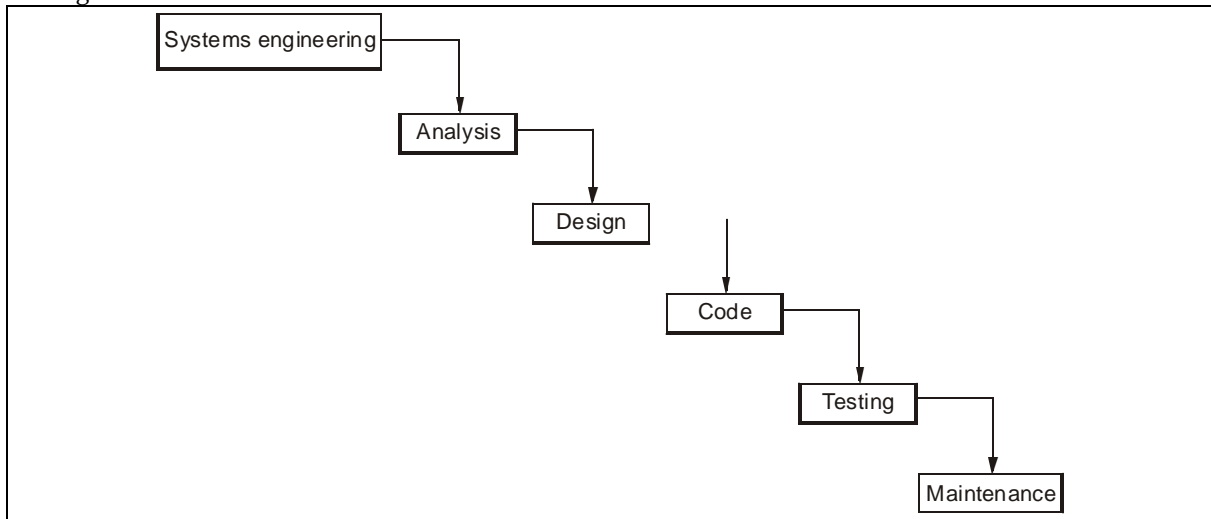


Project Planning & Management

Dec-2001

Q. 5

Ans. : For doing any project, the first thing to done is choosing a software engineering paradigm. The software paradigm used is classic life cycle or waterfall model. The main activities are systems engineeering and analysis, software requirement analysis, design, coding testing and maintenance.



The first step is systems Engineering and Analysis :

In this step we do the analysis of software, we define the different levels of information domain and their hierarchy.

The second step is software requirement analysis :

This gives you the proper requirement of the customer and people at stake. Required functions performance and understanding is also properly studied. The third step in desing step. In this step we define differnet data structures, software architecture, procedural detail and interface characterization. The desing process translates requirements into a representation of the software that can be assessed for quality before coding begins. Next step in coding. The desing must be translated into a machine readable form. In next step we go for testing process which focusses on logical and functional testing. In maintence step the problems after the delivery of software is encountered. Maintenance step can also be applied after every software engineering step.

In system engineering we will define the different information domains. The different domain areas in Indian Railways will be the reservation of ticket, cancellation of tickets, the schedules of the train, the database fo employees working etc. In requirement analysis we have to ask certain question to the customers. This help us to visulaise the proper inputs and

outputs of system and its affiliation to quality assurance. In analysis and design part we will do the analysis of the system. We will specify the data dictionary, data flow diagrams, entity relationship diagram and state transition diagram. We will also have to do the feasibility study. In feasibility study we have to study economic feasibility, technical feasibility and legal feasibility. In economic feasibility an evaluation of development cost weighed against the ultimate income or benefit derived from the developed system or product. In technical feasibility a study of function, performance and constraints that affect the ability to achieve an acceptable system. In legal feasibility we have to specify the determination of any infringement, violation or liability that could result from development of the system.

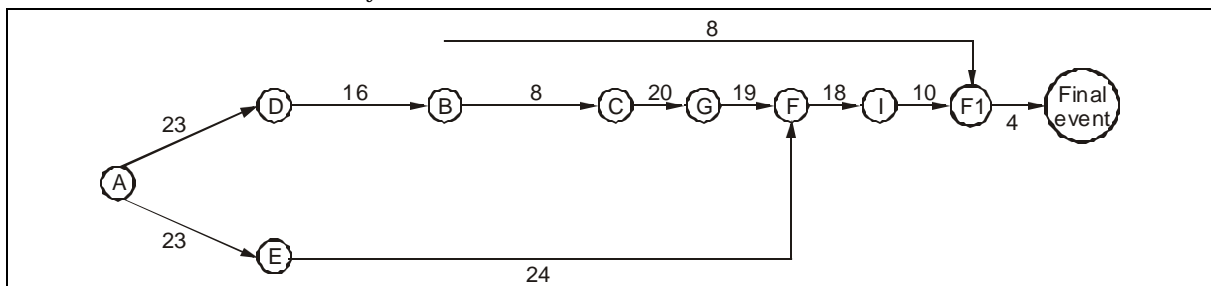
Risk factors involved are people related, product related, technology and process related factors. The project plan is produced at the culmination of the planning tasks. It provides baseline cost and scheduling information that will be ensured and change will be managed. The software project plan is a relatively brief document that is addressed to a diverse audience. It must (1) Communicate scope and resources to software management, technical staff and the customers (2) Define risks and suggest risk management techniques (3) Define cost and schedule for management review (4) Provide an overall approach to software development for all people associated with the project (5) Outline how quality will be ensured and change will be managed.

Q. 6 c)

Ans. :

Task	A	B	C	D	E	F	G	H	I	
Time	23	8	20	16	24	18	19	4	10	
	A < D, E;		D < F;		C < G;		B < H;		F, G < I.	

The network of the system will be



There will be three paths in this network. These are

- Path 1 → A, D, B, I, Final state
- Path 2 → A, D, B, C, G, F, H, I, Final State
- Path 3 → A, E, C, G, F, H, I

Completion time for paths 1 is 51 days.

Completion time for paths 2 is 118 days.

Completion time for paths 3 is 79 days.

So the path will be path 1.