ITRW 324

Group 18

Phase 1



Mr P Rossow

15 August 2017

***Web services Technical : Phase 1***

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ITRW 324

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# Introduction

Edward Teller said: “The science of today is the technology of tomorrow”. This quote gives a general idea of what we have tried to achieve in this project as well as moving forward. The general idea is to provide a clean system for a functioning laboratory, in our case one that develops vaccines for farm animals. This system can be implemented to remove some of the physical, time-wasting work such as filling in forms and trivial daily distractions.

The purpose of this report is to provide an overview of our solution that we have developed.

The problem: Doing part time work at a mid-sized laboratory during the vacations, we spotted a problem in their business operation. We noticed some needed but trivial activities and tasks that takes up plenty of time. These activities included checking the storage for stock, doing calculations and filling in relentless forms. We immediately knew something could be done to improve work flow and reduce time wasting during the day. As third year IT students we saw an opportunity for a small business system.

The solution: We created a web application that could display and receive information on the storage units supplies. This provides a manageable inventory system that can be monitored at any given time.

We also aim to insert a paging function so trivial questions can be answered and replied immediately.

# Equipment

* Our system includes php, html and css files. Most of the developers use Notepad++ or Atom for the programming. These can be downloaded free from their websites.
* For the database we use MySQL via XAMPP as well as Apache for the web service.
* One of the system requirements for this project is to host our database and websites on separate VMs. To achieve this we use VMware workstation player, also free and downloadable on their website.
* Most of the development happens on each of the developers individually owned laptops.
* To host the project we have used GitHub to create a repository and GitKraken as our git user interface. We have found it more efficient for our group than all its rivals.

# Problems encountered

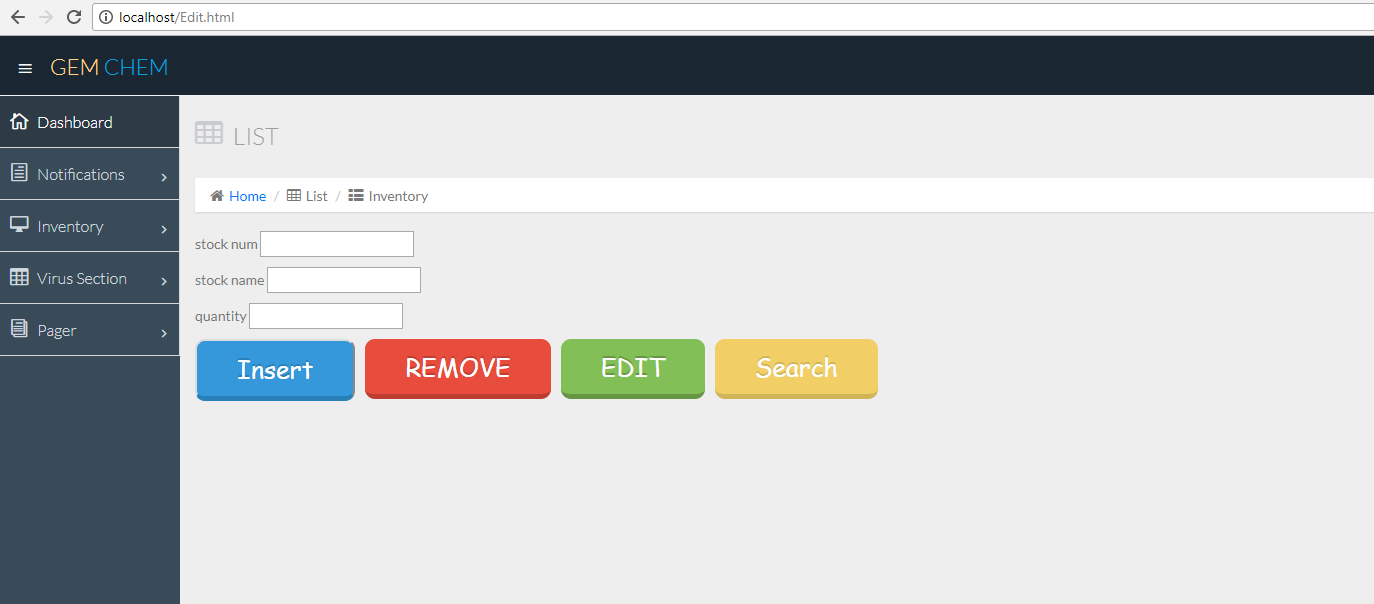
During the course of this project we had many struggles and thorns in our sides, some of these we could overcome and some we aim to overcome in the next phase of this project. Here are some of the issues we faced and how we approached it.

|  |  |  |
| --- | --- | --- |
| Problem type | Problem | Our approach |
| Planning | Due to many different schedules and responsibilities, one of the main issues in our group was on getting together and regrouping. This was one of our great struggles because we have many different daily schedules. | To overcome this problem we tried to communicate(via slack, watsapp, email and skype) and set meetings for times that could fit everyones schedule, this wasn’t always possible and we aim to improve in the phases to come |
| Development | Another major struggle we faced was the fact that none of us really had experience in any form of web based programming. | We overcame this by doing plenty of research including websites such as youtube, w3schools, stack overflow etc.  Although we hope to still improve our programming skills during the phases to come. |
| Development | We faced some issues when trying to combine our separate work, each person had an idea of what they wanted to do with their part of the project but we struggled to bring it together as a unit. | This is one of the issues we wish to resolve and prevent in phase 2. We aim to do this by planning more thoroughly and we now have a better understanding of the Git system and hope to use it to improve our project sharing abilities. |

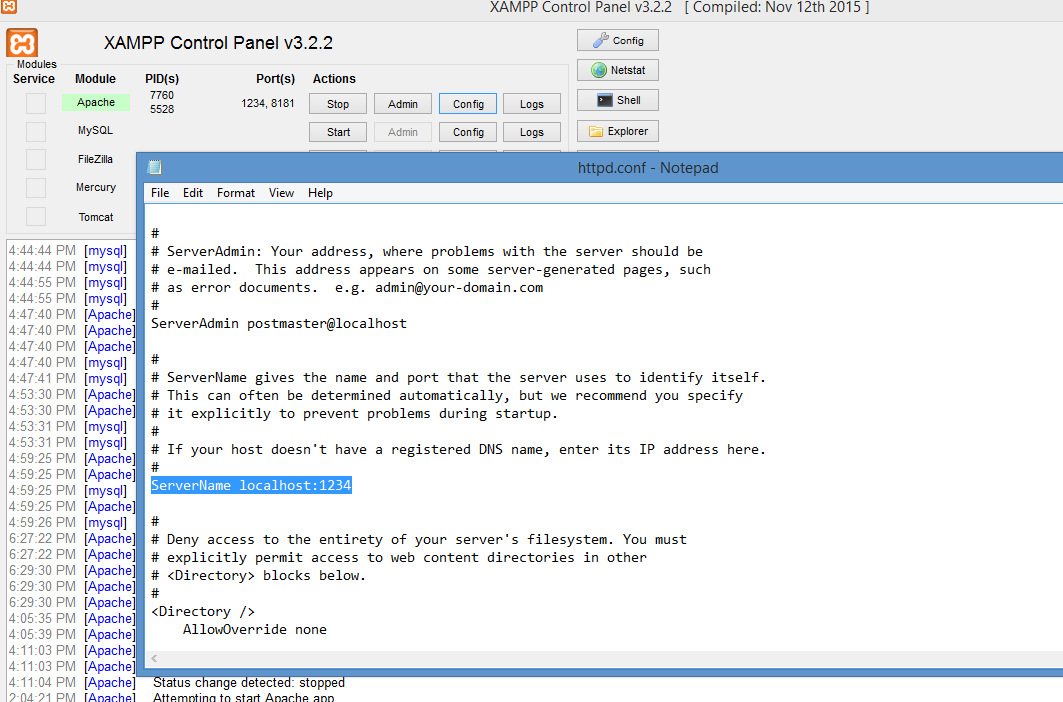
***We are truly enthusiastic to improve on the mistakes we made in phase 1 and to keep learning throughout the project.***

# Some examples of our system

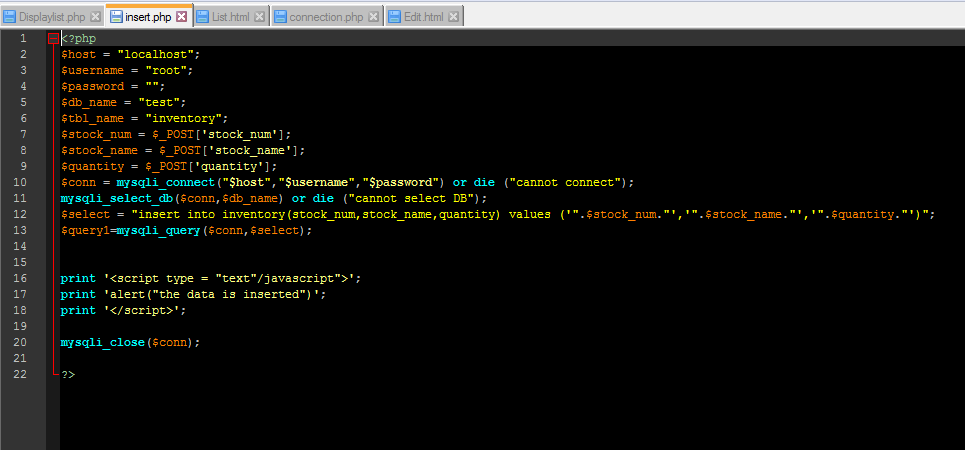
This is one of the types of layouts we tried for inserting inventory, removing inventory and searching for a specific item, we have changed our layout in our latest version.



Xampp



An example of our connection.php page and how we use php to connect to the database.



What’s next? Our next phase we aim to implement our system on a mobile device and allowing users to connect remotely. We aim to build on the system we currently have so that it becomes a fully functional web- and mobile based application. We are excited to keep learning from past mistakes and hope to improve on all the mistakes we made in our first phase.

# Workflow:

|  |  |
| --- | --- |
| Member | Explanation of responsibilities and duties |
| Jean | Group management, overall assistance in any programming issues the team may experience as well as any help to all files, software and work related issues. Also responsible for paperwork and other project related issues. |
| Stefan | Website layout using html and connecting the website to the DB (PHP). |
| Ruan | Website layout, html and JavaScript |
| Ruan | Creation of the two VM’s and connecting the website to the DB (PHP) |
| Charl | Secure PHP login system, Website(HTML) |
| Tiaan | Secure PHP login system |
| Henko | Connecting database to website, Display DB on website, Creating test DB |

# Conclusion

In conclusion, we had lots of interesting and difficult times during the course of first phase. We had a lot of fun, failed a lot, learned a lot and got frustrated a lot. But we remain excited to continue with our project to finally bring together a project we are proud to put our names on.

There were plenty of technical issues we encountered and crossed some bridges as a team. We hope to keep building our programming skills, team skills and work skills going forward.