

Coursework Report



UNIVERSITY
of
GREENWICH

Enterprise Web Software Development

COMP1640

Tutor: Dr. Doan Trung Tung

Project Name: Course Monitoring Reports

Name: Ngo Xuan Thanh

ID: 000917710

Degree: BSC. (Hons) Computing

Email: thanhngxgt00410@gmail.com

Team name:	Group 6
Team members:	Tran Minh Phuong (000917754) - Scrum Master, Programmer Nguyen Duc Thinh - Web security researcher, Tester Ngo Xuan Thanh (000917710) - Technical Team leader, Database Designer Nguyen Van Nam (0009176450) - Programmer Nguyen Van Nam (000918067) - Web Designer

URL of our video: <http://goo.gl/CZDMXe>

URL of our site: www.annamshop.com/Admin

Username and password:

Roles	Username	Password
Admin	Admin	Admin
Course Leader	CL	CL
Course Moderator	CM	CM
Director of Learning and Quality	DLT	DLT
Pro-vice chancellor	PVC	PVC
Faculty	Faculty1	Faculty1
Guest	Guest	Guest

Table of Contents

1. Abstract.....	3
2. Introduction.....	3
3. Evaluate	3
3.1. Product evaluate	3
3.2. Individual evaluate	6
3.3. Group evaluate.....	6
3.4. Methodology.....	7
4. Lessons learnt	9
5. Conclusion	9
6. References	10

1. Abstract

Nowadays, each university should have a management reporting system is needed. Because Through survey research, read the documents and reality shows each university has a lot of courses, thousands of students, so the management process takes a lot of time. The amount reported is very large, while the management of the traditional manually, send the hand, or sent by post, therefore we decided to build a system that is Course Monitoring Reports. In this paper, I will present, evaluation, facilitation of difficulties when we apply agile SCRUM development process of the project

2. Introduction

Course Monitoring Reports is a project for the university, which saves time and effort in managing the report, instead of printing and submit reports manually. The system is web-based development, user interface compatible with all devices, phones, tablets, computers

This system is not suitable for individual users, only developed for the universities to manage reports.

When developing a system we need to choose a method developed. Today there are many methods of software development, we choose the method that is Scrum Agile Development. Why we chose scrum?

“Scrum is part of the Agile movement. Agile is a response to the failure of the dominant software development project management paradigms (including waterfall) and borrows many principles from lean manufacturing. In 2001, 17 pioneers of similar methods met at the Snowbird Ski Resort in Utah and wrote the Agile Manifesto, a declaration of four values and twelve principles. These values and principles stand in stark contrast to the traditional Project Manager’s Body Of Knowledge (PMBOK). The Agile Manifesto placed a new emphasis on communication and collaboration, functioning software, team self organization, and the flexibility to adapt to emerging business realities.” <http://scrummethodology.com/>

Agile Scrum team helps us save time, grow quickly, seamlessly. Due to the short sprint and continuous feedback, it becomes easier to deal with the changes. Daily meetings make it possible to measure individual productivity. This led to an improvement in the productivity of each member of the team. This method is particularly useful for fast moving Web 2.0 projects.

3. Evaluate

3.1. Product evaluate

❖ Functions

This system helped the university management reporting easy, fast, convenient and save time, working system stable, fast, accurate

There is no functional errors, only a few minor errors on the interface with the device type is not popular

Here I would list the functions which the group has completed.

In this project we divided into 3 main groups users:

Administrator	As a user role with full rights, view reports, manage courses, classes, students, grades, manage employees, manage permissions
Staff	<ul style="list-style-type: none"> - Course Leader - Course Moderator - Pro-vice Chancellor - Director of Learning and Quality
Guest	A Faculty has a Guest account. This account is only allowed to view the report

Detail about Roles:

#	Roles	Requirements
01	All users	Can login to the system provided accounts.
02	Admin	<ul style="list-style-type: none"> - Can Add/View/Edit/Delete all courses - Can Add/View/Edit/Delete all faculties. - Can Add/View/Edit/Delete all role group. - Can Add/View/Edit/Delete all roles. - Can assign Faculties to CL, CM to manage. - Can assign Course to CL, CM to manage. - Can view chart report per month.
03	Course Leader	<ul style="list-style-type: none"> - Can create CMR and copy CMR will be sent to CM to approval. - Can view assigned courses. - Can Add/View/Edit/Delete all courses - Can Add/View/Edit/Delete all faculties. - Receives email notify when DLT is approval a report for PVC. - Comment report
04	Course Moderator	<ul style="list-style-type: none"> - Receives email notified when DLT approval a report for PVC. - Receives CMR and sent to DLT to approval. - Receives CMRs when CL create CMRs. - Comment report
05	Pro-vice chancellor	<ul style="list-style-type: none"> - Receives email notified when DLT approval a report. - Receives CMR and view CMR when DLT approvals. - Can see a report when it has been submitted. - Can see all report when DLT approvals. - Comment report
06	Director of Learning and Quality	<ul style="list-style-type: none"> - Receives CMR and view CMR when CM approvals. - Can view all report when CM approvals. - Sent Email notified for CL when CMR sent to PVC to comment. - Sent Email notified for CM when CMR sent to PVC to comment. - Sent Email notified for PVC when CMR sent to them. - Comment report

07	Guest	<ul style="list-style-type: none"> - View approved report. - Guest for each Faculty can see statistical reports.
08	Interface of System	The system must be designed for multi devices and it must be responsive on these devices.
09	Database	All information must be saved in database.

❖ Platform

The system was developed using ASP.NET MVC is one of the methods developed by Microsoft ASP.NET applications. ASP.NET is a development framework for building web sites and web pages with HTML, CSS, JavaScript and server scripting.

The main advantage of the MVC architecture is to distinguish the layers of a project in the Model, View and Controller for the Re-usability of code, easy to maintain code and maintenance.

❖ Database

Normalized data in the database, normalized as to allow for the organization of data in the database effectively. Reduce the amount of redundant data (eg storing the same data in one table). Ensure independent data (data related in the same table) helps minimize the space used in the database and ensure that data is stored in a logical manner.

The password is encrypted with passwords hashes using ASP.NET technique 5000 Rounds of the PBKDF2 (Password-Based Key Derivation Function 2) improve data security

❖ Design

User interface easy to use, design and perception predictable function, interface display well on devices with different screen sizes, such as tablets, phones and computers.

We had difficulty in development time if the self-construction of the code is compatible with all devices. To solve this problem we use the bootstrap framework. Front-end framework Bootstrap is, is a free collection of tools for creating websites and web applications. It contains HTML and CSS-based design templates for typography, forms, buttons, navigation and other interface components, as well as expand the options JavaScript.

Bootstrap compatible with the latest versions of all popular browsers such as Chrome, Firefox, IE, Opera. Bootstrap help the website interface design saves a lot of time. Bootstrap libraries have the code ready for our tailoring to your website. We do not have to waste too much time to manually write code for their interface. Based on the above advantages, we are very pleased about the interface is designed to be able to work on different devices.

❖ Testing

All members participate in discussions that contribute to post a list of test cases, members develop and unit test functions within the development process.

3.2. Individual evaluate

Based on the knowledge of programming APS.Net MVC and apply methods SCRUM Agile software development, I've completed a few functions of the project. These functions run I made was very stable, no error occurred. In this project my first role is the study of the project and then design the database.

I designed the table for the main function first, then added to the secondary function later, when the implementation of the week sprint, if my database design, making it difficult to build functional or not ensure standardization of data, I need to discuss, for the members of the group known difficulties I encountered, then put together to discuss the best solution.

Next I made building security functions to the system, account management, management rights of each account, login, logout, users need an account to log in and use the system, each account has different rights, the user interface will display or hide different for each account. Admin Account is an account with full rights, are allowed to add the account, edit account information.

Once done login function and part of the right for each account, I do to function, create reports.

- CL (Course Leader) can create CMR (Report about Faculty, Course Name, Course Leader, Academic Year, Total Student, Passed Student) and copy CMR will be sent to CM (Course Moderator) to approval
- CM receives CMR and sent to DLT to approval and receives CMRs when CL create CMRs.
- Pro-vice chancellor receives CMR and view CMR when DLT approvals. Can see a report when it has been submit. Can see all report when DLT approvals.
- Director of Learning and Quality receives CMR and view CMR when CM approvals. Can view all report when CM approvals. Can comment to report.
- Guest View approved report. Guest for each Faculty can see statistical reports.

Finally I build chart feature, allows visual reporting an intuitive, more chart shows the number of reports in accordance with the status of each month

3.3. Group evaluate

1. Tran Minh Phuong (000917754)

- Behavior: He always attended the group sessions, always on time, always prepared the documents before the team meeting, if any busy work cannot attend, he will notice over the phone
- Teamwork: He always participated in the discussion group. His ideas and a very good suggestion. He is also very open to listen to the criticism and most recent questions.

The best thing is he never dominated the discussion group. More than that, he pursued the promises and deliverables.

- Technical: Due to little practical work experience, so sometimes he needs to consult with the other members
- Work Product: Complete all assigned work
- Leadership: He has the skills to understand the fine points of the member. He has a sort of scientific work and efficiency. Whenever he completed the work assigned, he immediately started to work on the next task.
- Overall Evaluation: He spent a lot of time to complete their work and helping other members. He is a member of the hard and he tried to join us in this project

2. Nguyen Duc Thinh (000917710)

- Behavior: Always participate in meetings, completing the work deadlines
- Teamwork: Always listen, together with the members discussed to solve difficulties during project implementation
- Technical: Due to little practical work experience, so sometimes he needs to consult with the other members
- Work Product: Completion of the work is very good, work deadlines
- Overall Evaluation: He is an enthusiastic member, though still inexperienced but trying hard and has brought very good results. I really want to work together with his team in the next project

3. Nguyen Van Nam (0009176450)

- Behavior: Always participate in meetings, completing the work deadlines
- Teamwork: Always listen, together with the members discussed to solve difficulties during project implementation
- Technical: Due to little practical work experience, so sometimes he needs to consult with the other members
- Work Product: Completion of the work is very good, work deadlines
- Overall Evaluation: He is an enthusiastic member, though still inexperienced but trying hard and has brought very good results. I really want to work together with his team in the next project

4. Nguyen Van Nam (000918067)

- Behavior: Always participate in meetings, completing the work deadlines
- Teamwork:
- Technical: Due to little practical work experience, so sometimes he needs to consult with the other members
- Work Product: Completion of the work is very good, work deadlines
- Overall Evaluation: He is an enthusiastic member, though still inexperienced but trying hard and has brought very good results. I really want to work together with his team in the next project

3.4. Methodology

Scrum is a flexible methodology (agile), are commonly applied. Scrum is a process framework suitable for the fast development. Reduce time spent managing and increasing the time spent on development, product quality Increase compared with classic models such as the waterfall

model. Allows the organizations easily adjusted in the rapidly changing requirements, and produce a product that meets the business development goals.

We need to plan the work. The work of our Sprint is planned at the Sprint Planning Meeting. Sprint plans to be created through a collaborative effort of the entire Scrum Team. Sprint Planning Meeting is framed in long eight hours per month Sprint. If shorter Sprint length, duration Sprint Planning Meeting will be shorter. Scrum Master ensures that this meeting took place and the participants understand the purpose of it. Scrum Master also navigate Group meeting time frames. We need to define the job by answering the question: What to do in the sprint stages of this? To answer this question, the development team worked to predict the functions will be developed in the Sprint.

Scrum master exchanges with members of Sprint's goal to be achieved and of the Product Backlog items through which, if completed in the Sprint, the Sprint objective will be achieved. The entire team working together to understand Scrum work content of this Sprint. The inputs of the meeting is the Product Backlog, the growth part of the most recent product, capacity of the Group is to develop in the Sprint, and past performance of the Development Team. Number of selected items from the Product Backlog for the Sprint will entirely depend on the Group Development. Only the Development Team can assess that they can accomplish what in the next Sprint. After forecasting Development Group Product Backlog items to be delivered in the Sprint, Team Sprint Scrum established goal. Sprint is targeted objectives to be achieved in this Sprint through the implementation (of items) Product Backlog and it is a guide for Group Development about why to build Increment.

We need to determine: How to complete the selected job?

Once you have selected the work for Sprint, Group Development to decide how to build the functionality in the growth will be "completed" during the Sprint. Product Backlog items selected for the Sprint plus a plan to transfer them is called the Sprint Backlog.

Group development work usually starts by designing the system and the work needed to convert the Product Backlog into executable package. Work can be different sizes. However, only a sufficient amount of work will be planned during the Sprint Planning Meeting for the Development Team to forecast what you can do in the upcoming Sprint. The work is planned in the first days of the Sprint by the Development Team will be split into smaller units so that they can complete the (intended) as a day or more in the last small meetings . Development groups will organize themselves to work on the Sprint Backlog, both in the planning and execution throughout the Sprint plan.

Group perform daily Scrum meetings take place in no more than 15 minutes in order to synchronize Development Group's activities members and make plans for the next 24 hours. This is achieved by inspecting the work since the daily Scrum meetings yesterday, and based on the forecast of the work will be completed before the next meeting. For simplicity, daily Scrum meetings are held at the same venue, a fixed time. If the team members cannot meet, we conducted a study through skype call. During the meeting, each member of the Development Group explains:

- I did what since yesterday to help the Group achieve Objective Development Sprint?
- I'll do what today to help achieve Group Development Goals Sprint?
- I can see the problems hindering Development Group achieved Sprint Goal?

Development groups using daily Scrum meetings to assess the progress of work on the Sprint Goal and assess trends in the evolution of Sprint Backlog work. Daily Scrum meeting optimization capabilities to Group Development Goals can be achieved Sprint. Development groups often face meeting immediately after completion of meeting daily Scrum to re-plan for the remaining work in the Sprint. Every day, the Development Team can explain Scrum Master Owner Products and know what they intend to do as a group to complete self-management goals and the creation of the necessary growth in the Sprint.

Scrum Master ensures participation Development Group meeting, but the New Development Group has primary responsibility for organizing the daily Scrum meetings. Scrum Master teaches the Development Team knows how to hold the meeting do not exceed 15 minutes.

Scrum Master to impose rules on the only New Development Group is engaged daily Scrum meetings. Daily Scrum meeting will improve communication, omit unnecessary meetings, identify and remove the obstacles in the development process, emphasizing and promoting rapid decision making, and improve the level of Group's understanding of the project development. This meeting is the key of the inspection and adaptation.

At any given time in the Sprint, the total amount of time left to complete the job can be calculated. Development Group will monitor this number regularly, at least at the daily Scrum meetings. Based on the amount of remaining work throughout the Sprint, Team Development can manage progress.

Somehow, we have applied this method and software development for the project as a result we're done.

4. Lessons learnt

After completion of this project, I have learned a lot about working skills, ability to discuss, exchange, problem solving, I found that all my theories, research, most likely value.

Refer to Wikipedia for SCRUM Agile methods emphasize the following: Working software is valued more than documentation. Team collaboration is more important over contract negotiation. Responding to change is more important than following a plan

I have a conclusion, a working group scrum, members must constantly connected to each other every day, to ensure the progress of work, fixing mistakes promptly encountered

5. Conclusion

In this project we have applied the Scrum Agile development methods, after the project is finished I have a very positive conclusion for this method, it is exactly what we study. This method helps us to ensure the completion of projects on time, to satisfy requirements of the project through early and continuous delivery, the members work together and check

the progress of meeting weekly, award decide which changes regularly. We completed the project to ensure the requirements of the project.

Especially when applying this method, we learned so most things, discussion skills, problem solving, team work skills, teamwork skills are always important, it is an important factor when project development.

In the future we will upgrade and develop a better system

6. References

Agile-software-development. (n.d.). Retrieved from https://en.wikipedia.org/wiki/Agile_software_development.

ASP.NET MVC Overview. (n.d.). Retrieved from <http://www.asp.net/mvc/overview/older-versions-1/overview/asp-net-mvc-overview>.

Share and Discover Knowledge. (n.d.). Retrieved from <http://slideshare.net>.

www.scrum.org. (n.d.). Retrieved from <https://www.scrum.org/>.