Learning Guide Unit 7

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Description

Learning Guide Unit 7

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Overview

Unit 7: Change Management

Topics:

- Application Change Management
- Software Management
- Configuration Management

Learning Objectives:

By the end of this Unit, you will be able to:

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1. Apply change management techniques on a given problem and discuss application and maintenance related issues associated with change
2. Explore different tools used for software configuration management
3. Discuss the applicability of some SCM tools in a given scenario and reason its capabilities such as performing version control, supporting the concept of branch et el

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Tasks:

- Peer-assess Unit 6 Assignment
- Read through the Learning Guide and the Reading Assignment
- Complete the Discussion Assignment by posting in the Discussion Forum
- Respond to three of your fellow classmates' posts in the Discussion Forum
- Submit the Learning Journal
- Take and submit the Self-Quiz
- Take and submit the Graded Quiz

Introduction

Chapter 18: The chapter discusses three major types of change in an application's life cycle requirements, software, and documentation. For each, the importance of the change management techniques is discussed. Then, for each, techniques for managing changes are developed. At the end of the chapter, automated tools are identified for collaborative work, documentation, reverse engineering, and code management. To reduce the effort in test and maintenance phases, applications should use change control, design for maintenance, use reusable libraries, and use code templates. In managing application change, change control procedures and management are critical. Requirements, designs, programs, interfaces, hardware, or purchased software are all subject to change. Change management procedures track requests from initiation through implementation and allow management reporting of cost, types, and impacts of changes.

Reading Assignment

TEXT: The New Software Engineering:

- Chapter 18: Change Management

Additional Reading:

- Change Management: http://aircconline.com/ijait/V6N1/6116ijait02.pdf
- Configuration Management: http://www.sei.cmu.edu/productlines/frame_report/config.man.htm
- Software Configuration Management: https://files.ifi.uzh.ch/rerg/amadeus/teaching/courses/software_engineering_hs07/folien/ch23-SCM-addendum.pdf

Discussion Assignment

The Delta Insurance Company is having a policyholder subsystem which has started giving trouble. Over the years, the application evolved from using fixed length, multi-record type files to using a hierarchic database to using a relational database. The programs did not change much, but the data structures changed radically. Program code was patched to provide for the new data structure. The amount of people-time allocated to policyholder maintenance grew 15% per year over the last five years and is now costing as much per year as it did in 1980 to develop the original application. No one ever considered reevaluating the subsystem for redevelopment, but they would like to now. Upon inspection, the documentation was found to be up-to-date and includes flow charts and data flow diagrams. There are no current diagrams of the data structure. There are also no historical files of decisions or of changes. Apply the concepts of change management to discuss how should the company get this application in order? What type(s) of maintenance should they consider for the next set of changes?

You must post your initial response (with references) before being able to review other student's responses. Once you have made your first response, you will be able to reply to other student's posts. You are expected to make a minimum of 3 responses to your fellow student's posts.

Learning Journal

The Learning Journal is a tool for self-reflection on the learning process. In addition to completing directed tasks, you should use the Learning Journal to document your activities, record problems you may have encountered and to draft answers for Discussion Forums and Assignments. The Learning Journal should be updated regularly (on a weekly basis), as the learning journals will be assessed by your instructor as part of your Final Grade.

Your learning journal entry must be a reflective statement that considers the following questions:

1. Describe what you did, what you learned, your weekly activities, in what ways are you able to apply the ideas and concepts gained, and finally, describe one important thing that you are thinking about in relation to the activity
2. RCS (Revision Control System), a configuration management tool, adopts a reverse delta approach for storing multiple versions of a file. To optimize storage, RCS only stores the latest version of each configuration item and the differences between each version. For example, assume a file has three revisions—1.1, 1.2, and 1.3. RCS stores the file as of version 1.3, then the differences between 1.2 and 1.3, and finally the differences between 1.1 and 1.2. When a new version is created, say 1.4, the difference between 1.3 and 1.4 is computed and stored, and the 1.3 version is deleted and replaced by 1.4. Do you think RCS is able to apply Version Control in this case? Research the internet and find the pros and cons of this tool as a configuration management tool. Also, suggest some other tool that could be used for this scenario.

Self-Quiz

The Self-Quiz gives you an opportunity to self-assess your knowledge of what you have learned so far.

The results of the Self-Quiz do not count towards your final grade, but the quiz is an important part of the University's learning process and it is expected that you will take it to ensure understanding of the materials presented. Reviewing and analyzing your results will help you perform better on future Graded Quizzes and the Final Exam.

Please access the Self-Quiz on the main course homepage; it will be listed inside the Unit.

Graded Quiz

The Graded Quiz will test your knowledge of all the materials learned thus far. The results of the quiz will count towards your final grade.

Please access the Graded Quiz on the main course homepage; it will be listed inside the Unit. After you click on it, the quiz's introduction will inform you of any time or attempt limits in place.

Good luck!

Checklist

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