19CS302
Quick Revision Keys Unit 3

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Slide set 25

- What are the contexts of software implementation ?
- Goals of software implementation ?
- 4 examples of choice of programming language ?
- Examples of choices in software implementation ?
- Where all one can catch a bug ? Where is it most costly ?
- Program or programmer personality ?

Slide set 26

- Give examples of following code characteristics
  - Not too many
  - Naming (pascal, camel vs underscore prefix)
  - Examples of naming conventions for code portability
  - Code structure (File vs data+code structure)
  - Examples of Dos and Donts
  - Examples of practical considerations – error condition, security breaches, system resources, optimization , code documentation vs literate programming
- Examples – coding standard vs guidelines
- Examples – secure coding
- Testability techniques in coding – assertion vs test point, scaffolding vs harness vs test stubs, test data
- Refactoring vs rewriting ?

Slide set 27

- 2 perspectives from which sw construction should be looked at ?
- Examples of construction measures ?
  - Development progress
  - Productivity
  - Technical quality
- Measures for managing construction in scrum – burn down, velocity, throughput and cycle time
- 4 activities for managing construction quality ?
- Which columns in RTM (matrix) are filled in this phase ?

Slide set 29

- What are the main activities in SCM ?
- Slide 5 – why SCM is necessary ?
- Slide 6 – How is SCM in scrum agile ?
- What are the 4 roles in SCM ?
- Slide 10 - what are the things in SCMP ?
- Slide 11 – what are the activities (sequential) in SCMP ?
- What are the CI s ?
- What are the two challenges in SCM ?
- What are the 3 SCM directories as per IEEE standard ?
- What makes a software baseline ?

Slide set 30

- Why code branching is done (rationales) ?
- Codeline vs code branch ?
- Give 4 examples of branching strategies
- What is revision number in the context of branching ?
- Key features of version control system
- What are the steps in build process ?
- What installer is important ?
- What is code promotion ? How is it managed ?

Slide set 31

- What are the steps in Change Process ?
- What are information required to process a change to baseline ?
- What are the two types of change policies ?
- What is release policy ?
- Release vs revision vs Version ?
- What are the steps in a defect management process ?

Slide set 32

- What are the 4 types of tools in SCM ? Give examples of each
- Study the last slide (slide 14) carefully . Many questions can be asked about each of the inter-state transitions for the defect states. For example,
    - Resolved to unconfirmed ?
    - Unconfirmed to closed ?
    - Closed to Assigned ?
- The difference between bug, defect and issue (I might have missed mentioning this for another slide set)

Slide set 33

- Software Product Quality Perspective (match the RHS with LHS)
  - Operations
  - Revisions
  - Transitions
  - Environments
- Software Quality Standards – 4 quadrants : (Product, Process), (Conformance, Improvements)
- FLURPS + - expand it
- Attribute vs Measure vs Metric
- Characteristics sw measure and metrics
- Match RHS with LHS (slide 12- attribute vs metric)
- COSQ, COPQ, COGQ
- What is technical debt ?
- What are these failures – management, internal and external ?

Slide set 34

- Direct vs Indirect measures
- Metric vs Measure
- Size vs Complexity measures (give 3 examples)
- Slide 7 (Product vs Process Metric)
- SQA vs QE ? Who are the stakeholders in SQA ?
- What should be there in SQP (plan) ?
- Process performance vs Process maturity vs Process capability ?
- What are the 5 levels of maturity in CMM ?
- Why you need a model like CMM ? What are the risks of model based approaches ?
- What are the limitations of CMM ?