Lab # 02

Stepwise Software Project Planning

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2.1 Objective:

To familiarize the students with the different steps involved in the planning of different software projects.

2.2 Scope:

The student should know the following at the end of this lab:
1. What is a project plan
2. What are the different steps involved in software project planning
3. Software project assignment for this course

2.3 Useful Concept

Project Plan

A project plan, according to the Project Management Body of Knowledge, is:

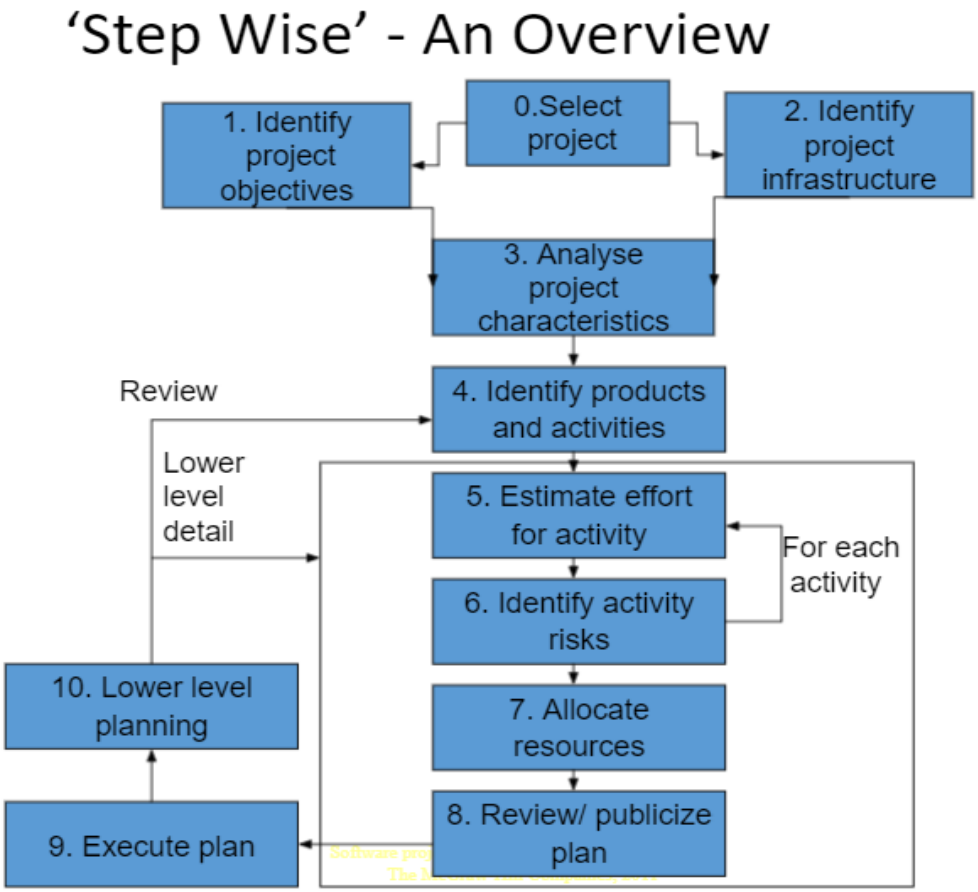
"a formal, approved document used to guide both project execution and project control. The main uses of the project plan are to document planning assumptions and decisions, facilitate communication among stakeholders, and document approved scope, cost, and schedule baselines. A project plan may be shortened or detailed."

Software Project Planning

- Software project management process begins with project planning
- Objective of software project planning are to provide a framework for manager to make reasonable estimates of resources, costs and schedules
- Guides the execution of the project, coordinating the activities.
- Facilitates better communication between the project stakeholders.
- Provides a means of tracking and monitoring the progress.
- Provides a detailed documentation regarding planning decisions.
- Project planning is significant for the success of the project.
- Careful planning helps prevent costly mistakes.
- Good planning is the key to meet the project objectives within defined time and budget.

Stepwise Project Planning

- Many different techniques can be used for project planning, but we will consider the stepwise approach



This is an overview of the main steps, details of which will be discussed in the following overheads:

- **0 Select project:**

There must be some process by which the project to be executed was selected.

- **1 Identify project objectives:**

It is important that at the outset the main stakeholders are all aware of the precise objectives of the project.

- **2 Identify project infrastructure**:

This may not be a significant step where you are working on an in-house project in a very familiar environment. However, where the project is being carried out for external clients then you may need to investigate the characteristics of the environment in which the project is to be carried out.

- **3 Analyse project characteristics:**

Different types of projects will need different technical and management approaches.

Eg: a project to implement control software embedded in industrial equipment will need a different set of methods than a project to implement a business information system. A multimedia application would again need a different set of activities

- **4 Identify products and activities**:

With software projects, it is best to start by listing the products, both deliverable and intermediate, to be created. The activities needed to create the products can then be identified.

- **5 Estimate effort for activity.**
- **6 Identify activity risks:**

Having assessed the amount of effort and the elapsed time for a project, the reasons why these might be varied during the actual execution of the project need to be considered.

Where there is a very high risk of additional effort/time being needed then actions to reduce this risk may be formulated.

- **7 Allocate resources:**

With software projects, these resources will mainly be staff, but could be equipment etc.

- **8 Review/publicize**

It is no good having a plan if no one knows about it.

- **9 Execute Plan**
- **10 Lower-level planning**

2.4 Exercise for Lab

- The students are required to search an appropriate project idea and form a group for the course of this subject.