SUPINFO Academic Dept.

SUPINFO International University

INSTITUTE OF INFORMATION TECHNOLOGY

3APL – Swift and Cocoa development Project

Document content

Subject
Delivery

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SOMMAIRE

1 CONTEXT

SupTracking is a stolen cars GPS tracking system company that needs your help to develop its
Because it needs to be powerful and scalable you naturally choose to use Java Android.
This tracking system works as follows :
A GPS box tracks the car, detects its position and indicates if it's moving.
When the car's owner is away from his moving car, the alarm is activated.
The position of the owner is signaled to the tracking service by an app on his smartphone.
This application will be developed by your team.
When the car is moving, the alarm is activated if the position of the owner is unknown or not updated since an hour when the car is moving.
It is also possible to define areas in which the alarm is disabled between some time slots.
For example, the parking lot of the workplace or when arriving at home.
The box in the car is just a GPS tracker.
The alarm is send by our service at the phone of the owner by a subsystem.
This subsystem will handle to trigger the alarm by comparing current cars positions and users positions. This part is made by another team.

This project must be done by groups, each containing 3 or 4 students maximum.
Working in a bigger group will be sanctioned by penalties points.

2 SPECIFICATIONS

The first version of the website will be composed of several functionalities listed below:

- Login:
  - Login an user
  - Logout

- Location:
  - Can update the smartphone location
  - Can get the car location

2.1 LOGIN

To access SUPTracking services, it's necessary to connect a user.
A user is defined by a username, a password, a phone number, last name, first name, postal address and email.
To authenticate a user, use the username and password.
It's necessary to have a login activity on the application at starting if the application doesn't know the username and password of the user.
When authentication is successful, the API of services returns the user in a JSON object.

2.2 SEND GPS POSITION

Your application starts a service to send the smartphone GPS position every minute.
If no Internet connection is available, the service can't send the position. So, your service shoulds not attempt to make HTTP Request.

2.3 GET CAR POSITION

If the user wants, he can see the car position on an activity dedicated to this.
To retrieve the position of the car you must use the "getCarPosition" function from the API.
The map must be centered on the car position.

2.4 API

An online version of the API is available at http://supinfo.steve-colinet.fr/suptracking/
It is possible to download the API to have it on your own server.
A user exists to test the functionality of your application.
Username "admin" password "admin"
This API works by HTTP POST.
Three methods are available:

To check an user use the “login” action:

Parameters:

- action=login
- login= “an username”
- password= “the password”

If successful, returns a json of the user and a state "success" as "true".
If failure, returns a state "success" as "false" in a JSON object.

To update smartphone GPS postition use the “updatePosition” action:

Parameters:

- action= updatePosition
- login= “an username”
- password= “a password”
- latitude= “a latitude”
- longitude= “a longitude”

If successful, returns a state "success" as "true" in a JSON object.
If failure, returns a state "success" as "false" in a JSON object.

To send a contacts backup use the “getCarPosition” action:

Parameters:

- action=getCarPosition
- login= “an username”
- password= “a password”

If successful, returns a state "success" as "true" and the car position in a JSON object.
If failure, returns a state "success" as "false" in a JSON object.

You can find examples on http://supinfo.steve-colinet.fr/suptracking/

2.5 ABOUT ACTIVITY

This activity shows a resume of this mobile application and presents your team.

2.6 LOG OUT

This functionality must log the user out and returns the user to the login activity.

3 INSTRUCTIONS

- Plagiarism is forbidden.
- Make accessible his code on a public sharing platform (as GitHub) before the end of the evaluation is forbidden.

Don't abiding by these rules will result in suspension of your assessment and will be considered cheating.

4 NOTATION

Functionalities	Points
Login	4
Log out	2
About Activity	3
Display car position	4
Send GPS position	4
Code Quality & Conventions	3
TOTAL	**20/20**

5 RETURN

Return your graded exercise as a ZIP.
Not following this convention will result in point loss.

You will send the archive **before the end of your evaluation**. After that delay, your graded exercise **will not be corrected and the mark 0 will be assigned to you**.