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4/18/2022

Enterprise Web Software Development (COMP1640 – individual report)

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Table of Contents

1	Introduction	1
2	Evaluation of product	1
3	Evaluation of process.....	2
4	Evaluation of Your self	4
5	Evaluation of each team member	4

Table of Figures

Table 1- Group member evaluation table	6
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1 Introduction

After 2 months of studying and completing the project, the author and his team finished with good results. This report will analyze the project, the agile model applied, the team's strengths and weaknesses as well as the individual's contribution to this project. Besides, this report also gives practical experiences that can be applied to other projects in the future.

2 Evaluation of product

A successful project is not only concerned with the main functions, but also many other important factors that contribute to the completion of the project such as: security, performances, interface, testing, ...

❖ Functionalities

This project is developed so that users can post ideas to contribute to the company. Therefore, the author team has completed the project with some main (important) functions such as: Quality Assurance Manager can post topics (proplem) so that company staffs can discuss and come up with solution ideas for that topic. Besides, the Quality Assurance Manager will manage the ideas and documents staff posted with the idea. Moreover, he can also view the system's statistics through dashboards with continuously updated data. Admin can set deadline for topic and deadline for comment on topic created by Quality Assurance Manager. Staff can post multiple ideas for a topic by anonymously or non-anonymously. They can also like or dislike any idea to show their agreement or disapproval. Moreover, the staff can comment their personal opinions under each idea. Especially with the system, when there is any change related to the idea post, the system will have an email notification about each related account.

❖ Security

Security is an issue that is always the most concerned for every system. Therefore, the author team pays great attention to security issues. If the user does not enter the correct login, they will not be able to access the system's working pages whether or not

they know the url. Besides, the functions are clearly decentralized, for example, staff cannot create a new topic or set a deadline for any topic. Moreover, in the system's database, the password is always encrypted to ensure that no one can log into the system without knowing the password. On the interface side when logging in, the system also supports that users can hide the password to avoid possible bad cases.

❖ performances

For a successful project that can be applied in practice, performances are extremely important. However, due to the lack of practical experience, the performance of this project is still poor. The algorithms used are not optimized, leading to many problems when there are many users at the same time. In order for the project to be put into practice, the author finds that the project still needs to improve a lot of weak performances.

❖ interface

The interface of this project was built by the author and the team to be as simple and clear as possible, making it easy for users to use. The interface of the project aims to bring all the main functions without being colorful and glossy. The sections are clearly laid out, responsive is also made for both PC and Mobile.

❖ testing

The group's testing process is done very methodically. After each major function is completed, a member will test that function and record it in the test case table as well as the testlog. Thereby helping the developer to easily fix bugs as well as complete the project.

3 Evaluation of process

Before starting the project, the author and most of the team members had no knowledge of agile scrum modal. In the group, only Vu Hoang Ha is the only one who knows and understands about scrum modal because he participated in an internship at the company with this model. Then, under the guidance of Vu Hoang Ha and lecturer Long, the author and other members began to learn about the product backlog, sprint backlog, burndown chart, and agreed on the regulations of each meeting... from the internet and related documents.

At the beginning of the project, the author and team members only focused on learning about the scrum model. In particular, the first research is on the Product backlog. This is a list of necessary requirements for the project arranged in order of priority to help members determine the project's development roadmap. Under the guidance of the scrum master, team members can identify and list all the project requirements and their priority according to the Product backlog. Thereby, the author also visualized Rox more clearly about the direction of project development for himself.

With the requirements list listed, the scrum master breaks them down into sprint backlogs to help team members manage their time and work more easily. Our team divided the requirements into 5 sprints with the help of the "jira" tool. Each sprint will give tasks to each corresponding team member and estimate the time to complete the work. After each member completes the assigned task in the team, the scrum master records the time the member spent completing that task. Thereby, the author and members can know the work progress of individuals and other members and take appropriate remedial measures.

Burndown chart is an indispensable chart for the scrum model in general and the author's team in particular. After each meeting, based on the work completed and the estimated amount of time, the scrum master will issue a Burndown chart to show the current progress of the whole team is fast or slow. Burndown chart shows the progress of the entire project but not for any individual. A slow individual can also cause the Burndown chart to give a downward chart. Besides, if the current progress is too fast than expected, the scrum master can also adjust it to suit the team.

For the author team, after each day, the scrum master usually opens a meeting to summarize the work done during the day as well as outstanding issues that may affect the project progress and give suggestions. solution to that problem. At the end of the meeting, the scrum master will make statistics according to a predefined form. In that form will give problems and solutions as well as plans for the next day. Meeting Minutes is an important tool for scrum masters to manage work progress as well as manage team members.

The scrum model is a model adopted by many companies and organizations in the process of building and developing projects. It gives users a lot of powerful advantages, but it also has a lot of limitations. First, the biggest advantage of the scrum model over other models is that it enables the project to respond quickly to constant changes. Customers can change and add ideas to the development team while developing the project, thereby increasing the interaction between customers and developers to help deliver the most complete product. In addition, the scrum model helps to reduce costs for the future product maintenance and debugging phase. However, besides the strengths, the scrum model also has some disadvantages such as: the requests sent to the development team may not contain all the necessary information; Because the customer can change the requirements, it is the rapid changes that cause the developer to make incorrect judgments and plans.

During the project development process following the scrum model, the author encountered many difficulties because this was the first time that the author had access to it. The biggest difficulty is the application in the first sprnt. The author does not have a clear understanding of the terms used and how they actually work. However, with the help of the trainer and the scrum master, the author understood and quickly completed it in sprint 2. Besides, the time requirement model is very clear, so the author and members are pressured. force. Due to the epidemic problem, some jobs have been delayed by deadlines. However, the group has

conducted continuous online meetings so that members can help each other complete the tasks that have been delayed.

4 Evaluation of Your self

For the individual, the author has successfully completed the task in the group. First of all, the author is the main front-end coder of the project. Although there are many limitations in knowledge, the author has researched and applied the knowledge from the internet as well as reliable sources to be able to complete the project. The knowledge of reactjs, the UI library applied by the author to handle the logic and interface. So technically, I think I can get 7/10. Besides, other skills such as teamwork skills, management skills, etc. are also used by the author, but there are still many shortcomings. During the teamwork, after the scrum master gives the tasks for the week, the author always completes them on time. Because the author is the one who implements the code of the project's processing logic, he always cooperates with Mai Van Duc - the interface designer to be able to develop the front-end for the project. In addition, the group regularly meets to discuss problems and solutions. Therefore, the author can grasp and offer solutions to other members, and the author can also get a lot of help from everyone. Through the project development process, the author found that his own teamwork skills can be achieved 6/10 points because the author usually only completes the task himself but has not contributed much to the group. In the fact, time management skills are the most important in management skills. It can almost determine the outcome of a project if the individual knows how to manage his or her time well. The author has detailed plans for the work to be done as well as the time to complete the project on schedule. However, when facing some technical difficulties or external factors, the author often extends the pre-specified time. That leads to unplanned execution steps and failed author time management. With management skills, the author thinks that he only gets 5/10 points because he has come up with a suitable plan for the project, but the implementation process is still very difficult. During the implementation of the project, the author and team encountered many difficulties such as: 3/5 members were infected with covid 19, post-covid problems greatly affected the work progress, some members have not yet grasped the technology to use, the internal conflicts in the group, ... but the author always tries to complete his own tasks well, thereby giving other members a lot of motivation force to continue trying to complete the project. Currently, despite having completed the set target on time, the author finds himself lacking a lot and must constantly improve not only his knowledge but also his soft skills to serve other projects in the future.

5 Evaluation of each team member

The author's group has 5 members. Except for the author, the remaining 4 members include Nguyen Van Duc (back-end developer), Mai Van Duc (designer and front-end developer), Vu Hoang Ha (scrum master and designer) and Ibrahim Usman Buratai (tester). . Each member will have different roles and functions in the team and contribute to the completion of the project.

1. Nguyen van Duc

He is the main coder of the back-end. He always actively participates in team meetings and always tries to complete the tasks assigned by the scrum master. He is the one who connects the members of the group by his cheerful and sociable personality. He communicates and communicates the group's duties with another foreign member. During the development of the project, despite having problems related to post-covid, he had to stay home for a week and delay the team's work schedule. However, immediately after recovering, he actively joined the team to be able to complete the project as it is now. In short, Nguyen Van Duc has contributed a lot to the success of the current project.

2. Mai Van Duc

He is the one who designs the wireframes, and helps the author to perfect the interface of the system. He always actively participates in team meetings and makes very positive contributions to the development of the system. Besides, he is also the one who gathers the team's meetings, thereby helping the scrum master to summarize the tasks as well as the project's progress. Moreover, he is a team report writer and draw diagrams such as: wireframe, flowchart, usecase,... Especially he is also a project tester to help the author detect bugs in the system, through that promptly fix the existing bugs in the system. In short, Mai Van Duc contributed a lot and helped complete the project quickly.

3. Vu Hoang ha

He is the scrum master of the team. He is an exemplary team leader. He is the one who designed the Sprint Backlog for the team, setting out tasks for each team member based on each person's ability. He is always on time and is the one who initiates group meetings. Besides, he is also the one who writes reports for the team and designs the interface details for the system. He is the team leader - scrum master, he often urges the members to complete the tasks on time, so there is always a great pressure on everyone. It can be said that Vu Hoang Ha is an extremely important person in the group. Although he is not directly involved in the project code, he nevertheless helps everyone to have a clear path to complete the project.

4. Ibrahim Usman Buratai

He is the only foreign member in the group. He has a lot of difficulties in communicating with people, but he always tries to attend all the meetings of the group. He doesn't have much coding experience but he always tries to participate in some part of each team task. He also participated in the project testing process with Mai Van Duc, thereby bringing out the problems that the author encountered in the project development process as early as possible. As a foreigner, his English is very good, he helped the team translate and understand the requirements of the course work, and at the same time helped the team complete the report. It can be said that Ibrahim Usman Buratai has fulfilled his role in the development of the project.

6 Lesson learns

After completing the project, the author has learned a lot of experiences and lessons that can be applied in future work. First, the author has learned a lot of technical skills as the front-end developer of the team. The author learned a lot of tricks to work with as well as a better understanding of how a real project works. Second, the author can work in groups, learn how to work effectively in groups, how to coordinate with other members. Above all, a lesson on how to handle problems in groups. Third, the author knows how to arrange and manage time in a reasonable and suitable way for himself. The author encountered a lot of problems with time management during the project, such as: personal problems delaying the set deadline, functions that were too difficult to be completed on time,... Thereby, the author has drawn a lot of experience for himself. Most especially, the author has learned and applied the scrum model to real projects. Today, scrum model is a popular and widely used model, so applying the scrum model in this project is a great lesson for the author to practice and work in the future.

Factor	Vu Hoang Ha	Phan Bao Hoang	Mai Van Duc	Nguyen Van Duc	Usman Ibrahim
Attend meetings	10	10	10	10	8
Complete assigned	10	8	8	8	8
work on time	10	10	10	10	8
Contribute ideas when working	10	8	8	8	6
Good cooperation with team members	8	8	8	8	6
Problem solving	8	8	8	8	8
total	9.3	8.7	8.7	8.7	7.3

Table 1- Group member evaluation table