**BIT302**

**Software Engineering**

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**ASSIGNMENT 1**

**Project Proposal**

**“Web-based Information System for MicroHousing System in Kuala Lumpur”**

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Introduction

For almost a decade, Internet has been rapidly developed and it pushes for more development of advanced technology, helping individuals to do work better. Businesses, companies, industries is trying to take advantage of technology development to enhance and improve their operations on daily basis. This has been done by industrials in order to provide better product & services to customer and attract for more benefits.

Most of businesses nowadays will rely on a web-based or web application information system. Information systems are combinations of hardware, software, and telecommunications networks that people build and use to collect, create, and distribute useful data, typically in organizational settings (Valacich & Schneider, 2010). A web application (or "web app" for short) is any computer program that performs a specific function by using a web browser as its client (Nations, 2019).

Project Background

As we mentioned before, with the rapid development technology (especially Internet and web), many businesses trying to take over the advantage of it. Property, especially micro housing, is a one of example of that it might to be a better opportunity for businesses to kick in.

This time, the study case

For almost a decade, Internet has been rapidly developed and it pushes for more development of advanced technology, helping individuals to do work better. Businesses, companies, industries is trying to take advantage of technology development to enhance and improve their operations on daily basis. This has been done by industrials in order to provide better product & services to customer and attract for more benefits.

Most of businesses nowadays will rely on a web-based information system

Project Aims

* To change the traditional way of showing marks to students from paper – based report card to online information system
* To ease communication between students and teachers, by providing them with teacher contact details
* To provide students with latest announcement from the school so that they will not miss any school’s activity
* To design a web based application which connect database to the website so that data can be updated anytime and information can be viewed anytime anywhere

Project Objectives

1. Conducting a research about how many and what subjects are generally taught in junior high school
2. Determining how many tests are being given to student per subject per year to know how many marks will be entered in the database
3. Select tools and programming language that are most suitable to develop an information system
4. Produce documents that are necessary for the completion of this project
5. Decide how the user interface will be designed and determine the color scheme
6. Creating database and input all the data that are needed
7. Integrating database and web design to produce a complete application

Project Scope

|  |
| --- |
| **Project Title:** Web-based Information System for MicroHousing System in Kuala Lumpur  **Date:** th February 2020  **Prepared by:** Rivaldo Bagus Soepardhy, Team Leader, aldobagus@hotmail.co.id |
| **Project Summary and Justification:**  This information system is made to help students in junior high school to see teachers’ information, mark details, schedule and announcements. Through the system, we are integrating database system and website design. The system will be managed by an admin to add, delete and update data. As a result, students don’t have to wait until the end of the semester to see their marks in form of paper – based report cards. Students also do not have to depend on hard – copied schedule to check their subject time table. |
| **Product Characteristics and Requirement:**   1. Do some research on junior high schools that have applied web based academic information system for their students 2. Providing content that suitable to solve problems that students have. The web based application should be informative and helpful by showing all data that are students need to see. 3. The web application will be tested with different browsers to make sure it is accessible and does not have any display problem. 4. All the link will be tested, to see if the link work properly or not. It will be tested once a week. |
| **Summary of Project Deliverables**  **Project management-related deliverables:** Project aims, project objectives, scope statement, WBS, schedule, cost baseline, requirements specification document, design and testing documentation, web based academic information system that is useful and can work, final project presentation, and other documents required to manage the project.  **Product-related deliverables:**   1. Web based academic information system that can be accessed by any registered student in a school 2. The content of the web allows student to know the marks that have obtained for the current semester and parents can see their child’s marks. 3. Ability to manage relationship with clients, which in this project are school and its students by answering their questions related to the system, to avoid confusion and misunderstandings. |
| **Project Success Criteria:** Our goal is to complete this project within three months. The project will be considered successful if it meets all of the product characteristic and requirement listed above, and does not misaligned with the project scope. The project team will succeed if they can follow team contract and stay on track of WBS and Gantt Chart that has been created. If the information system for junior high school is successful and very helpful for students, similar system can be developed and applied for primary and high schools too. |

Project Schedule

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Schedule** | **Start Date** | **End Date** | **Estimate Days** | **Responsible** |
| **Initiating** | | | | |
| Identifying Topic | Mon 16/10/17 | Mon 16/10/17 | 1d | All |
| Conducting Research | Tue 17/10/17 | Fri 20/10/17 | 4d | All |
| Identifying Project Aims and Objectives | Mon 23/10/17 | Tue 24/10/17 | 2d | All |
| Identifying Non – Functional and Functional Requirements | Wed 25/10/17 | Thu 26/10/17 | 2d | All |
| Complete Initiating Task | Thu 26/10/17 | Thu 26/10/17 | 0d | All |
| **Planning** | | | | |
| Develop Scope Statement | Fri 27/10/17 | Mon 30/10/17 | 2d | Lovely |
| Develop WBS | Tue 31/10/17 | Tue 31/10/17 | 1d | Denny |
| Create Project Schedule | Wed 01/11/17 | Wed 01/11/17 | 1d | Denny |
| Baseline Gantt Chart | Thu 02/11/17 | Thu 02/11/17 | 1d | Denny |
| Determine Development and Demonstration Platform | Fri 03/11/17 | Mon 06/11/17 | 2d | All |
| Develop Risk Management Plan | Tue 07/11/17 | Tue 07/11/17 | 1d | Lovely |
| Develop Use Case Diagram and Use Cases | Wed 08/11/17 | Thu 09/11/17 | 2d | All |
| Develop Expanded Use Cases | Fri 10/11/17 | Mon 13/11/17 | 2d | Denny |
| Develop Analysis Class Diagram | Tue 14/11/17 | Tue 14/11/17 | 1d | Lovely |
| Develop Sequence Diagram | Wed 15/11/17 | Wed 16/11/17 | 2d | Lovely |
| **Executing** | | | | |
| Collecting Data | Thu 02/11/17 | Tue 07/11/17 | 4d | All |
| Inputting Data to Database System | Thu 02/11/17 | Tue 07/11/17 | 4d | All |
| Designing the Web Page | Wed 08/11/17 | Fri 24/11/17 | 13d | All |
| Integrating the Database with the Web Design | Mon 27/11/17 | Mon 18/12/17 | 16d | All |
| Produce Prototype #1 | Mon 18/12/17 | Mon 18/12/17 | 0d | All |
| Improve and Update the System | Tue 19/12/17 | Tue 26/12/17 | 4d | All |
| Produce Complete System | Tue 26/12/17 | Tue 26/12/17 | 0d | All |
| **Monitoring and Controlling** | | | | |
| Update Gantt Chart | Mon 27/11/17 | Mon 27/11/17 | 1d | Denny |
| Testing Prototype #1 | Tue 19/12/17 | Wed 20/12/17 | 2d | All |
| Testing the Complete System | Tue 26/12/17 | Wed 27/12/17 | 2d | All |
| **Closing** | | | | |
| Presentation and Demonstration for Prototype #1 | Thu 21/12/17 | Thu 21/12/17 | 0d | All |
| Presentation and Demonstration for the Complete System | Thu 28/12/17 | Thu 28/12/17 | 0d | All |

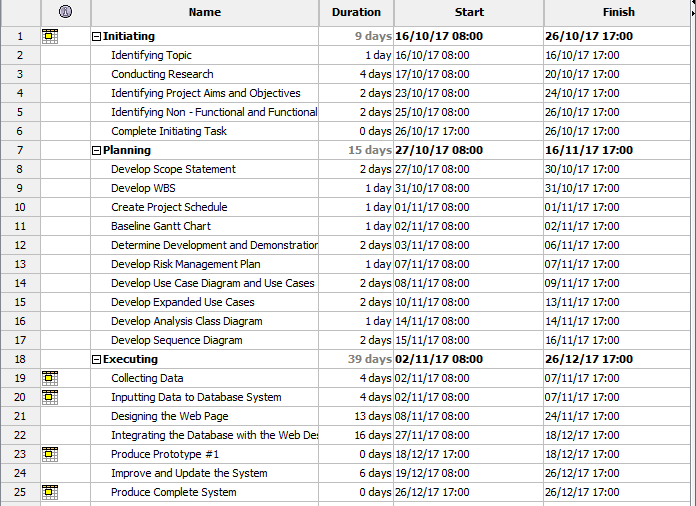
Work Breakdown Structure

1. Initiating Tasks
   1. Identifying Topic
   2. Conducting Research
   3. Identifying Project Aims and Objectives
   4. Identifying Non – functional and Functional Requirements
   5. Complete Initiating Task
2. Planning Tasks
3. Scope Statement
4. WBS
5. Project Schedule
6. Baseline Gantt Chart
7. Development and Demonstration Platform
8. Risk Management Plan
9. Use Case Diagram and Use Cases
10. Expanded Use Cases
11. Executing Tasks
12. Collecting Data
13. Inputting Data to Database System
14. Designing the Web Page
15. Produce Prototype #1
16. Produce Complete System
17. Monitoring and Controlling Tasks
18. Update Gantt Chart
19. Testing Prototype #1
20. Testing the Complete System
21. Closing
22. Presentation and Demonstration for Prototype #1
23. Presentation and Demonstration for the Complete System

Milestones

* Complete Initiating Task
* Produce the Prototype #1
* Presentation and Demonstration for Prototype #1
* Produce the Complete System
* Presentation and Demonstration for the Complete System

Gantt Chart



Development Platform

**Software/tools:**

1. **Microsoft Excel**

We will use Excel to store data and formula that we have collected before inputting them to database in MySQL.

1. **Microsoft Word**

We will use Word to produce documents and reports related to this project.

1. **Microsoft Power Point**

Power Point will be used to create presentation to show the design of our system and what went right or wrong during the development of the system.

1. **StarUML**

This is an open – source tool for Unified Modelling Language diagrams and modelling. We will use this tool to create use case diagram, class diagram and sequence diagram.

1. **MySQL**

We choose MySQL as our relational database management system because it is open – source and has many features to help us managing our database.

1. **Notepad++**

Notepad++ will be used to write our html codes to design the interface for our web application.

1. **phpMyAdmin**

**We choose this tool because it is open – source and it can be connected to our database in MySQL. phpMyAdmin** provides a convenient graphical user interface to work with and it also has all common functions that we need to develop a MySQL-based application or website.

1. **Adobe Photoshop**

Photoshop is suitable to manipulate and edit images that will be used in our web application design.

1. **Project Libre**

Project Libre is an open – source project management software that we use to create Gantt chart which help us in scheduling works for this project.

**Hardware:**

1. **Laptop**

All the for developing this application will be done using laptops that run on Windows operating system.

Demonstration Platform

**Software:**

1. **Web browser – Google Chrome and Mozilla Firefox**

Because we are developing web based application, this application will be opened through a web browser. We choose Google Chrome and Mozilla Firefox to open our application because those are the most common browsers used nowadays. We also want to make sure our design and the data being displayed are consistent in both browsers.

**Hardware:**

1. **Laptop and PC**

Our application is intended to be opened through web browsers from laptop and personal computer.

Risk Management Plan

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Risk Management Plan for Development of Web-based Information System for MicroHousing System in Kuala Lumpur | | | | | | | | | | | |
| Prepared by: Luh Wulandari Maharani & Rivaldo Bagus Soepardhy Date: Monday 30th February 2020 | | | | | | | | | | | |
| No | **Rank** | **Risk** | **Description** | **Category** | **Root Cause** | **Triggers** | **Potential Responses** | **Risk Owner** | **Probability (1 – 10)** | **Impact** | **Status** |
| 1 | 1 | Project would not be done on time | Team members could overwhelm by the tasks and might not finish them all on time | Process Risk | Not enough time to complete the project | One or more tasks might take longer than expected to complete | Follow the project schedule and do better time management to avoid tasks being unfinished after the due date. | Lovely  Denny | 4 | High | This issue has not happened yet and so far tasks are being done on time. |
| 2 | 2 | There is possibility that the system will have some malfunction | The system might have some errors and crash, or cannot perform its function correctly | System Risk | There are errors during the development process | Team members do not check the system carefully during the testing stage | Test each function of the system thoroughly to ensure system crash would not happened | Lovely  Denny | 3 | High | This issue has not happened yet. |
| 3 | 3 | The team may not understand all the requirements to develop and complete the system | When requirements are not fully understood, the system that is produced may not as useful as what was planned | Process Risk | Lack of research and understanding about the subject | Not enough time to carry out research | Spare some times to conduct more research about similar application to learn about requirements that needed to be fulfil | Lovely | 3 | Medium | Team members have done more research and have understood what the requirements to complete the system are. |
| 4 | 4 | Lack of communication that may lead to misunderstanding between team members | Tasks that are not clearly divided and communicate may cause misunderstanding and conflict | People Risk | Each team member is busy with other activities | Have different schedules which make it difficult to have same spare time to meet and communicate about the project | Do online discussion if it is not possible to physically conduct a meeting, make a meeting schedule from the beginning of the project | Denny | 3 | Medium | This issue has not happened yet and so far, team members communicate each other clearly. |

# References

Valacich, J., & Schneider, C. (2010). *Managing in the Digital World: Fourth Edition.* Prentice Hall.