# Final Report

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# PROJECT MANAGEMENT

# Manage – Education – PUF School

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# A. Requirements

**The requirement of software was implement based on PHP and AngularJS**

- ☞ The website have good design and using easily
- ☞ Setting up website easily on general hosting
- ☞ Administrator can manage some thing such as: class, teacher, subject, student, …
- ☞ The student account will be provided by administrator
- ☞ The website have some notification for each action to notice for users.
- ☞ The students cannot update profile information, they just update the picture profile after sign-in successful.
- ☞ The students can change password.
- ☞ The students can view own score for each subject

# B. Planning and Organization

**Detail he planning you have followed. Indicate explicitly how the group was organized, the main tasks using a Gantt chart, the planning of the iterations, the responsibility of each team member…**

## I. Inception

As the process of understanding the project. What are the main feature of project? How to use XP to develop this project? Planning for the development of software corresponding to the selected processing. Define user requirements.

Work in this phase include:

- Discuss the goal of project
- Send all member the project plan
- List requirement

## II. Elaboration

As the design and construction of the scheme, the processor class, interface of website, database for backend, and unit test for each model

**Work in this phase include:**

- Design project for web with MVC using Slim Framework
- Interface design (mock-up)
- Design database
- Unit test for each model (each function query)
- Upload it on Github to share and management code each commitment

## III. Construction

This processing forced on building, testing and finishing product.

**Work in this phase include:**

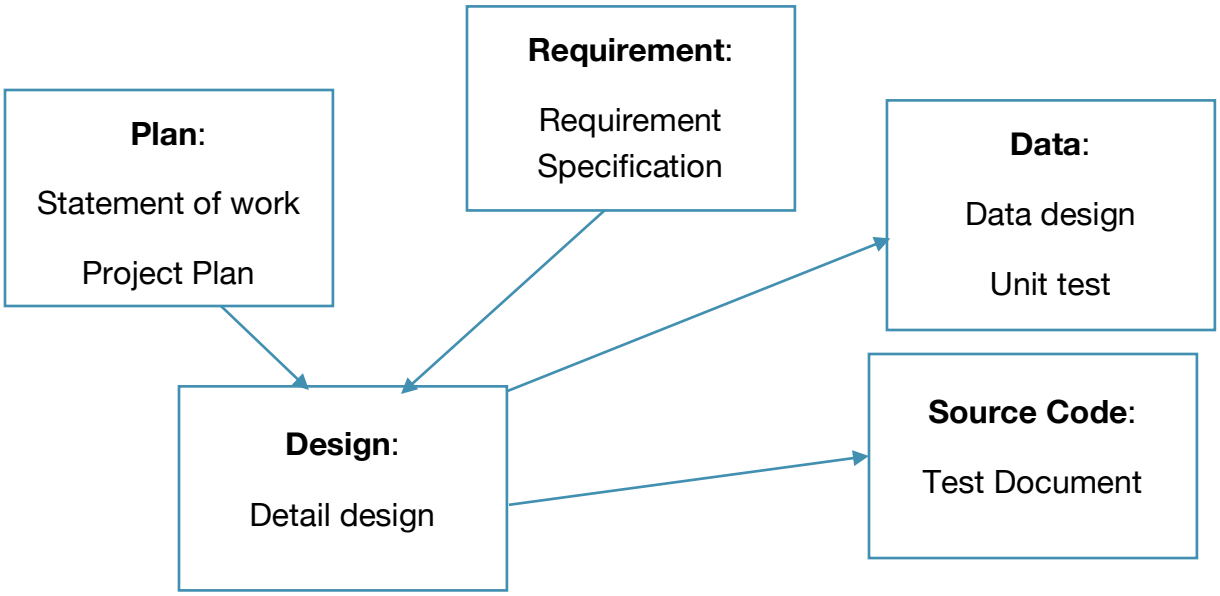
- Fix all bug for project
- Test all feature on website

## IV. Transition

Delivery of product to customers, then maintain and fix bug.

**Work product in this phase include:**

- Setting up the website on hosting
- Writing the manual of product



# V. Gantt chart

| | TASK NAME | DURASTIC | START | FINISH | RESOURCE NAME | COACH | TRACKER |
|---|---|---|---|---|---|---|---|
| **1** | **Manage – Education – PUF School** | 60 Days | **Wednesday, January 14, 2015** | **Sunday, March 15, 2015** | | | |
| **2** | **Planning** | **7 Days** | **Wednesday, January 14, 2015** | **Wednesday, January 21, 2015** | | | |
| 3 | Define | 2 Days | Wednesday, January 14, 2015 | Friday, January 16, 2015 | Thang, Dung , Hau , Duy | | |
| 4 | Create requirement | 3 Days | Friday, January 16, 2015 | Monday, January 19, 2015 | Thang, Dung , Hau , Duy | | |
| 5 | Create planning | 2 Days | Monday, January 19, 2015 | Wednesday, January 21, 2015 | Thang, Dung , Hau , Duy | | |
| **6** | **Designing** | **7 Days** | **Thursday, January 22, 2015** | **Thursday, January 29, 2015** | | | |
| 7 | List function for web | 3 Days | Friday, January 23, 2015 | Monday, January 26, 2015 | Thang, Dung , Hau , Duy | | |
| 8 | Interface graphic | 2 Days | Monday, January 26, 2015 | Wednesday, January 28, 2015 | Hau , Duy | | |
| 9 | Database | 1 Days | Wednesday, January 28, 2015 | Thursday, January 29, 2015 | Thang | | |
| **10** | **Coding** | **29 Days** | **Friday, January 30, 2015** | **Saturday, February 28, 2015** | | | |
| 11 | **Unit Test** | 10 Days | Friday, January 30, 2015 | Monday, February 09, 2015 | | | |
| 12 | Database conection | 3 Days | Friday, January 30, 2015 | Monday, February 02, 2015 | Thang | Thang | Dung |
| 13 | Database query | 3 Days | Monday, February 02, 2015 | Thursday, February 05, 2015 | Thang | Dung | Thang |
| 14 | Implement object | 2 Days | Thursday, February 05, 2015 | Saturday, February 07, 2015 | Thang | Thang | Hau |
| 15 | Implement main function | 2 Days | Saturday, February 07, 2015 | Monday, February 09, 2015 | Thang | Duy | Thang |
| 16 | **Implement code** | 10 Days | **Tuesday, February 10, 2015** | **Friday, February 20, 2015** | | | |
| 17 | Database conection | 1 Days | Tuesday, February 10, 2015 | Wednesday, February 11, 2015 | Thang | Thang | Hau |
| 18 | Database query | 1 Days | Wednesday, February 11, 2015 | Thursday, February 12, 2015 | Thang | Dung | Thang |
| 19 | Backend Admin Function | 1 Days | Thursday, February 12, 2015 | Friday, February 13, 2015 | Thang | Thang | Thang |
| 20 | Backend Student Function | 1 Days | Friday, February 13, 2015 | Saturday, February 14, 2015 | Thang | Duy | Thang |
| 21 | GUI Interface | 1 Days | Saturday, February 14, 2015 | Sunday, February 15, 2015 | Thang | Thang | Duy |
| 22 | Frontend Admin Function | 3 Days | Sunday, February 15, 2015 | Wednesday, February 18, 2015 | Thang | Dung | Thang |
| 23 | Frontend Student Function | 2 Days | Wednesday, February 18, 2015 | Friday, February 20, 2015 | Thang | Thang | Hau |
| **24** | **Testing** | **10 Days** | **Saturday, February 21, 2015** | **Tuesday, March 03, 2015** | | | |
| 25 | Run functions of WEB | 4 Days | Saturday, February 21, 2015 | Wednesday, February 25, 2015 | Thang | | |
| 26 | Update functions of WEB | 6 Days | Wednesday, February 25, 2015 | Tuesday, March 03, 2015 | Thang | | |
| **33** | **Improvements and writing report** | **12 Days** | **Tuesday, March 03, 2015** | **Sunday, March 15, 2015** | | | |
| 34 | Improvement code | 5 Days | Tuesday, March 03, 2015 | Sunday, March 08, 2015 | Thang | | |
| 35 | Writing report | 4 Days | Sunday, March 08, 2015 | Thursday, March 12, 2015 | Thang, Dung , Hau , Duy | | |
| 36 | Complete and public WEB | 3 Days | Thursday, March 12, 2015 | Sunday, March 15, 2015 | Thang | | |
| | **TOTAL DAYS** | **60 Days** | | | | | |

# VI. The responsibility of each team member

**Nguyễn Minh Thắng:** setting up project plan and discuss and meeting with all team member. Setting up project architecture, design database and coding backend and front end of project and write report

**Nguyễn Nho Dũng:** Design database, design interface, Report

**Ngô Tuấn Hậu** Find Document in relevant , Report

**Trần Thanh Duy** : Design interface ,Report

# C. XP Practices

XP is a lightweight, efficient, low-risk, flexible, predictable, scientific, and fun way to develop software. It is designed to work with project that can be built by team of two to ten programmers

## I. XP Processing

### 1. The first month

The first month we make some plan to do. Such as design database, build web server and write unit test for each function in Model (MVC).

For each meeting we have 15 minutes to review some task, what's done, what's doing and what we will do in next time, after that we work together to complete some task pending and fix some major bug.

Then we continues write unit test for some function that almost querying from database

After complete unit test for model we pair programming for controller (get, post function in order to request from client). Some task to configure web server and authorization for project

### 2. The second month

Then finished apart task in the first month, we design some task for front end of the website, we have some task to design layout and write javascript on client.

For each meeting we have 15 minutes to review some task that same the first month. In the second month we don't have to write more the unit test but if having new function, we will write unit test before code on controller

In this month we continue in design layout and code javascript, some function about administrator and student.

## II. Development Tool

To implement this application, we need to use several tools to implement the project.

- Composer (PHP) for project management
- Sublime for coding editor
- Git for collaboration and code management
- Bower to get some plugin for front end

## III. Conclusion

We can complete the project by quickly and in-time with complete feature. But we still have some bug about design database.

We need get more requirements in order to design database and project so much more exactly designing and get fewer bugs.

# D. Design

## I. Framework

We use Slim framework is a lightweight framework PHP in order to build webserver. With this framework we can get, post like RESTful easily, we can route a page just simple than original PHP, it get little storage and rich document.

In this framework we can apply MVC to build a web service for project.

There a lot of framework for PHP but this's new and lightweight.

## II. Database

We user SQLite for this project because it easy to setting up and we can move it to everywhere, this is a advantage for we can coding and share code together.

## III. Front-end

We use bootstrap and angularJS, they are so popular and easy to use to build a good design and AJAX on client. With bootstrap we don't need to knowledge more about css or design layout, we still can build a nice layout with more component. In this project, we get a free theme that write by bootstrap to build front-end.

With angularJS, this is a good framework for AJAX, we can router page, binding object two ways or write some new directive, …Because angularJS is so good, thus we don't need to use JQuery.

# IV. Future

If this project becomes bigger, we will move database to MySQL or Oracle.

Because we don't have time to design so this project still lack some feature and exist some bug.

# E. Implementation

**This project was written as web application with the database based on SQLite**

- Programming language : PHP , Javascript
- Database language : SQLite
- Framework : Bootstrap, AngularJS, Slim
- Model : MVC

# I. PHP

- Code and File Organization
- Utilities and Libraries
- The MVC Partern
- Security
- Less Code and Faster Development
- Comunities Support
- Performance tool
- Suitable for Teamwork

# II. SQLite

DB Browser for SQLite is a high quality, visual, open source tool to create, design, and edit database files compatible with SQLite.

It is for users and developers wanting to create databases, search, and edit data. It uses a familiar spreadsheet-like interface, and you don't need to learn complicated SQL commands.

**Controls and wizards are available for users to:**

- Create and compact database files
- Create, define, modify and delete tables
- Create, define and delete indexes
- Browse, edit, add and delete records
- Search records
- Import and export records as text
- Import and export tables from/to CSV files
- Import and export databases from/to SQL dump files
- Issue SQL queries and inspect the results
- Examine a log of all SQL commands issued by the application

# III. Bootstrap CSS Framework

**There is 5 reason why we choise this Framework**

- **Speed of development**

Undoubtedly one of the biggest advantages of using Bootstrap is the speed of development. If you're looking to push out a new website or application quickly, you should definitely consider using Bootstrap.

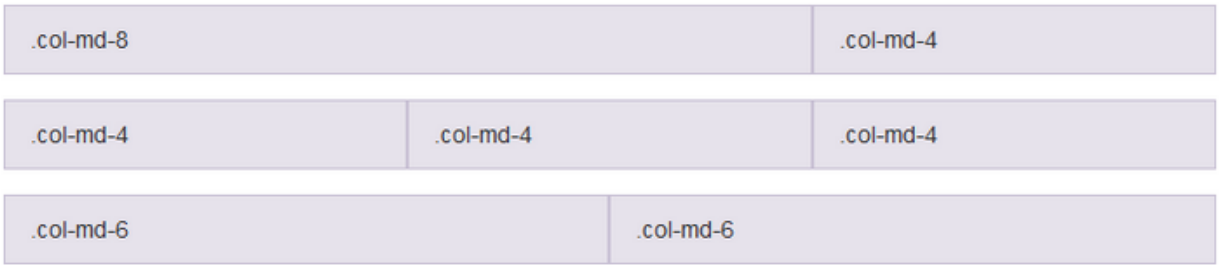
Rather than coding from scratch, Bootstrap enables you to utilize ready made blocks of code to help you get started. Combine that with cross-browser compatibility and CSS-Less functionality, many hours of coding can be saved. To achieve the fastest route possible, you can also purchase ready-made Bootstrap themes and modify them to suit your needs.

- **Responsiveness**

Mobile devices continue to grow in popularity year after year. Cisco predicts that global mobile data traffic will increase nearly 11-fold between 2013 and 2018. The need to have a responsive website is becoming increasingly important.

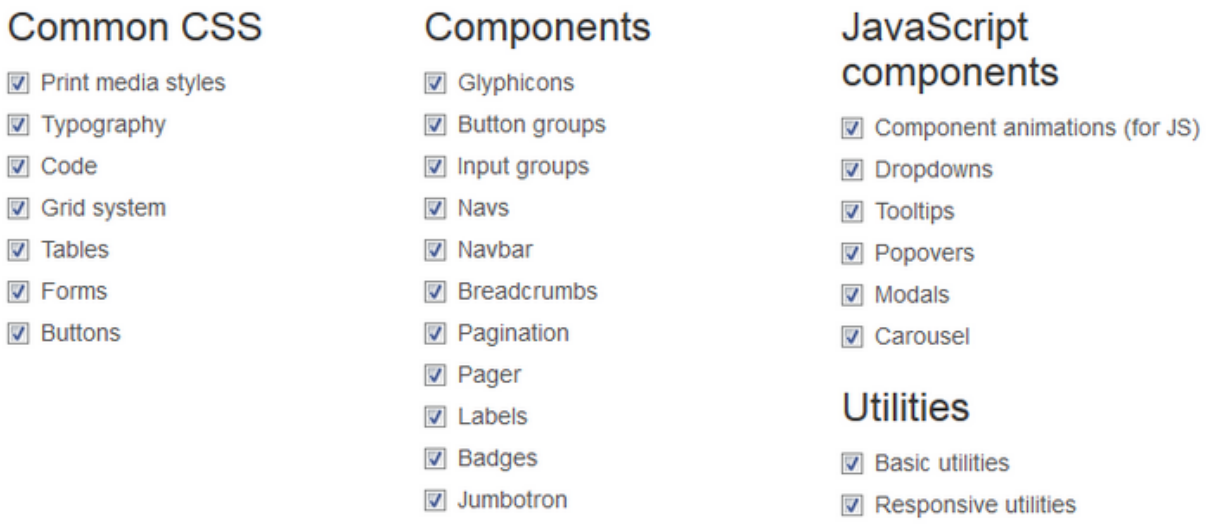
Creating mobile ready websites is a breeze with Bootstrap thanks to the fluid grid layout that dynamically adjusts to the proper screen resolution. There is virtually no work that needs to be done to achieve proper responsiveness.

Using Bootstrap's ready made classes, you can specify how many spots in the grid system you want each column to occupy. Then, you can specify at which point you want your columns to stack horizontally rather than vertically to display properly on mobile devices.



- **Customizable is easy**

Bootstrap can be tailor made according to the specifications of your project. Developers have the ability to pick and choose the features that are needed and the rest can be tossed. This is easily accomplished using the Bootstrap customize page. Simply tick off all the features you don't need and your custom version of Bootstrap will be ready for download. How cool is that?




- **Comunities Support**

## IV. Slim framework

- **Router**

Slim provides a powerful router that maps route callbacks to specific HTTP request methods and URIs. It supports route segment parameters and pattern matching.

- **Middleware**

Build your application with custom concentric middleware to tweak the HTTP request and response objects before and after your Slim app runs.

- **HTTP**

Slim has easy-to-use request and response abstractions that let you inspect and manipulate HTTP messages' method, status, URI, headers, cookies, and body.

- **Sessions**

Slim provides first-class session support. It persists session data using military grade encryption. Slim also enables "flash" messages across requests.

- **Caching**

Slim provides helper methods that make client-side HTTP caching easier. It helps you work with the Expires, Last-Modified, andETag headers.

- **Crypto**

Slim has super-secure cryptography using military-grade encryption. Slim uses your unique key to encrypt session and cookie data before persisting data to disk.

# V. AngularJS

☞ AngularJS Gives XAML Developers a Place to Go on the Web

☞ AngularJS Gets Rid of Ritual and Ceremony

☞ AngularJS Handles Dependencies

☞ AngularJS Allows Developers to Express UI Declaratively and Reduce Side Effects

☞ AngularJS Enables Massively Parallel Development.

☞ AngularJS Gives Developers Controls.

☞ .AngularJS Helps Developers Manage State.

☞ AngularJS Supports Single Page Applications.

# F.Statement of the final result

**We have been complete follow in requirement :**

- ☞ The website have good design and using easily
- ☞ Setting up website easily on general hosting
- ☞ Administrator can manage some thing such as: class, teacher, subject, student, …
- ☞ The student account will be provided by administrator
- ☞ The website have some notification for each action to notice for users.
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- ☞ The students can change password.
- ☞ The students can view own score for each subject

**In future :**

We can using NodeJS to built chat room on this website . We think that it can bring many benifits and student can talking together and get more information for learning.

# G. Reference

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