

PHASE III PROJECT

(PRELIMINARY DESIGN)

Topic	Marks	Details
Feature/characteristics identification	5	Refer point 1 given below
Constraints Identification	5	Refer point 2 given below
Analysis of features and finalization subject to constraints	10	Refer point 3 given below
Design selection	10	Refer point 4 given below

1. Feature/characteristics identification

Planning is the strong keys to make the project more effective and well utilization of resources to achieve the goal. In this, Students have to identify characteristics of the project like how objectives are important for achieving the goal, the total time duration of the project, calculated risk, and uncertainty of the project, the total estimated cost of the project, etc. are essential characteristics of the project

Characteristics of a Project: Projects are not homogeneous. Each project is different in itself. The distinctive characteristics of a project are as follows (**according to your Problem statement specify details in these points**):

1. Objectives

Every project is started with some objective or goal viz. time, budget, quality, and quantity, when objectives are fulfilled project cause existing. You can initially define the objectives of the project what actually need to achieve. Objectives are the key characteristics of the project where you will see the progress of the project and time to time analysis will show you the result of how much you have achieved.

2. Single entity –

A project is one whole thing. This means that in a project although different people contribute still is recognized as a single entity. The teams are often specifically assembled for a single project.

3. Life Span –

No project can be ceaseless and indefinite. It must have one end beyond which it cannot proceed. Every project is invariably time-bound. At the time of planning, you will see the time phase of the project where the team can work independently on the project modules. Let's consider an example project that is divided into three modules let's say A, B, and C. If the total time span of a project is 5 months then you can set the time span for modules independently like A can complete in 2

months and also B can complete in 2 months and C can complete in 1 month as per requirement.

4. Require funds –

Every project needs funds to reach the endpoint. Without adequate funds, no project can be successfully implemented. Cost estimation is one of the essential factors for any organization. So, calculating in advance the required funds for the project will be very impactful.

5. Life Cycle –

Each project has a life cycle with different stages like start, growth, maturity, and decay. A project has to pass through different stages to get itself completed. Let's consider an example where the project is related to software development then you can say SDLC (Software Development lifecycle) will be the life cycle of the project where you will see many stages like planning, defining, designing, building, testing, and deployment, etc.

6. Team Spirit –

Team spirit is required to get the project completed because the project constitutes different members having different characteristics and from various disciplines. But to achieve common goal harmony, missionary zeal, team spirit is necessary.

7. Risk and Uncertainty –

The project is generally based on forecasting. So risk and uncertainty are always associated with projects. There will be a high degree of risk in those project which are not properly defined. Only the degree of control over risk and uncertainty varies with the project being conceived based on information available.

8. Directions –

Project is always performed according to the directions given by the customers with regard to time, quality and quantity, etc. The convenience of the supply sides of economics such as labor availability ore resources and managerial talent etc. are all secondary concerns, primary being the customer requirement.

9. Uniqueness –

Each project is unique in itself, and it's having own features. No two projects are similar even if the type of organization is the same. The uniqueness of the project can measure by considering the many factors like objectives, features of the project, application of the project, etc.

10. Flexibility –

Change and project are synonymous. A project sees many changes throughout its life span. These changes can make projects more dynamic and flexible.

11. Sub-Contracting –

Sub-contracting is a subset of every project and without which no project can be completed unless it is a proprietary firm or tiny in nature. The more complexity of a project the more will be the extent of contracting. Every project needs the help of an outsider consultant, engineer, or expert in that field.

12. Cost –

If the quality of the project is to be changed there could be an impact on the cost of the project. The cost could increase if more resources are required to complete the project quicker.

2. Constraints Identification

There are six major constraints in project management to consider.

1. Time: The project's completion, or final due date for deliverables. Time constraints can be negotiated but can never be overcome completely.
2. Cost: The budget of the project delineates how much can be spent on certain things. Maybe everyone in the office would work better with their own helicopter or personal chef, but successful project management can't be about having the best of everything. Instead, it's about doing the best you can with what you have.
3. Scope: What is expected of the project, as outlined in the project plan. This can be somewhat negotiated, but in the end, if you've agreed to do something, you're expected to get it done.
4. Quality: These are the limitations placed on the project deliverable by the client. For example, if they specifically want a landing page to have a load speed of under two seconds, then not achieving that will be a failure.
5. Benefits: This constraint relates to the expected outcomes or benefits from a project. Think of a new advertising campaign that's actually turning people off your product in droves, though the expected benefits were more customers. It's now projected to actually decrease sales. So, as the benefits of the project are no longer what they were expected to be, the project may need to be cancelled before completion.
6. Risk: The risk tolerance of the project usually can't be overcome. The risks that are identified and ranked on the project's risk register therefore need to be constantly monitored to ensure they don't exceed the risk tolerance threshold of the project's stakeholders.

Students have to identify project constraints according to the project idea at this stage of the project but it should also be a continuous process. While constraints can never be entirely overcome, their effects can be reduced. By adhering to a plan and schedule that stays within these boundaries, your project is given every chance of success.

3. Analysis of features and finalization subject to constraints

In this section students have to make deep analysis of the project features/characteristics and identified constraints and they will select it according to the problem statement of project. These selected ones are final for your project. Students can make Gantt chart to show work breakdown structure in it.

4. Design selection

In this section students will create at least 5 Diagrams (DFD, ERD, Class diagram, sequence diagram etc.) suitable to problem statement.