SUPINFO Academic Dept.

SUPINFO International University

INSTITUTE OF INFORMATION TECHNOLOGY

4JVA – Java EE - Enterprise Programming Project

Document content

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1 CONTEXT

SUPINFO wants to create its own SMS service and need you to develop it. Because it needs to be powerful and scalable you naturally choose to use Java Enterprise Edition Technologies. SUPINFO wants to create SupSMS to send SMS message from everywhere.

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 of use in the index page
  - View a offer page to sale 10$ by month for unlimited send and synchronize messages and contacts
  - Register as a new user, authenticate himself

- As a registered user:
  - Add/Delete/Update contacts
  - Send message to a contact
  - View a conversation with a contact
  - Delete a conversation with a contact
  - Web Service to synchronize sms and contacts
  - Views stats of exchanges sms with contacts
  - View and edit his profile
  - View and edit his invoices
  - Log out

- As an administrator:
  - Show and manage all users
  - Show all invoices

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...).

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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 sent sms).

A navigation area must be displayed on the top of all pages (login, register, offer page).
For authenticated users, the navigation area displays a logout link, a link to send a new message and a link to manage contacts.

This page, displays conversations history in a list sorted by date.
(the last received or sent at top).

Show a link for each item to show or delete the conversation with this contact.

2.3 CONVERSATION PAGE

From this page a registered user can see a conversation with a contact from the link of the index page.

2.4 REGISTER AND AUTHENTICATE

When registering, users have to give some details about them, like phone number, first name, last name, email address, credit card 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 his phone number and password.

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2.5 OFFER PAGE

For than our service works, it's necessary to communicate the offer.
For anonymous, a page showing the offer of 10$ by month for this service.

2.6 CONTACTS

A contact is defined by a phone number, last name, first name, postal address and email.
If a contact is deleted, his conversation is deleted.
It will be possible to manage contacts (add / update / delete).
A timestamp will be noted each update to facilitate the sync with web service.

2.7 SMS

An SMS is a text message with a phone number of a contact in the recipient and a user's phone number in the sender and an timestamp.
An user is obliged to have a phone number for sending SMS.

If a sms is received from an unknown number, the conversation page display just the phone number.
If a sms is received from a known number in contacts, the conversation page display the full name.

2.8 SEND SMS

The application must use JMS to send sms to the application of the sms provider.
The JMS is a text message in this format: SENDER\n\rMESSAGE\n\rRECIPIENT

The receipt by JMS and sending in the phone network is not your part.
The new sent sms is stored in the SupSMS application.

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2.9 WEB SERVICE

The SOAP web service can sync all contacts and sms from a smartphone to the application and from the application to the smartphone.

2.10 VIEW AND EDIT HIS PROFILE

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

2.11 LOG OUT

This functionality must log the user out.

2.12 ADMIN PANEL

In Admin panel, an admin can view and manage all users.
For the first version of our application, the admin can list and delete users if he want and see all invoices.

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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 page	5
Offer page	1
Conversation page	5
Security (register, auth, log in/out, filters)	3
Manage Contact	4
Send SMS	3
View and edit profile	2
Administration panel	4
Web Service	3
DAO, MetaModel & Criteria API	2
Web Design	2
Code Quality & Conventions	4
TOTAL	**40/40**

5 RETURN

Return your graded exercise as a ZIP archive named as follows:
4JVA_SupSMS_Campus_IdBooster.zip.
For example: 4JVA_SupSMS_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 19th December 2014 at midnight**. After that delay, your graded exercise **will not be corrected and the mark 0 will be assigned to you**.

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