

COMP313 – Project Management

Exercise 1

1. What are the attributes of a project? [12%]

The attributes of a projects:

- Has a unique purpose -- creating a unique product, service or result.
- Is temporary and has a time frame.
- Should have a primary customer or sponsor.
- Is developed using progressive elaboration.
- Requires resources, often from various areas.
- Involves uncertainty.

How does a “Project” differentiate from an “Operation”? Give two examples for each of the two.

- A project is a temporary endeavor undertaken to create a unique product, service, or result, whereas an operation is a work done to sustain the on-going business and/or to produce repetitive products and services.
- Example for project: Developing a software for a company; Investigating an accident; Filming a movie.
- Example for operation: Serving a line of customers; Operating a railway business; Developing a game program for my own interest.

2. Assume that the planned scope, time and cost of a software development project have been agreed by the sponsor and project manager at the beginning. In the middle of the course of project development, the sponsor proposes a change as stated in the following cases, what would you counter-propose in terms of scope, time and cost? Justify your answers. [12%]

2.1 The sponsor decides to extend the scope by adding more functions.

Since the scope is extended, time and cost should be higher accordingly, because resources, time and effort should be applied more to work on a bigger scope.

2.2 Sponsor requests to finish the project much earlier.

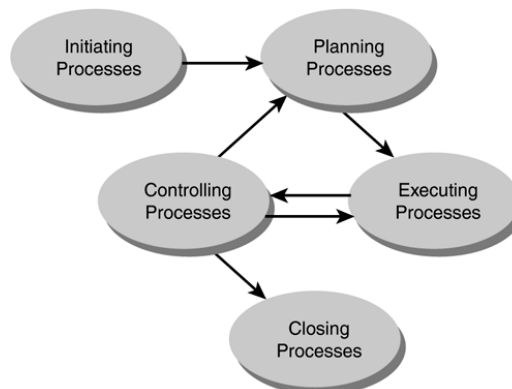
If the sponsor further requests to get it down much earlier without changing the scope, the only variable is cost. The cost would be much higher since you need to re-plan the work schedule and hire more people and other resources. Besides, quality will be at risk.

3. List 4 major reasons for terminating a project. Give one example for any two of them. [12%]

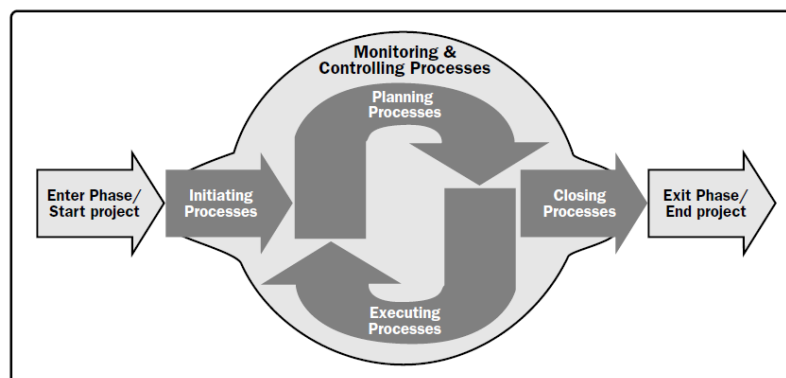
- The project’s objectives have been achieved. (Ex: The software is completed and user requirements have been fulfilled; The rescue team has saved all the people in a rescue operation.)
- Its objectives will not or cannot be met anymore. (Ex. In filming a movie, the main character suddenly quits and no replacement.)
- The need for the project no longer exists. (Ex. You develop a financial software system, but your company has been closed down.)

- The client (customer, sponsor or champion*) wishes to terminate the project. (Ex. A celebration is cancelled due to a disaster.)

4. Draw a diagram to illustrate the life cycle of a project with the 5 phases. [12%]



or



5. Before initiating the project, the sponsor/client may have some preferential objectives to achieve, which poses an influence to the prioritization of the three constraints/factors. For instance, in the midst of a severe pandemic, China had declared that it would develop a temporary hospital in 10 days to serve an urgent use. The hospital was designed to accommodate 5,000 patients who were highly contagious. Briefly discuss how they plan for the project with the triple constraints with regards to its primal objectives. [12%]

In this case, the project manager would prioritize time over the cost while the scope must stay on the top since the project is very large and the sponsor requests to accomplish it in a short time without any delay. Thus, the priority of the 3 triple factors are in Scope, Time and Cost.

6. List the typical contents that must be contained in a project charter.

A project charter contains:

6. Describe the essential purpose of a project charter. [7%]

To formally authorize a project or a phase and document initial requirements which satisfy the stakeholder's needs and expectations.

7. In general, list the three most influential factors to the project success ~~and briefly explain why.~~ [9%]

1. User involvement
2. Executive support
3. Clear business objectives

8. Before a project starts, what major documents must be in place? What do they contain? After the project is accomplished, what should be produced? [12%]

Before a project starts, there must be:

- Project Statement of Work (SOW) – contains the project ideas and problems, user requirements
- Business Case – contains the business analysis of the project, constraints (scope, time, cost), resources (HR, money, equipment etc.)
- Contract / Agreements.

After the project is accomplished, the following items should be produced:

- Product/service or result
- Lessons learned

9. Among the 10 knowledge areas, some are used to evaluate the success of a project. Describe the relevant knowledge areas using an example of a software system development. [12%]

The 4 core knowledge areas lead to specific project objectives are Scope, Schedule (time), Cost, and Quality.

In a project of software system development:

- Scope describes whether the project has completed all the functions.
- Schedule describes whether the project has completed on time.
- Cost describe whether the project has completed on budget.
- Quality describe how well the quality of the system matches with end-users' expectation.