

## 4JVA - Enterprise Programming Project

Document content

---

Subject  
Delivery

Version 1.0  
Last update: 22/11/2015  
Use: Students/Staff  
Author: SAD

**Conditions d'utilisations :** SUPINFO International University vous permet de partager ce document. Vous êtes libre de :

- Partager — reproduire, distribuer et communiquer ce document
- Remix — modifier ce document

**A condition de respecter les règles suivantes :**

Indication obligatoire de la paternité — Vous devez obligatoirement préciser l'origine « SUPINFO » du document au début de celui-ci de la même manière qu'indiqué par SUPINFO International University – Notamment en laissant obligatoirement la première et la dernière page du document, mais pas d'une manière qui suggérerait que SUPINFO International University vous soutiennent ou approuvent votre utilisation du document, surtout si vous le modifiez. Dans ce dernier cas, il vous faudra obligatoirement supprimer le texte « SUPINFO Official Document » en tête de page et préciser notamment la page indiquant votre identité et les modifications principales apportées.

En dehors de ces dispositions, aucune autre modification de la première et de la dernière page du document n'est autorisée.

**NOTE IMPORTANTE :** Ce document est mis à disposition selon le contrat CC-BY-NC-SA Creative Commons disponible en ligne <http://creativecommons.org/licenses> ou par courrier postal à Creative Commons, 171 Second Street, Suite 300, San Francisco, California 94105, USA modifié en ce sens que la première et la dernière page du document ne peuvent être supprimées en cas de reproduction, distribution, communication ou modification. Vous pouvez donc reproduire, remixer, arranger et adapter ce document à des fins non commerciales tant que vous respectez les règles de paternité et que les nouveaux documents sont protégés selon des termes identiques. Les autorisations au-delà du champ de cette licence peuvent être obtenues à [support@supinfo.com](mailto:support@supinfo.com).

© SUPINFO International University – EDUCINVEST - Rue Ducale, 29 - 1000 Brussels Belgium . [www.supinfo.com](http://www.supinfo.com)

# SOMMAIRE

<b>1</b>	<b>CONTEXT .....</b>	<b>4</b>
<b>2</b>	<b>SPECIFICATIONS.....</b>	<b>4</b>
2.1	<i>DATA STRUCTURE .....</i>	<i>5</i>
2.2	<i>INDEX PAGE .....</i>	<i>5</i>
2.3	<i>REGISTER AND AUTHENTICATE.....</i>	<i>5</i>
2.4	<i>FOOT RACES HISTORY.....</i>	<i>6</i>
2.5	<i>VIEW AND EDIT HIS PROFILE .....</i>	<i>6</i>
2.6	<i>WEB SERVICE .....</i>	<i>6</i>
1.1	<i>LOG OUT .....</i>	<i>6</i>
<b>3</b>	<b>INSTRUCTIONS.....</b>	<b>7</b>
<b>4</b>	<b>NOTATION.....</b>	<b>7</b>
<b>5</b>	<b>RETURN.....</b>	<b>7</b>

## 1 CONTEXT

---

SUPINFO wants to create its fitness application and needs you to develop it. Because it needs to be powerful and scalable you naturally choose to use Java Enterprise Edition Technologies.

The goal is to create a robust web platform to view foot races and share them on social networks. For this exercise, just share by Facebook.

**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:

- As anonymous:
  - View a short description of this service and statistics in the index page
  - Register as a new user, authenticate himself
- As a registered user:
  - Show history
  - Share a foot race
  - View and edit his profile
  - Use web services to add/remove track
  - Log out

You have to use EJB 3.1 and Servlet/JSP implementing JSP Model 2 Architecture and JPA implementing good practices (DAO, Factories, Criteria and MetaModel API...).

### 2.1 DATA STRUCTURE

---

Before starting the project, draw an UML class diagram representing the JPA Entities you will need with their relationships.

This diagram will be useful for you and for the team that will develop the next version of the platform.

The class diagram must be returned in **jpeg, png or pdf** format (otherwise your Teacher will hate you!).

### 2.2 INDEX PAGE

---

For anonymous the index page must show a short description of this service and statistics of use (number of users, number of course races). You are free to add others statistics. A navigation area must be displayed on the top of all pages (login, register).

For authenticated users, the navigation area displays a logout link, a link to his profile and a link see the page of saved foot races.

This page displays the last saved foot race with a Google Map.

### 2.3 REGISTER AND AUTHENTICATE

---

When registering, users have to give some details about them, like username first name, last name, email address, a postal code and password.

Of course, you'll have to check user input.

When the user registers him, it must log him in too.

The user can authenticate by a dedicated log in page with username and password.

### 2.4 FOOT RACES HISTORY

---

An authenticated user can view old foot races and add new foot race by the web-service.

On the page of his races history, a user can view the detail of a foot race and share it on social network. A foot race is a list of GPS coordinates and speed informations. It's a Track object. A « Track » is composed by an id, a user, a longitude, a latitude, a speed information (km/h) and a date (format : YYYY-MM-DD HH:MM:SS).

Display the race with Google Map api.

To display a foot race you can group by date. One race by day.

The lastest foot race at top of the page.

### 2.5 VIEW AND EDIT HIS PROFILE

---

Users can view a profile page to change their details (except username).

### 2.6 WEB SERVICE

---

This application provides a web service (REST) to list older tracks order by date.

This web service can add or delete a track of a user account. A new track is an array of GPS tracks.

To use this api the user must send his username and password for each request.

All request are send by JSON object.

This Api returns JSON only.

### 1.1 LOG OUT

---

This functionality must log the user out.

### 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
Data Structure	2
Index (map, statistics, service description, navigation area)	3
Security (register, auth, log in/out, filters)	3
Share by Facebook	2
Display a course race on a map	3
Manage course race (add/remove)	3
Page history of tracks	3
View and edit profile	2
Course races are displayed by day on history page	4
Web service list foot races	2.5
Web service add a foot race	2.5
If EJB is not use	-10
Design	2
Code Quality & Conventions	3
<b>TOTAL</b>	<b>35/35</b>

### 5 RETURN

Return your graded exercise as a ZIP archive named as follows:

**4JVA\_SupFitness\_Campus\_IdBooster.zip.**

For example: 4JVA\_SupFitness\_Troyes\_10000.zip

Not following this convention will result in point loss.

You will send the archive **to your Teacher SUPINFO email address and a copy to 4JVA@supinfo.com** to secure your project. Send it **before the 4<sup>th</sup> March 2016 before 23:59**. After that delay, your graded exercise **will not be corrected and the mark 0 will be assigned to you.**