COMP47660 - Secure Software Engineering 2021/2022

Assignment 1

The **HSE** provides public health and social care services to everyone living in Ireland To fight the COVID pandemic, HSE is providing an online reservation system for citizens aged 18 years and over who would like to receive their first COVID vaccination (1st or 2nd dose). The system will keep track of the doses received by each individual registered in the system. It will also show statistics about the profile of the individuals who received the vaccination, and provide a forum to ask questions about the vaccination campaign. Your team has recently been hired by HSE to work on the new reservation system that will be released on the **4th of March.**

The Web Application will include the following functionalities:

- Users can register to the Vaccination System: Users can register by providing their personal details (name, surname, date of birth, PPS Number, address, phone number, email address, nationality). Only users who are over 18 can register in the system correctly.
- Registered users can login and logout from the system.

- Registered users can book a vaccination appointment. After a user performs the login correctly s/he can choose a vaccination centre and select an available slot at each centre. After a slot is selected, it should no longer be available to other users. Note that a user can only book the 1st vaccination appointment if s/he has not received any vaccination. S/he can only book a second appointment if s/he has received the 1st dose. The second appointment should be booked at least 3 weeks after the 1st vaccination. Vaccinated users should not be allowed to book appointments. A user can book an appointment only if s/he does not have an appointment booked already.
- Registered users should be able to retrieve a record of their last activity, i.e. whether they have booked an appointment, received their first dose, whether they have an appointment for their second dose and whether they received their second dose).

- If the user has a pending appointment, s/he should be able to view the details of the appointment and also cancel the appointment.
- Any user should be able to visualize aggregated statistics about the vaccination campaign, such as vaccinated age groups, male VS female, nationalities.
- Any user should be able to ask questions in a public forum provided by the system.
- HSE staff who are in charge of administering the vaccination can update vaccination information about a user. After logging in successfully they can modify the record of a user in the following way:
    - If a user booked the first dose but s/he has not yet received it, they can indicate that the user received their first dose also including information about the type of vaccine received (Pfizer or Moderna). Afterwards the system should automatically book a second appointment for the user 21 days after the first dose.
    - If a user has an appointment to receive the second dose, the staff can administer the dose and update the system indicating that the user received their second dose also including information about the type of vaccine received (Pfizer or Moderna). Afterwards the system should automatically update information about the user indicating that s/he is fully vaccinated.
- HSE staff can answer the questions that the users ask in the forum.

Technical Requirements

Your web app should be implemented using Spring Boot (and the Java language). Unfortunately you won't have the flexibility to choose your favourite technology to implement the web app.

Your web application requires a database to include passengers and users' personal information, credit card details, credentials, reservations, flights and their availability. You can use MySQL as a database management system.

You are required to work on this assignment collaboratively in groups of 3. Your group should use a distributed version repository (Git) to submit the WebApp. Inside your repository you should provide a diary that documents the contribution of each team member to the project. Obviously, this contribution should be reflected by the commits visible in your repository.

	A	**B**	**C**	**D**	**E**
Functionality (70%)	Code runs in the web server and performs correctly all the	Code runs in the web server and performs correctly	Code runs in the web server but only performs half of the	Code runs on the web server but only performs	Code won't run and the project page won't display

	functionalities requested	most of the functionalities requested.	functionalities requested	few of the functionalities requested	
Persistency (20%)	Data persistence implemented correctly	Data persistence implemented correctly	Data persistence implemented correctly although database tables have some errors	Data persistence not implemented.	Data persistence not implemented.
Use of Git (5%)	Comments are consistent with the stated description of the group work and well laid out.		Some comments are present but not sufficient to identify the specific modifications performed in the code base.		No comments at all and code is badly structured.
Look and Feel (5%)	Facilitates navigability of the application	The graphical interface is easy to use although in some parts navigation is not very intuitive	The graphical interface is not very easy to use and in many parts navigation is not intuitive	The graphical interface is implemented but it is hard to use .	No graphical interface

I understand group work can be difficult. Thus, I will put in place the following measures to ensure that group work is effective:

- In your repository, you will be required to mention the amount (percentage) and type of work that each team member performed.
- For assignments 1 and 3 I will be able to backup the stated group members' contributions on the commits pushed in your Git repository.
- If you are experiencing serious problems while working on one of the assignments, you should contact me right away so I can decide whether I should evaluate your contribution individually and/or whether I should add you to another group.