

Project scheduling.

Why - project scheduling?

Following are the issues for which a project must be scheduled

- *) project is not completed on schedule
 - *) changing customer requirement
 - *) Technical difficulty are generated
 - *) Miss Communication among project management
 - *) Essential S/W & H/W may be delivered ~~late~~ late.
 - *) on large project S/W engineer perform multiple tasks parallel.
 - *) risk is not considered at begning of project -
- TO solve the ^{above} issues, project scheduling must be required.

What is project scheduling?

- *) It is the responsible activity of project Manager.
- *) Project Manager separate total work task in project into different activities called work breakdown structure (WBS).
- *) Project Manager estimate time & Resource Required to complete activities.
- *) Effective project scheduling leads to success of project, Reduce Cost & increased customer satisfaction.

WORK Breakdown Structure.

Work Breakdown Structure (WBS)

- * It is used to recursively decompose a given set of activities into smaller activities.
- * It provides a notation for representing the activities, ~~sub-task~~ sub-activities & tasks need to be carried out in order to solve a problem.
- * The root of the Tree is labeled by Project name.
- * Each ~~of~~ node of the tree is broken down into smaller activities called children.
- * The time frame when each activity is to be performed is to be determined.
- * The end of each activity is called Milestone.

Techniques of Project Scheduling.

CPM (Critical path)

- By Forward Pass
- By Backward Pass

PERT (Program Evaluation or Review Technique)

- most likely time (M)
- optimistic time (b)
- Pessimistic time (a) (α)

Most likely :- Actual time ^{which is} completed in less time

optimistic :- The activity

pessimistic :- Activity taking longer time than most likely time.

~~Single Expected duration (b) =~~ ~~$\frac{a+b+4M}{6}$~~