SE3040 -Application Frameworks Project

Software Engineering - Year - 3 Semester 1, 2017

Digital Health Solution for Sri Lankan Hospitals

As part of your SE3040 - Application Framework Group Project you will develop a module for the Health Sector in Sri Lanka. Your module should be practically usable in a Government or Private Hospital in Sri Lanka as a stand-alone module. You can also explore how it can coexist with other modules.

The SLIIT Faculty of Computing has been working on Digital Health Project called Digital Pulz. The details of this project can be found at http://his.sliit.lk/. The technology stack used in this project is MYSQL, Hibernet, JSON based Java Web Services and the front end is developed using PHP CodeIgniter Framework. The OPD, Pharmacy and the Laboratory modules are available as an Open Source Project.

Please visit http://his.sliit.lk/ to find the requirements of the OPD, Pharmacy, Laboratory and other modules which are part of the Digital Health Suit of modules. For your project you should select any one of the modules listed here. You also have the freedom of selecting a module which is not listed, kindly see the section of doing your own project.

You can use the details found at http://his.sliit.lk/ to identify the requirements of your selected module, get details of data that needs to be captured, expected user interfaces and reports. There is a hosted demo and in addition you can download the open source version and try it out as well.

You need to use the following technology stack as part of your solution. Marks will be allocated for the appropriate use of each of the technologies.

1. HTML/Java Script front end
2. Angular JS
3. Node JS
4. Express JS
5. Spring Framework
6. Aspect Oriented Programming
7. JSON base Web Services
8. Java Persistent Layer
9. Suitable Database of your choice (either relational or NoSQL)

Your backend should be an API running JSON based web services. The front-end application that you are developing should communicate with the back end only using these web services.

Plagiarism and use of existing code

1. You can use the existing code from the http://his.sliit.lk/ open source repository to be part of your project, however you cannot use code that has been modified by someone else as part of your solution.
2. Your solution cannot use Hibernet and PhP.
3. You can use any additional Javascript framework which is not listed above, but it should be acknowledged.
4. You cannot use any other codebase which is either public or private,
5. The codebase which is presented as part of your project should be written only by members of your group.

Doing a different Digitial Health Module

1. You can propose to do a different module as part of your project if it is a requirement that can be implemented in an actual hospital in Sri Lanka. You can submit a printed project proposal containing details of the requirements. The scope should be similar to one of the listed modules at http://his.sliit.lk/. The technology stack of your solution should meet the requirements given above.

Doing a completely different Project

1. Your team can also propose a completely different project. A business type project which has actual requirements from a real client can be considered as a project. It should use JSON based web services to connect the front end to the back end. The scope should be similar to one of the listed modules at http://his.sliit.lk/. The technology stack of your solution should meet the requirements given above. You can submit a printed project proposal containing details of the requirements.

2. You are encouraged to submit proposals that meet requirements for a google summer of code project https://developers.google.com/open-source/gsoc/ or other competitions that uses javascript frameworks. The scope should be similar to one of the listed modules at http://his.sliit.lk/. . The technology stack of your solution should meet the requirements given above. You can submit a printed project proposal containing details of the requirements.

Requirements of Project Implementation

1. You are required to maintain GitHub code repository for your project. You should properly commit code at an individual level right throughout the project life cycle.
2. You should show evidence of testing your application by including test cases
3. A user guide should be provided
4. A technical report describing your project should be provided
5. Your individual blog can be used to describe your experience doing the project and a critical reflection on what you have done.
6. Deploy the project to AWS before the final presentation. Your final demo should be run from AWS. Details of how to create individual AWS accounts and using AWS will be provided later.

Submission Deadlines

Project Charter (Google Form) – Deadline 10th March 2017

Project Proposal Submission – 17th March 2017

Progress Review Report - 12th May 2017

Final Presentation – Two weeks after Final Examination is over

Final Report Submission – During Final Presentation