269370 Software Project Management

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Section ……011……

Final Examination: Semester 2/2019 Take Home Exam Due Date 29 April 2020, 23.59 Hr.

Instruction

1. There are a total of 3 questions, for the total of 40 marks.
2. Please type only in English with "Verdana 10pt" and only in the given space. You are allowed to remove the "." at the beginning of the line. Those are there only for counting of line.
3. Save your answer as PDF and send it to sakgasit@eng.cmu.ac.th using the following format as the subject: [269370 Final Exam – 600611789].
4. Late submission is not allowed.

1. **[20 Marks]** Risk management is an essential part of a project. Please plan for risk management for your tentative 269491/269492 project.

1.1 [5 Marks] Briefly describe your 269491/269492 project:
What is your project? What is it going to do?

The Qualitative Business Data Retrieval and Repository System is a web application that allows clients to upload their qualitative documents in pdf format to web application then the system will extract texts from that documents by using python libraries. After that, it will allow users to input keywords to retrieve sentences that relate to keywords and repository of them, and users can navigate to where the sentence is.

What are the objectives?

To solve the problems for data analysts and organization that need to analyze qualitative documents in the matter of read too many unnecessary sentences and wasting their time for read the document before analyzing it.

Who are the client?)

Data analysts and organizations that need to analyze qualitative documents (something like annual report).

1.2 [5 Marks] Identify 10 risks which will you anticipate for your project.

1. Cannot retrieve sentences that relate to keywords clearly
2. Cannot finish the project in time.
3. Conflict within the users..
4. Because it is a web application. So, there is a risk of being hacked.
5. Each module cannot connect together.
6. Performance of the PDF processing engine.
7. Over budget.
8. Changed requirement.
9. Conflict within the group.
10. Cannot navigate to where the sentence is.

1.3 [5 Marks] Analyze the risks which are identified in 1.2. Then, put a "*" in the Prioritize column for each of the most important 5 risks.

Risks No.	Probability	Impact	Risk Exposure	Prioritized
1.	0.6	Critical	0.6 * 3 = 1.8	*
2.	0.3	Catastrophic	0.3 * 4 = 1.2	*
3.	0.4	Catastrophic	0.4 * 5 = 2.0	
4.	0.9	Catastrophic	0.9 * 4 = 3.6	*
5.	0.2	Catastrophic	0.2 * 4 = 0.8	
6.	0.7	Marginal	0.7 * 2 = 1.4	
7.	0.3	Negligible	0.3 * 2 = 0.6	
8.	0.7	Negligible	0.7 * 3 = 2.1	*
9.	0.2	Negligible	0.2 * 2 = 0.4	
10.	0.5	Catastrophic	0.2 * 4 = 0.8	*

1.4 [5 Marks] Propose a plan for the selected risks

Risk No.	Mitigation Plan
1	Try to use natural language processing to improve the sentence.
2	Ask for advice from expert to improve efficiency of doing the project.
4	Use https and firewall to improve the security of the system.
8	Brainstorm with teammate.
10	Do some research over the internet and ask for advice from the expert.

2. **[10 Marks]** It is said that we should breakdown tasks to the smallest (shortest) item as possible. This will make it easier to monitor the progress. Some even say that the broken down tasks should be no longer than a normal progress meeting schedule. For example, if the project has a weekly report meeting, each task must not be longer than one week. Do you agree with this? What will you do if there is a task which cannot be broken down to that certain unit? Please state your opinion and rationale.

I agree because by breakdown tasks we can defining and organizing of the project task, estimate the cost and time of the project, and keep track the progress of the project. And if the problems has occur, we can quickly fix it. If the task cannot cannot be broken down and cannot done in time, the solutions that in my mind is to increase time for the task, or hold a meeting to get the people that involve in the task come to brainstorm and solve the problems.

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3. **[10 Marks]** Critical path analysis is usually an exam question for this course. Previous students used various techniques to calculate critical path, critical activities and slacks. Manual calculation, calculation based on activity diagram and PERT are examples of these techniques.

   3.1 [5 Marks] Please compare advantages and disadvantages for them.

Issue	Manual	Activity Diagram	PERT
1.Complexity	Simple	Simple	Complicate
2.Time	Estimate time	Duration	Duration Early start Early finish Late finish Late start
3.Cost .	Low	Medium	High
4.Limitation	Not accurate	Not suite for complex activities.	More complex more risk of mistakes.
5. Efficiency	Low.	High for simple data.	High for complex data.

   3.2 [5 Marks] Identify an appropriate scenario to implement the following technique:

   Manual calculation

It is suite for create a draft project, by using this method to draft a project plan to propose the project by use the engineering sense to estimate the estimate time for each activity.

   Activity diagram

It is suite for the small size of project, for example, create a website for a small grocery store.

   PERT

It is suite for the project that very complicate, for example, create a CRM system for an enterprise.

Quote of the Century:

"We will pass away together"

- Unknown –