablet) that can be connected to the UNIT Factory WI-FI network

You can also register on Cisco DevNet site developer.cisco.com and try to find some useful information

Chapter V

The project

V.1 Mandatory part

Imagine that you must create a special software for clients who use the Cisco Mobility Services solution. Your client wants to know more about customers, for example, how many of them returned, how much time they spend in some zones, floors or buildings. Your potential client can be an owner of a conference hall, clothing store, business center, shopping mall.

Here's what you must do:

- Turn-key vertical-focused application, program or web service
- User-friendly interface
- Your program or app must display and visualize next information:

    1. How many devices connected to the wi-fi network;
    2. Floor map with designated location searching by the WiFi MAC address and xlogin, if available;
    3. Analytics (number of repeat visitors over all available ranges);
    4. Presence (Sum of Connected Visitor, dwell time);
    5. Forecasting number of visitors;
    6. Construct correlations between session duration and the day of the week; number of connections and the day of the week; and some other correlations at your choice;
    7. Floor congestion

- You need to encode requests. You must handle errors (btw, you need to do the error-handling of your code all the time) and write it in some files or tables

- Program or app must work in all 3 clusters and be detected in each floor (zone) you are located

- Display a message when you find some devices. Your program should adapt messages depending on where you (connected devices) are.
  For example: "Hi, @xlogin or mac: 00:00:2a:01:00:06 now is on the first floor."

You can use programming languages, frameworks and libraries that you need. It will be better for you if you write this project using object-oriented modeling.

Don't hardcode data and information, for example, floor images, siteID etc. You program/app must take all actual information from RESTful API

Need new ideas? Visit this site https://cmxlocationsandbox.cisco.com/ **login/password learning/learning**

V.2 Bonus

- Write Spark bot that can catch you now and display current location on the floor map

Enter your xlogin as a Bot Username

Have some question or found some bugs, go to
https://web.ciscospark.com/ and then enter your email here
https://eurl.io/#BkOcM9LGf to join "Cisco Spark Edu helper"