Akanksha
LCS2019019

Page:
Date:

(1) (i) Importance of Software engineering –

It is important because specific software is needed at in almost every industry. Software engineering reduces complexity of the software, helps in handling big projects, makes as reliable and effective software in less time.

(ii) four fundamental activities that are common to all software process are –

- Software specification – where customer and engineers define the software that is to be produced
- Software development – where software is designed and programmed
- Software validation – where it is checked according to customer's need.
- software evolution – where software is modified to reflect changing customer and market requirement.

(iii) Computer science is concerned with theories and methods that underline computers and software systems, whereas software eng. is concerned with practical problems of producing software. Some knowledge of computer science is essential for software engineers.
System engineering is concerned with all aspects of the development and evolution of complex system where software plays a major role. System eng. is concerned.

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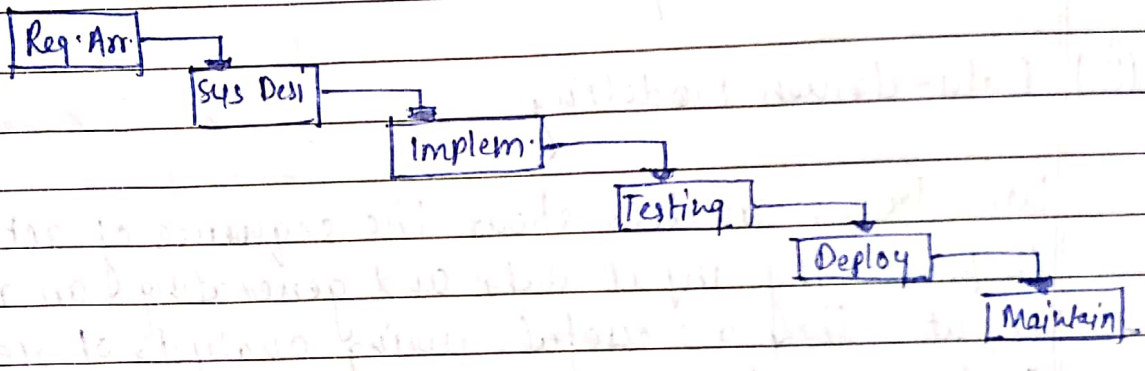
Page:
Date:

with hardware development, policy and process design and system deployment as well as software eng.

(iv) waterfall model -
It is the most basic model and first SDLC model. In this we follow waterfall approach, the whole process is divided into seprate phase. The outcome of one phase acts as input to next one sequentically. There is no feedback b/w phases.



(v) Reuse-oriented software engineering has advantage of reducing the amount of software to be developed and so reducing cost and risks. It usually leads to faster delivery of software.
The stages are -
Component analysis
Requirement modification
System design with reuse
Development and integration

eg. Webservices, .NET etc.