

**Undergraduate Final Year Project Report**

**PROJECT REPORT**

**Development of eTutoring web-based secure role-based system for Greenwich University**

**Group 3**

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**Bachelor of Science with Honours in Computing**

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# **Introduction**

Greenwich University wants to develop a web-based, role-based eTutoring system to aid students in learning more effectively. After some discussions internally, they want to implement Scrum with Agile concepts in this project and choose us to be the scrum team that will handle this project.

We are a small group of students tasked with building the system for Greenwich University. In our scrum team, we have:

**Long** – the ScrumMaster. He works with documents and finalize the report.

**Khoa** – works together with the ScrumMaster and the team to handle documents.

**Duc** – the database designer. He can design the database and connect it with the front-end.

**Duy** – the programmer and tester who works together with Duc to handle the back-end. He has some professional experience in working as a professional software developer.

**Nguyen** – the web designer who handles the front-end. He has some professional experience in working as a professional software developer.

In this project, we will develop the system using PHP and MySQL for the back-end. Both of them are free and open-source technologies that will significantly reduce the development cost compare to using something like Microsoft SQL with its expensive pricing. For the front-end, we use the common HTML, CSS and JavaScript. All of which are popular technologies with tons of supports from their communities. And we decided to use Lavarel so that when the system develops further and further, the framework can handle the ever-growing system.

In this system, there will be three types of users: Students, Tutors, and Staffs. **The Students** can use the system for meetings with their tutors, upload their documents and commenting on them, blogging, and have their own personal dashboard that summarize their interactions.

**The Tutors** will also be able to use the system for meetings with their students, uploading documents and commenting on them and blogging. The interesting thing is that they will have a dashboard of their personal students. It can be sorted and filtered the way they want.

**The Staffs** have the highest authorities. They can allocate and reallocate personal tutors to students and both the students and tutors will receive notification emails when this happens. The allocation can be done in bulk of ten at a time. Certain authorized staffs can gain access to dashboards of other staff as well as individual dashboards for students.

# **1.1. Project aim & objectives**

With this project, we want to learn how to develop an eTutoring system as a team using Scrum with Agile concepts in 6 months.

In order to achieve our aim, we will define the objectives and describe them in details below.

1.1.1. Analyze the system

We start with defining the requirements and functions of the system based on the specification given to us. By defining them, we understand how the system works and decide on the appropriate approach for this project. The requirements of the system as well as technologies and methodologies chosen by us will affect our plans for the project. This shouldn’t take more than two weeks.

The deliverables for this objective would be the backlog.

1.1.2. Design the system

After analyzing the system and planning out the project, we start designing the system. By designing the system, we can code according to our design. This can take from two to four weeks.

The deliverables for this objective would be wireframes for the front-end, ERDs and Activity Diagrams for back-end.

1.1.3. Implementation

After making the design, we will start coding accordingly to create a functional system with working functions. The system will be finished before the deadline arrives.

The deliverables for this objective would be the source code and screencast to show the system in action.

1.1.4. Testing the system

It is important to test the system that we develop to ensure that they are working as intended. With every sprint, we will test the functions that we are developing.

The deliverables for this objective would be a test plan, a test description, and a test report.

# **1.2. Legal, Social, Ethical and Professional**

# **1.3. Planning**

Backlog

# **1.4. Project evaluation**

Not available yet with the current information

# **2. Database**

**3. Functionality**

**4. Testing**

**Test-case Admin**

|  |  |
| --- | --- |
| Login |  |
| Logout |  |

|  |  |
| --- | --- |
|  |  |
|  |  |

Admin có chức năng regist, add class, chat.

Admin có quyền regist cho các role khác như staff, teacher, student.

Regist chỉ xuất hiện ở role admin.

Chức năng user management(create,edit,delete) Staff, teacher có quyền thấy add class và chat Student chỉ thấy được chat.

Muốn sử dụng chat thì staff hoặc teacher phải add user vào class thì phần khung chat ở teacher và student mới hiện lên để chat.

Chức năng add class(create, edit, delete) Chức năng add user vào class có thể add multiple user cùng 1 lúc

**5. Agile Method**

**6. Links**

# **TABLE OF FIGURES**

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