**Assignment 1**

**Course Code: MANP 1433**

**Course Name: Software Project and Configuration Management**

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**Abstract**

Synopsis once everything has finished.

1. **Introduction**

Recently, the execution of information technology in government organizations, public services as well as other business services has gradually become a necessity. This situation has made the information technology field to grow rapidly as well as the software development project. The most crucial part of software development project is the project management. Project cost management is one of the most important aspects of project management. Project management includes applying information, skills, tools and methods to various activities to meet the project requirements [1]. Cost management is the project cost management process that includes estimating costs to develop the project budget as a deliverable to control project spending. Project cost management is important as it set a baseline for the project costs as it is one factors that determine the project success [2].

Continuous exploration and reasonable results of various software improvements have shown that estimating costs and effort at a high precision rate increases the shot of successful quality item. According to [3] , the actual cost estimation of a project become more complex with the increase in functionalities and size of the projects. This project cost management must be carried out through the whole phase in the software development life cycle to keep the budget on track based on the cost estimation. There are several techniques in doing the cost estimation which are algorithmic and non-algorithmic approach.

This paper basically will summarize on the understanding of software cost estimation and it’s important in software projects. We will also look into different cost estimation techniques together with their advantages and disadvantages. Based on paper [2], we will discuss on quantitative approach and framework used by the researcher in obtaining the data regarding the cost estimation.

1. **Literature Review**

In late 1960's it, became clear that the development of software are different from the manufacturing industry. This is because most of the software produce is either completed with over schedule and budget or a failed software project [4]. When a project is failed, it jeopardizes an organization's prospects and the company future. According to [5], in 2011 to 2015 only 29% information technology project were successful.

Based on estimation problem, studies found that the most common failure of the software project is poor communication, change in the requirements, not reviewing project progress on regular basis, unclear requirements and project scope, unrealistic expectations from client, absence of good project manager and therefore lead to budget and schedule overrun [2][3] . The root cause of the project failure is inaccurate estimations of software cost and effort as the software nowadays become more and more complex. The cost estimation management is important as it sets a baseline for the project cost to govern all the activity in the software development life cycles to keep the budget on track.

However, estimation of costs must be done at the early stage to determine the approximate price of the software. Although the estimation is performed at the early stage, an accurate estimation result is important throughout the software project development to keep the budget on track. There are some techniques such as algorithmic and a non-algorithmic approach has been studied by researchers to manage the cost estimation of the software project. This technique is depending on type of project and which phase of software development life cycles the project currently in.

Explain technique of the cost estimation management.

1. **Methodology (answering the assignment).**

Several steps were conducted during this study regarding software cost management as one of the most important factors in the development of software industry are as follow:

1. Step 1: Plan.

The assignment planning will help in focus and keeping me on track.

* Check how much the assignment is worth and what percentage of the final mark it is as this action will help in deciding how much time to spend on it.
* Check the marking schedule to see what the lecturer will look for when they mark the paper and how the marks are assign. This will help in understand what points that needs to be focus on. If there is no marking schedule check the assignment question to see if the information is there.
* Thinking and doing some research about what are the software project management issues focusing on cost estimation management.

1. Step 2: Analyse the question

First of all, I need to know what it means by reading it slowly and carefully before answering a question and trying to understand what is expected from me. I do some analysis on project cost management based on the questions given which are:

* I need to define what I understood from my readings of some academic articles, software cost estimation and its importance in a software project.
* I need to explore and discuss the different cost estimation techniques together with their advantages and disadvantages.
* I need to do some comment on the quantitative approach used by [2] which I need to elaborate and explain whether I agree or not that it is a suitable approach to be implemented in the related industry and justify my answers.
* I need to discuss on the framework found in [2] regarding cost estimation conceptual framework.

1. Step 3: Draft an outline

Drafting an outline will give a structure to follow when writing the assignment. In this assignment the draft is to follow based on the assignment guideline file in e-learning.

1. Step 4: Find information

Before starting writing, some research is carried out on the topic of project cost estimation management that is relevant and reliable information. Using an online UTM library database, this research is done. Once I have found the information, the next step is to evaluate it to make sure that it matches with assignment topics.

1. Step 5: Write.

It is time to complete the assignment and write it down once the necessary information is found.

1. Step 6: Edit and proofread.

I can improve it by editing and re-reading, once I have written the assignment.

1. **Answers to the question on project cost management**
2. The truth is, it is a wrong action to run projects without good project management. Project cost management is a series of activities within the project to estimate, allocate and control costs. It allows for the determination and approval of the project budget and control of spending. As I said earlier in this paper that most of the software’s produced nowadays are either a failed project or the project is completed but with overrun budget and schedule. Thus, it is very important to estimate costs accurately in order to run software development project efficiently. Project cost estimation management is important because it ensures that what is delivered is correct and offers real value against the business opportunity. Proper planning will reveal tasks, durations, resources required and other factors that will be taken into account during the cost estimation process. However, the project cost management is important as it set a baseline for projects costs as this will be govern the activities to keep the budget on track from the planning of the project until the end phase of the software project life cycles.
3. There is several cost estimation technique proposed by the researchers that can be divided into two parts which is the algorithmic and non-algorithmic technique.
4. Comment on the quantitative approach used by Che Rose et al., 2016). Explain whether you agree or not that it is a suitable approach to be implemented in the related industry and justify your reasons.
5. Discuss on the framework found in ( Che Rose et al., 2016).
6. **Conclusion**

Conclusion that can be made from this assignment paper's entire writing.

**Reference**

[1] S. M. A. Suliman and G. Kadoda, “Factors that influence software project cost and schedule estimation,” *Proc. 2017 Sudan Conf. Comput. Sci. Inf. Technol. SCCSIT 2017*, vol. 2017-Novem, pp. 1–9, 2018.

[2] N. Husna *et al.*, “A Quantitative Approach for Selecting a Software Cost Estimation Method,” *Open Int. J. Informatics (OIJI*, vol. 4, no. 1, pp. 10–24, 2016.

[3] S. Bilgaiyan, S. Mishra, and M. Das, “A Review of Software Cost Estimation in Agile Software Development Using Soft Computing Techniques,” *Proc. - Int. Conf. Comput. Intell. Networks*, vol. 2016-Janua, pp. 112–117, 2016.

[4] S. Islam, B. B. Pathik, M. H. Khan, and M. Habib, “Software test estimation tool: Comparable with COCOMOII model,” *IEEE Int. Conf. Ind. Eng. Eng. Manag.*, vol. 2016-Decem, pp. 204–208, 2016.

[5] I. Kurniawan, A. A. Arman, and S. Mardiyanto, “Development of analogy-based estimation method for software development cost estimation in government agencies,” *Proc. 2017 6th Int. Conf. Electr. Eng. Informatics Sustain. Soc. Through Digit. Innov. ICEEI 2017*, vol. 2017-Novem, pp. 1–6, 2018.

[6] https://www.openpolytechnic.ac.nz/current-students/study-tips-and%20techniques/assignments/step-by-step-guide-to-assignment-writing/.

[7] https://www.brighthubpm.com/project-planning/20143-project-planning-as-a-basis-for-cost-estimating/