

OBJECTIVES OF ACTIVITY PLANNING

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- The objective of software project planning is to provide a framework that enables the manager to make reasonable estimates of resources, cost, and schedule.

OBJECTIVES OF ACTIVITY PLANNING CONT'D

1. **Feasibility assessment:-** Is the project possible within required timescales and resource constraints?
2. **Resource Allocation:-** What are the most effective ways of allocating resources to the project. When should the resources be available.
3. **Detailed Costing:-** How much will the project cost and when is that expenditure likely to take place?
4. **Motivation:-** Providing targets and being seen to monitor achievement against targets is an effective way of motivating staff.
5. **Co-ordination:-** When do the staff in different departments need to be available to work on a particular project.

PROJECT SCHEDULES

- Before work commences on a project or, possibly, a stage of a larger project, the project plan must be developed to the level of showing dates when each activity should start and finish and when and how much of each resources will be required.
- Once the plan has been refined to this level of detail we call it a project schedule.

PROJECT SCHEDULES CONT'D

- Creating a project schedule comprises four main stages.
- The first step in producing the plan is to decide what activities need to be carried out and in what order they are to be done.
- The ideal activity plan will then be the subject of an activity risk analysis, aimed at identifying potential problems.
- The third step is resource allocation.
- The final step is schedule production.

PROJECTS AND ACTIVITIES

- **Defining activities**
 - ✓ A project is composed of a number of related activities
 - ✓ A project may start when at least one of its activities is ready to start
 - ✓ A project will be completed when all of its activities have been completed
 - ✓ An activity must have a clear start and a clear stop
 - ✓ An activity should have a duration
 - ✓ Some activities may require that other activities are completed before they can begin

PROJECTS AND ACTIVITIES CONT'D

- **Identifying activities**

There are three approaches to identifying the activities or tasks that make up a project – the activity-based approach, the product-based approach and the hybrid approach.

1. The activity-based approach

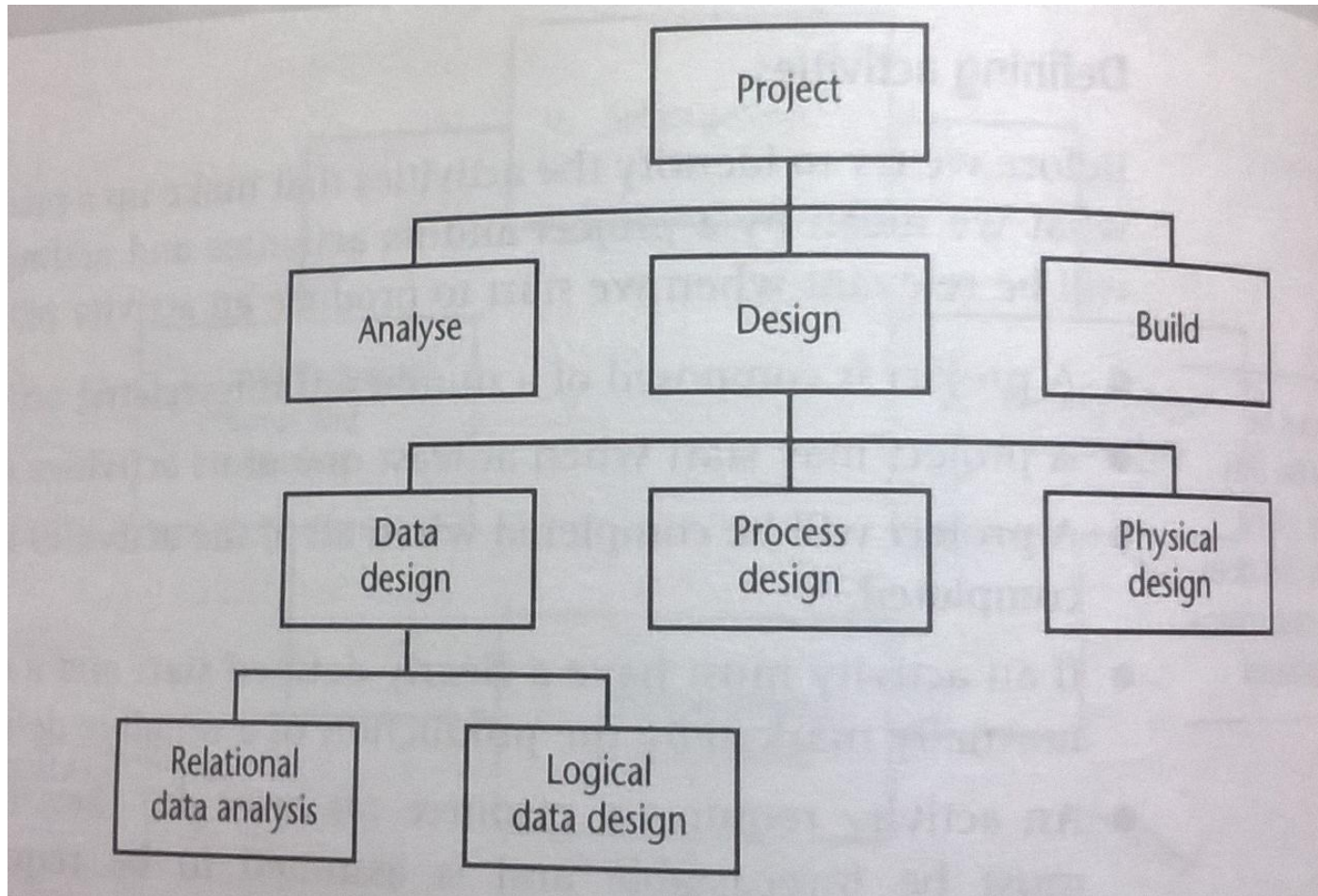
The activity-based approach consists of creating a list of all the activities that the project is thought to involve.

The activity-based approach

CONT'D

- When listing activities, particularly for a large project, it might be helpful to sub-divide the project into the main life-style stages and consider each separately.
- Rather than doing this in ad hoc manner, with the obvious risks of omitting or double-counting tasks, a much favoured way of generating a tasks list is to create a Work Breakdown Structure(WBS).

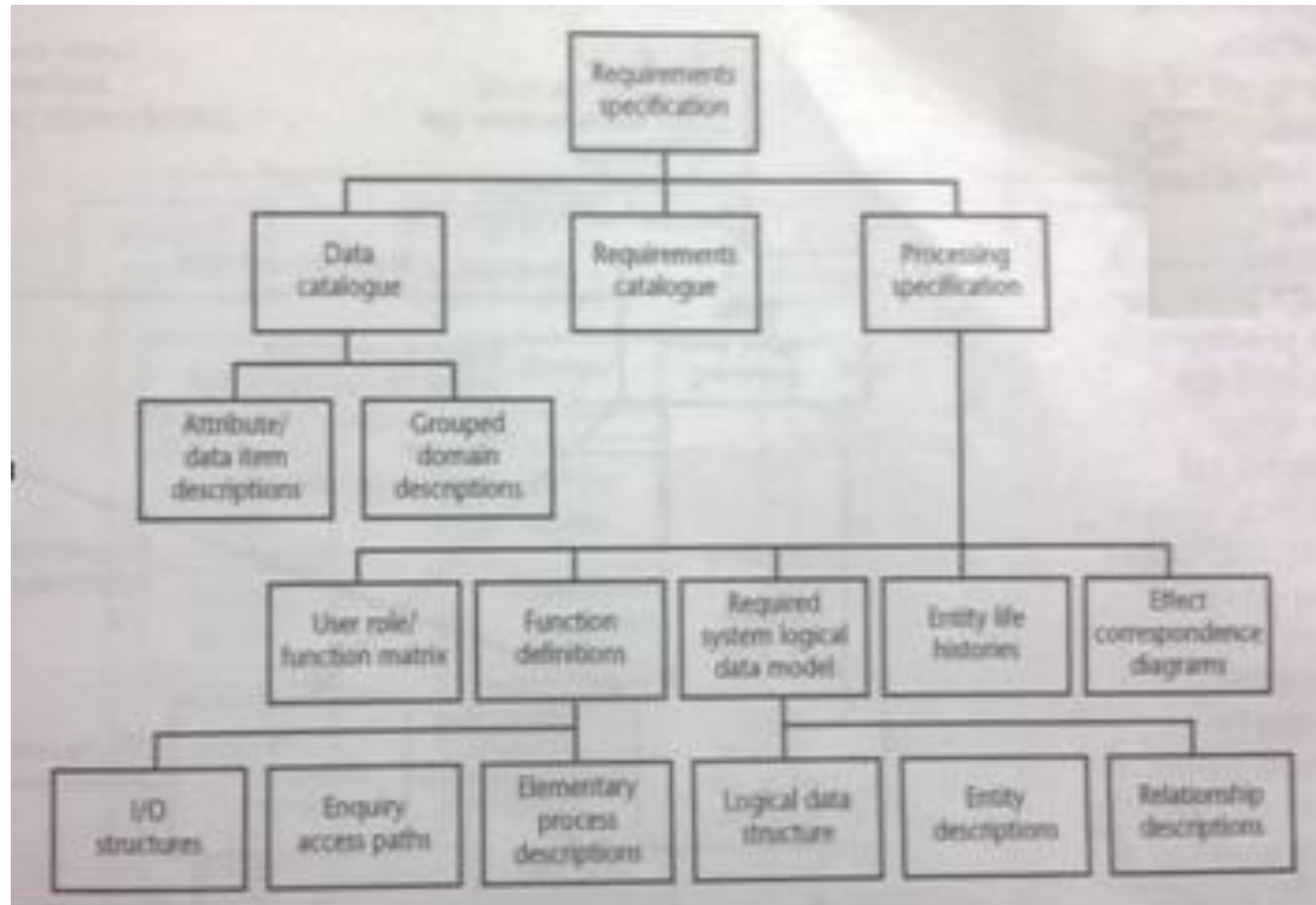
The activity-based approach



The Product-based approach

- It consist of producing a Product Breakdown Structure and a product flow diagram.
- PDF indicated, for each product, which other products are required as inputs.
- The PDF can therefore be easily transformed into an ordered list of activities by identifying the transformation that turn some products into others.

The Product-based approach



The hybrid approach

- The WBS is based entirely on a structuring of activities.
- The figure on the next slide is based on a simple list of final deliverables and, for each deliverable, a set of activities required to produce that project.
- In a project of any size, it would be beneficial to introduce additional levels- structuring is product and activities.

The hybrid approach

