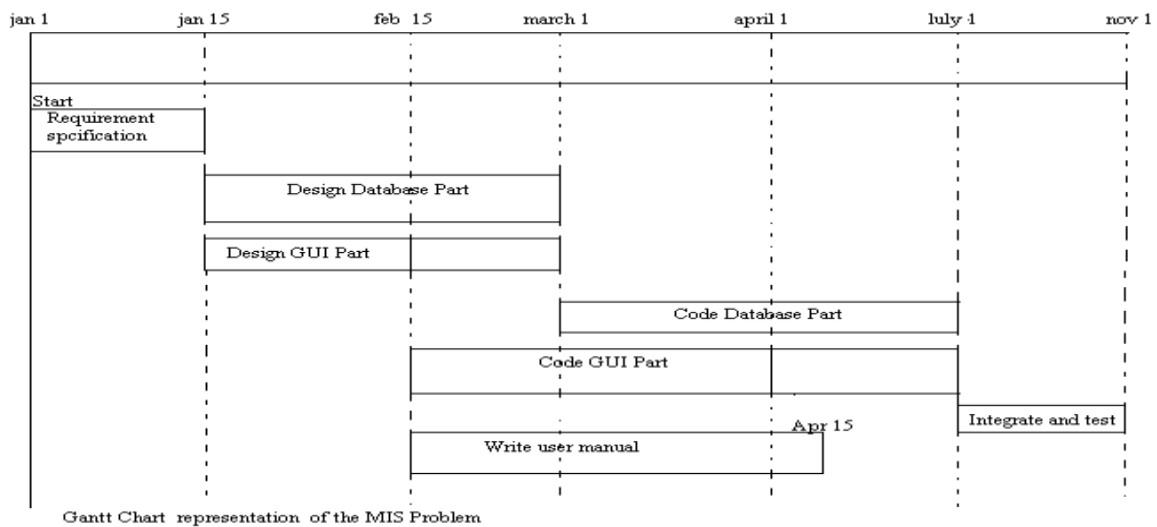


No.1 Explain Gantt chart with example.

5 marks

Ans: Gantt charts are a project control technique which is used for scheduling, budgeting and resource planning. Gantt Charts are mainly used to allocate resources to activities. A Gantt chart is a special type of bar chart where each bar represents an activity. The bars are drawn against a time line. The length of each bar is proportional to the duration of the time planned for the corresponding activity.



In the above figure all the phases starts only after the requirement specification phase is completed. The design database and design GUI are started simultaneously as both are independent processes. The coding part only begins after the design part is completed. Finally the integration and testing phase is starts after all the phases are completed.

No.2 Write down the characteristics of SRS Document.

5 marks

Ans: The characteristics of SRS document are as follows:

Concise: The SRS document should be concise, unambiguous, consistent and complete. Irrelevant description reduces readability and also increases error possibilities.

Structured: The SRS document should be well-structured. A well-structured document is easy to understand and modify.

Block-box View: It should specify what the system should do. The SRS document should specify the external behavior of the system and not discuss the implementation issues.

Conceptual Integrity : The SRS document should exhibit conceptual integrity so that the reader can easily understand the contents.

Verifiable: All requirements of the system as documented in the SRS document should be verifiable and can be checked that the software meets the requirement.

Modifiable : The SRS is modifiable if and only if its structure and style are such that any changes to the requirements can be made easily, completely and consistently while retaining the structure and style.

No. 3.

a) Write down the formula for basic COCOMO model.

2marks

Ans: The basic COCOMO model gives an approximate estimate of the project parameters. The basic COCOMO estimation model is given by the following expressions:

$$\text{Effort} = a_1 \times (\text{KLOC})^{a_2} \text{ PM}$$

$$\text{Tdev} = b_1 \times (\text{Effort})^{b_2} \text{ Months}$$

Where

- (i) KLOC is the estimated size of the software product expressed in Kilo Lines of Code,
- (ii) a_1, a_2, b_1, b_2 are constants for each category of software products,
- (iii) Tdev is the estimated time to develop the software, expressed in months,
- (iv) Effort is the total effort required to develop the software product, expressed in person months (PMs).

b) Write down the function point metric formula.

2marks

Ans: Function Point (FP) is estimated using the formula:

$$\text{FP} = \text{UFP (Unadjusted Function Point)} * \text{TCF (Technical Complexity Factor)}$$

$$\text{UFP} = (\text{Number of inputs}) * 4 + (\text{Number of outputs}) * 5 + (\text{Number of inquiries}) * 4 + (\text{Number of files}) * 10 + (\text{Number of interfaces}) * 10$$

$$\text{TCF} = \text{DI (Degree of Influence)} * 0.01$$

c) What is α -testing and β -testing ?

Ans: α -testing: α testing is the system testing performed by the development team.

- β -testing: This is the system testing performed by a friendly set of customers.

d) What is democratic team structure?

Ans: The democratic team structure does not enforce any formal team hierarchy. Typically a manager provides the administrative leadership. At different times, different members of the group provide technical leadership. The democratic team structure is appropriate for less understood problems. A democratic team structure is suitable for projects requiring less than five or six engineers and for research-oriented projects.

e) What is anomaly and inconsistency?

Ans:

Anomaly: An anomaly is an ambiguity in the requirement. When a requirement is anomalous, several interpretation of the requirement are possible.

Inconsistency: Two requirements are said to be inconsistent, if one of the user requirements contradicts the requirement of other end user of the system. It leads to inconsistent description of the requirement.