Soham Ladgaonkar
TE - Comps B
9616

FR. CONCEICAO RODRIGUES COLLEGE OF ENGG.

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SEMESTER / BRANCH: V/COMPUTER Engineering

SUBJECT: Software Engineering **(CSC502)/ First Assignment**

Date: 19-08-23 Due Date : 25-08-23

CSC502.1: Recognize software requirements and various process models. (Understanding)
CSC502.2: Develop project Plan, schedule and track the progress of the given project (Applying)

Questions :

1. What is the significance of recognizing software requirements in the software engineering process?
2. Describe the main characteristics of different process models used in software development.
3. How does the Capability Maturity Model (CMM) contribute to improving software development processes?
4. Explain the differences between prescriptive process models and evolutionary process models.
5. Provide examples of situations where using a specific process model would be more suitable.
6. Compare and contrast the Waterfall model and Agile methodologies in terms of project planning and progress tracking.
7. Apply process metrics to evaluate the efficiency and effectiveness of Waterfall , Agile (both Scrum & Kanban) methodologies, considering factors such as development speed, adaptability to change and customer satisfaction.
8. Justify the relevancy of the fallowing comparison for software development models.

Features	Water fall Model	Incremental Model	Prototyping Model	Spiral Model
Requirement Specification	Beginning	Beginning	Frequently Changed	Beginning
Understanding Requirements	Well Understood	Not Well Understood	Not Well Understood	Well Understood
Cost	Low	Low	High	Expensive
Availability of reusable component	No	Yes	Yes	Yes
Complexity of System	Simple	Simple	Complex	Complex

Risk Analysis	Only at beginning	No risk analysis	No risk analysis	Yes
User involvement in all phases of SDLC	Only at beginning	Intermediate	High	High
Guarantee of Success	Less	High	Good	High
Overlapping Phases	Absent	Absent	Present	Present
Implementation Time	Long	Less	Less	Depends on Project
Flexibility	Rigid	Less flexible	Highly flexible	Flexible
Changes Incorporated	Difficult	Easy	Easy	Easy
Expertise Required	High	High	Medium	High
Cost Control	Yes	No	No	Yes
Resource Control	Yes	Yes	No	Yes

Rubrics :

Indicator	**Average**	**Good**	**Excellent**	**Marks**
Organization (2)	Readable with some mistakes and structured (1)	Readable with some mistakes and structured (1)	Very well written and structured (2)	
Level of content(4)	Minimal topics are covered with limited information (2)	Limited major topics with minor details are presented(3)	All major topics with minor details are covered (4)	
Depth and breadth of discussion(4)	Minimal points with missing information (1)	Relatively more points with information (2)	All points with in depth information(4)	
Total Marks(10)				

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SE ASSIGNMENT 1

Q.1) What is significance of recognizing software requirements in software engineering process?

→ As the technology changes the user requirements and evident on which software is working also changes. so every organisation is ranked on the software engineering principles used by that organization.

→ Implementing and managing large size of software programmes requires specific methods.

Q.2) 1) Software processes are activities for designing, implementing and testing, implementing and testing for a software system.

2) Persepective Process Models :-

1) The name 'perspective' is given since the modal perscebile set of activities action, task and change control mechanism.

3) Agile Process Models :-

1) It includes the concept of development along with a set of guidelines necessary for development

2) An agile team quickly responds to change.

9.) CMM Model

3

- developed by Software engineering institute
- It defines a process or methodology
- 2 types of meta models
    1) continuos model
    2) Staged Model

9.4)

Perspective Process	Evolutionary Process
(1) To binary ades. and structures	(1) Do not maximizes speed of evolution
(2) Defines a distinct set of activities, actions, tasks	(2) Lacks flexibility, extensibility and high quality
(3) More popular	(4) Less popular
(4) Provides complete & full developed system	(4) Does not allow a complete system to be developed