COMP47660 - Secure Software Engineering

Assignment 1

University of Springfield is a respectable university in the USA.
To increase engagement of students in the School of Computer science the majority of the staff members have requested to build a web application that can be used by the students to enroll to modules, visualize their grades, and also visualize statistics to build a web application that can be used by students to search for information about modules.

Your team has been recently hired by the University to work on the new students management system that will be completed on **February 28th.**

The Student Management System should include the following functionalities:

- View School Statistics: allow students to visualize statistics about the school (e.g., percentage of male and female among students and staff); students nationalities.
- Students can register to the WebApp: Users can register by providing their personal details (name, surname, student ID, address, phone number, email address). The student will be able to create a username and a password that can be used during future logins.
- Students can login and logout from the WebApp.
- Students have to pay their fees for the current academic year in order to be able to enrol in a module.
- Students can visualize the modules they are currently enrolled in and their grades: After login is performed successfully, students should be able to view the modules they are enrolled in and their grades.
- View Available Modules: students should be able to look for modules provided by the school on a specific topic. When a module is visualized, it should be possible to see the module name, the module topics, the name of the module coordinator, and view module statistics (number of enrolled students, grades distributions for previous editions of the module).
- Students can enroll in a module: After a module is selected, the student can enrol in the module if there is still availability (number of registered students does not exceed a max number of students).
- Students can cancel their enrolment for modules that have not terminated.
- Students can cancel their registration.
- No registration functionality is required for staff. The assumption is that staff is already registered in the system and does not need to do so.
- Staff can modify module info. Staff are allowed to modify information about modules.
- Staff can input grades. Staff are allowed to input grades for students when a module terminates.

Clearly this application requires a database to include student information, staff, and module information.
You are required to work on this assignment collaboratively in groups of 2-3. Your group should use a distributed version repository (Git) to submit the WebApp.

Refer to:
https://www.birmingham.ac.uk/schools/metallurgy-materials/about/cases/group-work/tips.aspx
To ensure that your group works effectively.
Inside your repository you should provide a diary documenting who is the group leader, the roles and tasks assigned to the group members, including deadlines.

	A	B	C	D	E
Functionality (75%)	Code performs correctly all the functionalities requested	Code performs correctly most of the functionalities requested	Code only performs half of the functionalities requested	Code only performs few of the functionalities requested	Code won't run and project page won't display
Persistence (10%)	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.
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

An extra 10% will be assigned if you use an external library to visualize school statistics (e.g., https://d3js.org/).