UNIT-IV

project planning, scheduling, Monitoring & Implementation:-

project planning:- project planning is a procedural step in project management, where required documentation is created to ensure successful project completion. Documentation includes all actions required to define, prepare, integrate and coordinate additional plans. The project plan define how the project is executed, monitored, controlled and closed.

project planning is a discipline addressing how to complete a project in a certain timeframe. one view of project planning divides the activity into these steps:-

- Set a measurable objectives.
- Identifying deliverables
- scheduling
- planning Tasks
- Setting project goals.
- creating Supporting plans.
- creating project schedule..

Nature of project planning:-

primary function:-

function of management largely depends upon planning. It provides the basic foundation from which all future management functions arise.

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Goal-oriented:-

plans arise from objectives. objectives provides guidlines for planning.

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Continuous process :-

It is an on-going process of adapting the organization with the change in business.

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flexible :-

planning selects the best alternatives based on certain assumptions. There is possibility of dead log in the functions of the management. It has one more alternative to suit future situation.

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Managerial function :-

It is found at all levels and department of an organisation. It involves choosing the future course of action from alternatives.

* ~~function~~ Need of project planning :-

i) It increase project performance and success rate.
ii) Save money.
iii) Improve team communication
iv) If planning good then the loss of resources will less.
v) Easy to track project goals and results.
vi) project planning plays an essential role in helping guide stakeholders, sponsors, teams and the project manager.
vii) planning is needed to identify desired goals, reduce risks.
viii) To eliminate or reduce uncertainty.
ix) To provide a basis for monitoring and controlling work.

function of project planning :-

i) Defining project scope :- Clearly outlining the project's objectives, deliverables and boundaries.

ii) Setting goals and objectives :- It define the project scope, goals, and objectives clearly, ensuring everyone involved understands what need to be achieved.

iii) Estimating Resources :- It helps in identifying and estimating the resources required (time, money, manpower, equipment) to complete the project successfully.

iv) Scheduling :- It involves creating a timeline or schedule that outlines tasks, milestones and deadlines, ensuring efficient use of time and resources.

v) Risk Management :- It identifies potential risks and develop stategies to mitigate them, reducing the project failures.

vi) Communication and Coordination :- It facilitates communication among stakeholders, ensuring everyone is on the same page regarding responsibilities, progress and changes.

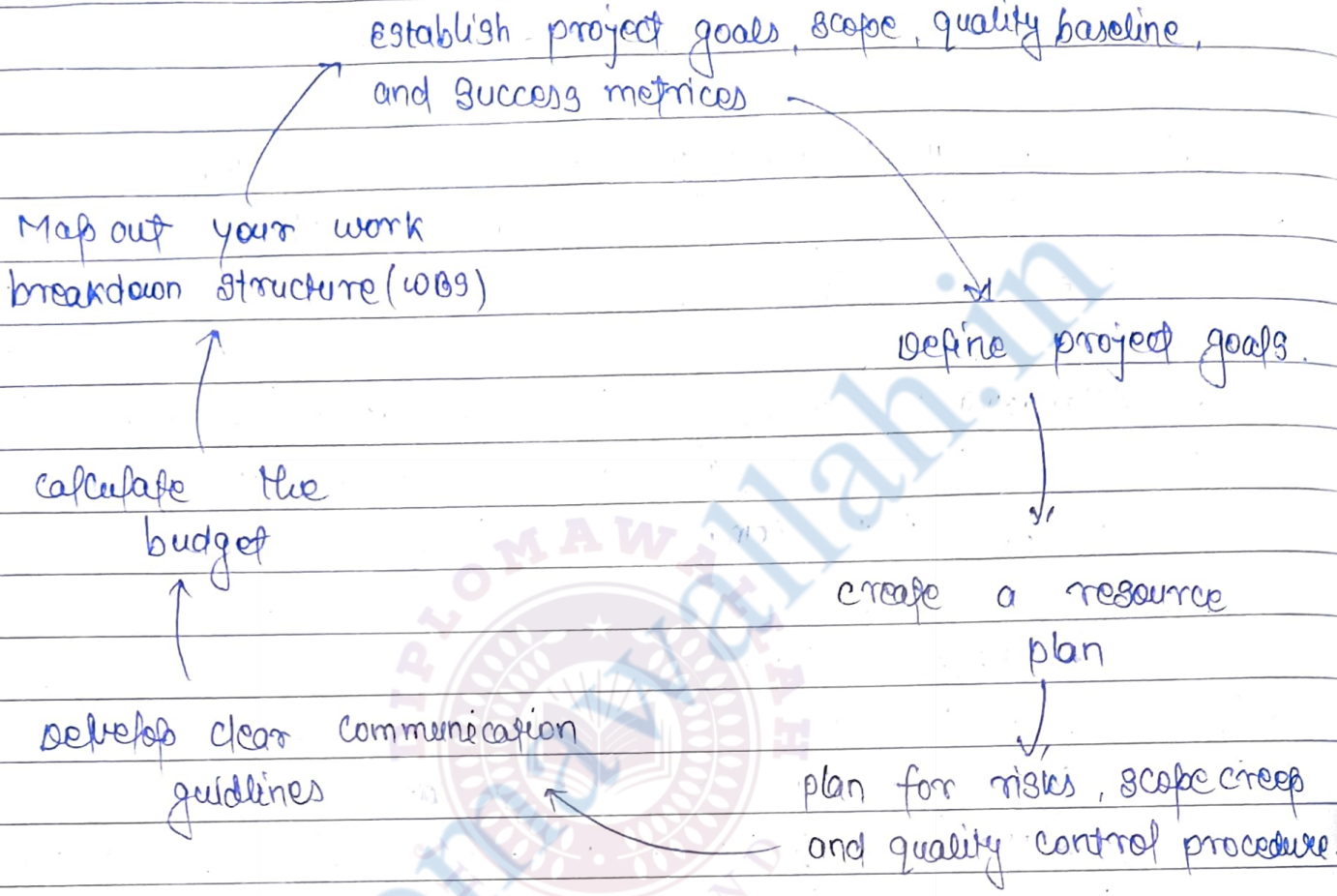
vii) Monitoring and controlling :- To monitor progress and performance against the plan, and taking corrective action if deviations occurs in project.

viii) Team management :- Building, leading and managing the project team.

ix) Quality planning :- Define quality standards and processes.

x) Budgeting and cost management :- establishing a budget and controlling expenses.

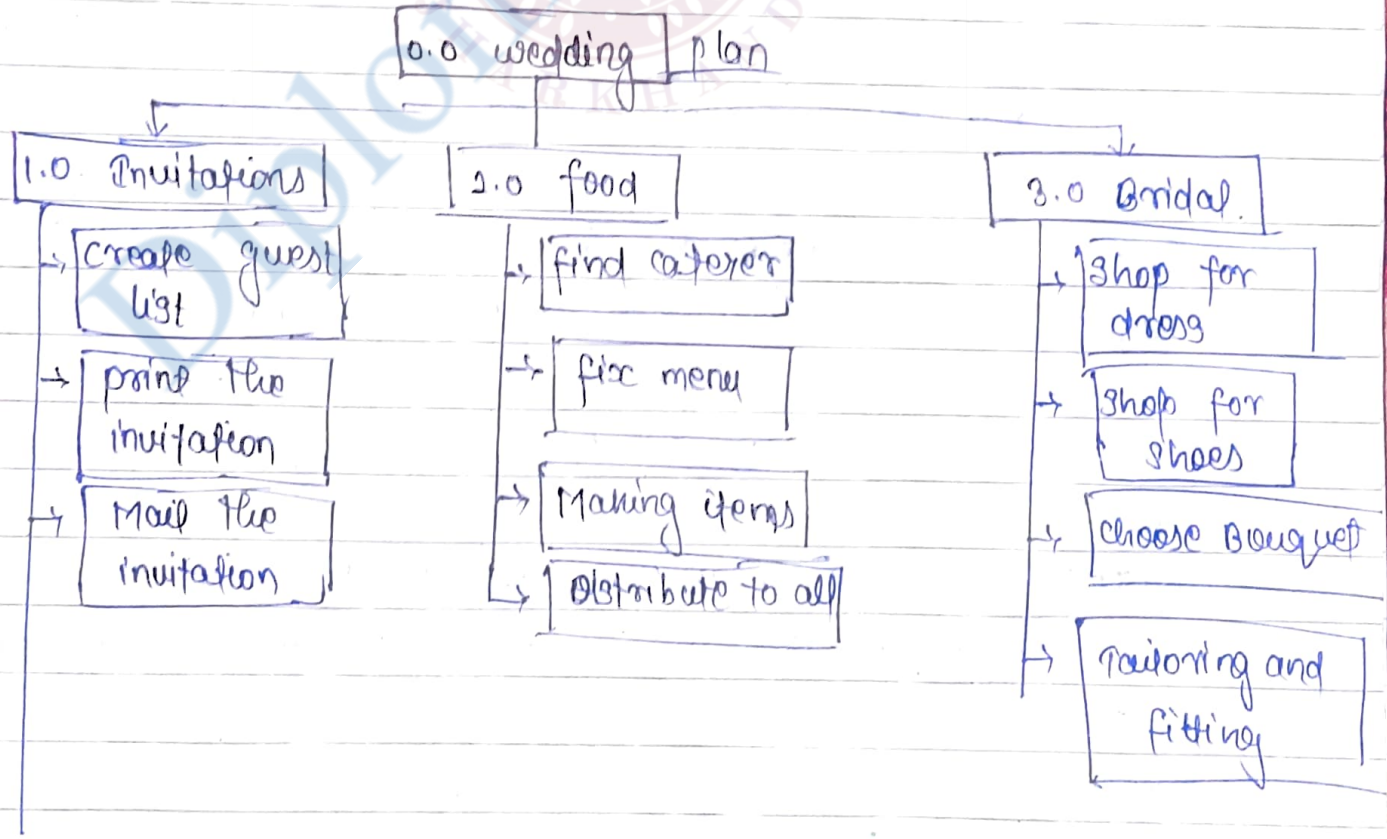
steps in project planning



Describe project planning structure:-

1. Name of the project.
   - Describes the content, memorable, short
2. Background of the project.
   - what is the content ? why the project does needs to be done?
   - Assess, explain and justify the need.
   - what is the theoretical background.
3. Aims and objectives of the project.
   - Name and explain clearly the main goals and sub goals of the project.

4. Target group of the project.
   - for whom is the project done and what for?
5. Implementation and the timetable of the project.
   - Explain the procedures that you will use to reach your goals.
   - How do you plan to implement the project?
   - Schedule your implementation.
6. Resources of the project.
   - Define the literature and references you will use, use of expert, technology resources and possible funding.
7. ~~Expected~~ Monitoring ~~of~~ and evaluation of the project.
   - How do you plan to monitor and evaluate ~~the~~ your work?
8. Expected results of the project.
   - what are the expected results?
9. Reporting the Results?
   - How will you report your results?



* What are project objectives?

Project objectives are specific measurable /graph represents outcomes that a project aims to achieve within a defined timeframe. They clarify the projects purpose and guide the team towards ~~suss~~ successful completion.

* Tools of project planning :-

Project planning tools help everyone concerned keep ~~track~~ track of project requirement and ~~dealin~~ deadline. Some of the most popular project planning tools include the following :-

1). Gantt Chart :-

- A Gantt chart is a useful graphical tool which shows activities, tasks, different phases, jobs and resources ~~performed~~ in project management performed against time.
- It is also known as visual representation of a project where the activities are broken down and displayed on a chart which makes ~~it~~ it is easy to understand.
- Each task is represented by a bar that shows the time required for the project. The bar represents or shows percentage of task have been completed. It also show dependencies, which simply means the inter linkages betn various activities in the project.
- Gantt chart is a useful tool in planning and scheduling the project. It keeps the management updated as to when the project will get completed. It also keeps the management informed about any addition resources that are required and manage dependencies betn tasks.

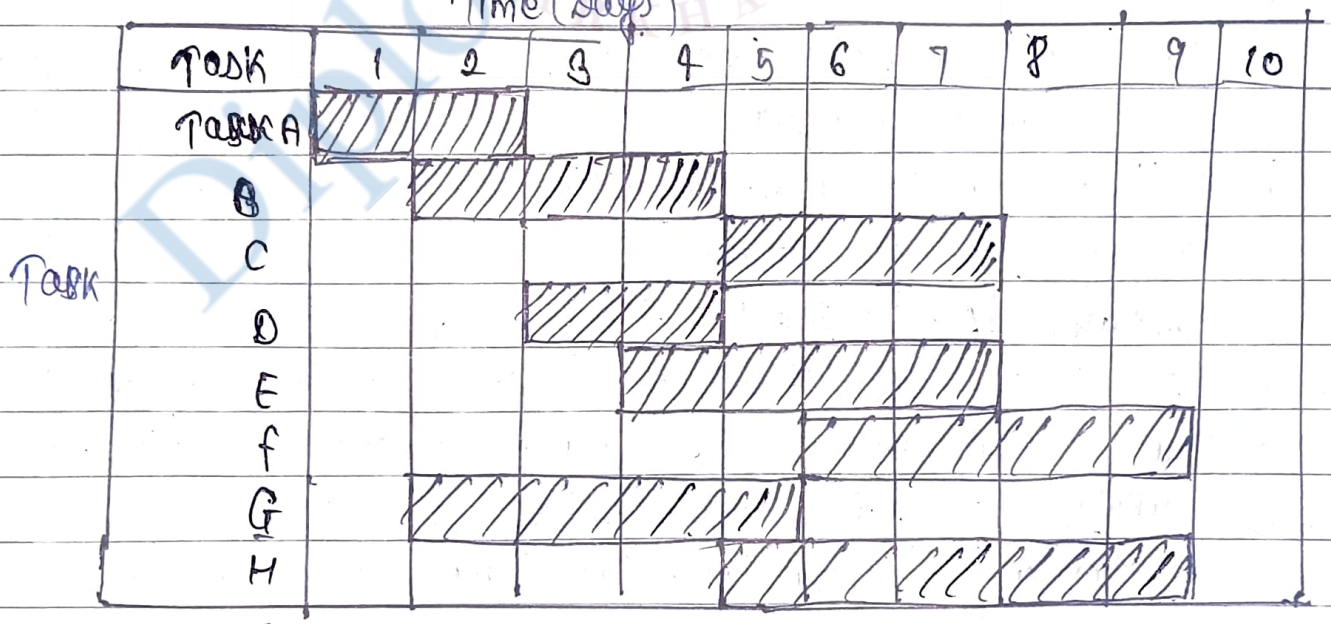
- A Gantt chart is used ~~for~~ to establish the initial project schedule. which is going to do what, when and how long it will take.
- Monitor and report progress - helps you to stay on schedule.
- control and communicate the schedule - clear visuals for stakeholders and participants

Advantages :-

- It is easy to understand.
- It can be used to show progress.
- It can be used for manpower planning.

Disadvantages :-

- It cannot show inter-relationship among activities on large complete projects.
- There may be physical limit to the size of the bar chart.
- it cannot easily cope with frequent changes or updating.



2. CPM (critical path Method) :-

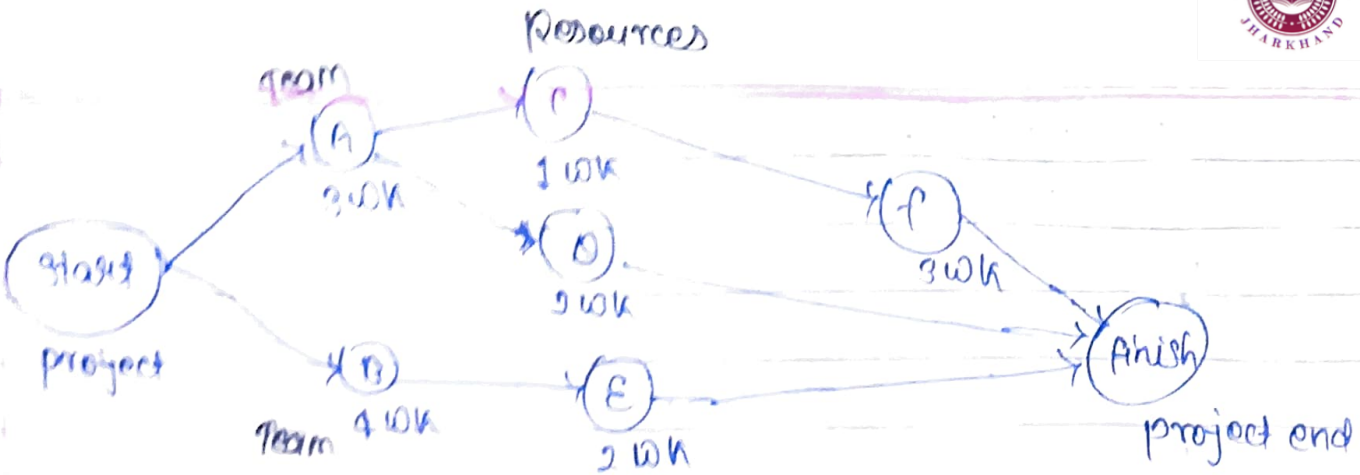
- It was developed by J.E Kelly of Remington-Rand and M.R walker of Dupont to aid in scheduling maintenance shutdowns in chemical processing plants.
- CPM is a crucial tool for determining the progress of the project to ensure that the project is on schedule.
- It is based on the concept of critical path and was designed to focus on the time and resources, particularly cost, necessary to complete the activities of a project.
- CPM is commonly used with all forms of projects, including construction, aerospace and defence, software development, research project, product development, engineering and plant maintenance, among others.
- CPM has more used tool than any other network scheduling tool.

Benefits / Advantages :-

- It provides a graphical view of the project.
- predicts the time required to complete the project.
- Show which activities are critical to maintaining the schedule and which are not.
- Evaluates which activities can run parallel to each other.
- widely used in industry.

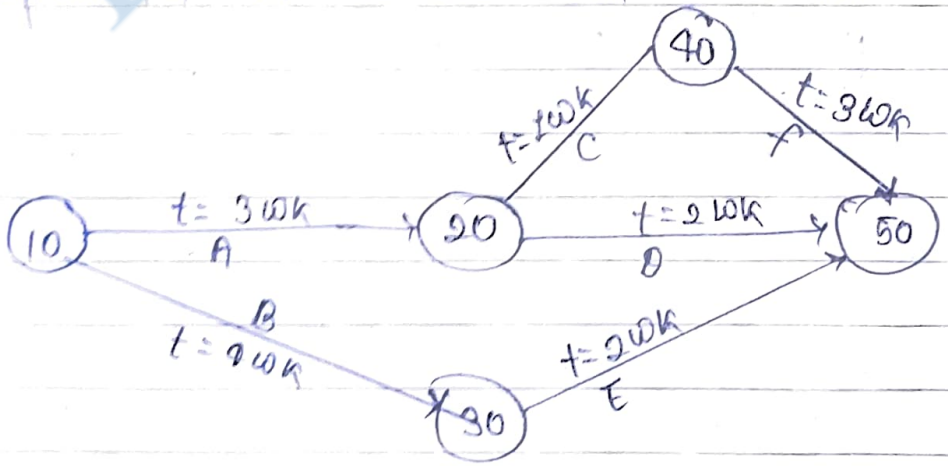
Limitation / Disadvantages :-

- CPM can be complicated and complex for larger project.
- The critical path is not always clear and needs to be calculated carefully.
- Estimating activity completion time can be difficult.



3. PERT chart :- The program Evaluation and Review Technique

- It is a network model that allow for randomness in activity completion times.
- It helps in analysing the tasks to complete the task.
- PERT simplifies the planning and scheduling of large and complex project.
- The PERT was developed in 1950 for the ~~U.S Navy~~ US Navy's polaris project having thousands of contractors. It has potential to reduce both the time and cost required to complete a project.
- The PERT is typically represented as an activity on arc ~~method~~ network, in which the activities are represented on the lines and milestones on the node.



Advantages:-

- It uses three estimates per activity - optimistic, pessimistic and most likely.
- It can be drawn only using AOA diagrams.
- It can have dummy events.
- PERT encourage management control by exception.
- It enables forward-working control.
- PERT can be effectively used for re-scheduling the activities.

Limitations:-

- It is a time-consuming and expensive technique.
- It is based on Beta ~~dis~~ Distribution and the assumption of Beta Distribution may not always be true.
- It is not useful for routine planning of recurring events.

* Time monitoring efforts:-

A project, by definition, has an official end data. In order to meet this data, every project needs a schedule and to manage their own time and the team's time to ensure that the schedule is met. The time management is so critical, without it, project will not get done on time.

* project scheduling :-

A project management schedule is resource control and management tool, that identifies activities for the entire project based on resources such as time scales, budget and dependency requirements.

In other word, the project management schedule is a plan for the completion of a project, a list of planned activities, to achieve project goals through efficient use of available resources.

- project scheduling is the process of identifying and organizing the tasks of a project into a sequence of events ensuring a harmonious completion of the venture.

objective of project scheduling :-

- completing the project as early as possible by determining the earliest start and finish of each activity.
- calculating the likelihood a project will be completed within a certain time period.
- finding the minimum cost schedule need to complete the project by a certain data.
- progress control and investing the results of delay's in activity completion times.

Advantages :-

- It simply ensures that everyone remains on same page as far as tasks get completed and deadline.
- It helps in identifying the lack of resources.
- It also helps to identify relationships and to monitor process.
- It provides effective budget management and risk mitigation.

* Project Evaluation :-

Project Evaluation is a step-by-step process of collecting, recording and organising information about project results, including short-term outputs (immediate results of activities) and longer-term project outcomes (change in behaviour, practice or policy resulting from the project).

Importance of project evaluation :-

Evaluating project results is helpful in providing answers to key questions like :-

- what progress has been made ?
- were the desired outcomes achieved ? why ?
- are there ways that project activities can be refined to achieve better outcomes ?
- How effective is the development project ?
- Do the project results justify the project inputs ?