Software Project Management

SW Project Planning

Software project is a complete methodology of programming advancement from requirement gathering to testing and support completed by execution procedures in a specific period in order to achieve intended software product.

SDLC

1. SRS(system requirement specification): This phase will be completed in between client and project manager of that software development product.

a. Feasibility of the requirement : Raw SRS then Feasible SRS

b. Time line

c. Validity

d. Cost estimation

2. Designing Architecture
    a. Low Level Design
    b. High Level Design
3. Coding
    a. IDE
    b. Coding Standard
    c. Scalable Code
    d. Version Control
4. Testing
    a. System Testing

    b. Manual Testing
    c. Automated Testing
5. Deployment, Maintenance and Support

Software Development is a sort of all new streams of business and there is an involvement of structural programming items. Programming items are customised to customer needs/necessity. Business and ecological imperative brings risk in software development, so we need software project management to follow the effective path for software development.

Software project management

a. Software manager is responsible for planning and scheduling project development.
b. They manage the work to ensure that it is completed to the required standard.
c. They monitor the progress to check the event is on time and within the budget.
d. Planning should incorporate the major issues like size and cost estimation scheduling

Along with these, project manager is also responsible for

a. Scope of work to be completed
b. Risk Analysis
c. The resources required
d. Project accomplishment
e. Everything should be recorded.

a. Dev Time
b. Resource requirement

Estimation

Project estimation is a piece of information given to the client by the project manager after a discussion and decision over the feasibility, Planning, Scheduling of the project.

Types of estimation

- Cost estimation
- Resource estimation
- Size estimation
- And timeline of the project.

Need of Estimation

Estimation is needed for financial planning, Time line Creation, Risk identification

Who does the estimation

- Project Manager
- Subject Matter Expert
- Team Leader
- Business Analyst
- Risk Analyst
- Developer
- Client

There are three constraints for project management. They are:

Cost, Scope and Time.

Cost Constraint includes the overall project budget and anything of financial value required to get the job done.

Items that may affect the overall cost includes-

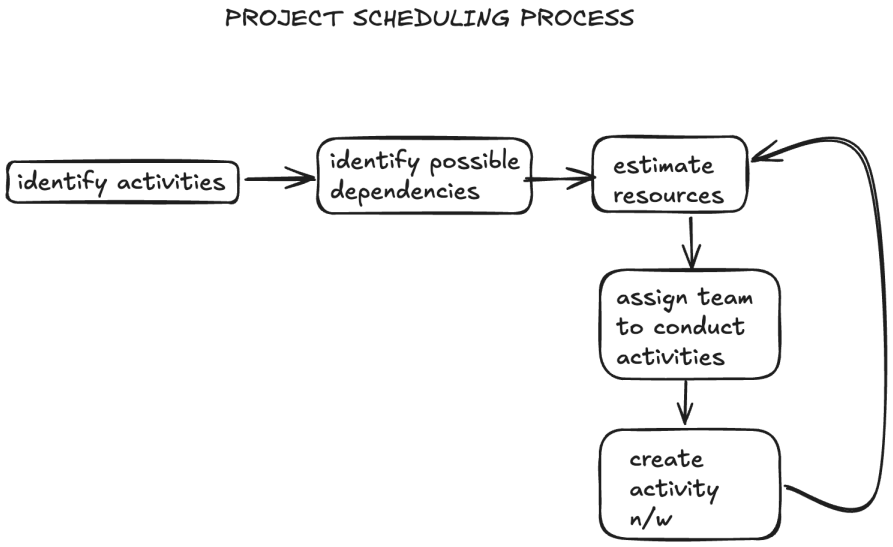
- Equipments
- Salary
- Facility
- Repair
- Material

Cost Estimation is required to justify the money or the financial condition to complete the project. It is crucial to accurately estimate project's cost, so it is not a one-and-done task.

Unit-2 project organization and scheduling

Project scheduling is a mechanism that is used to communicate and know about that task that are needed

- organisational resource to be given or allocated to this task
- has to be done or performed
- what time duration or time framework is needed to perform the task
- scheduling cycle of project cycle



The process of project scheduling is being carried out by the PM in a coherent sequence.

Problems arised during project development stage

- Manpower estimation and retention
- Technical defaults
- Timeline

Benefits of project scheduling

- It simply ensures that everyone remains on the same page as per as task get completed, dependencies and deadlines.
- It helps in identifying issues early and concern such as lack or unavailability of resources.
- It also helps to identify the relationships and to monitor process

- It provides effective budget management and risk mitigation.

Work Breakdown Structure

Work breakdown structure is a process or mechanism to divide a large and complex project into simpler, manageable and independent task. The root of this structure is labelled by project name itself.

Types of WBS: Phase Based(Product based), Deliverable based(Service based)

Considerations:

i. The project managers and top level management identifies the main deliverables of the project.
ii. The main deliverables are broken down into smaller higher level tasks.
iii. This complete process is done recursively to produce much smaller independent task.
iv. It depends on the project manager and team that upto which level of detail they want to break down their project.

Network Diagrams

They are required to represent the ongoing development of a project to different stakeholders using various types of charts.

i. PERT Chart: It is responsible for organising, scheduling and timeline representation of a project.
ii. Grant Chart:

iii. Bar Chart

iv. CPM

Unit 3

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