Daniel Murtagh

Dr. Cenk

CS 312 Software Engineering

February 1, 2018

Homework II

2.4. Yes, Stepwise refinement refers to the general description of code, then breaking down that code into different parts where they will be more refined in until the code is fully refined. Similarly, Incrementation and Iteration use the same format of breaking down the general code into smaller steps where they will be refined and tweaked until the required task is completed. Incrementation breaks down the product and Iteration refines it.

2.5. Workflows are the actual activities of creating the software, baselines separate the workflows into different iterations, and artifacts are the products created from the iterations.

2.6. Both the Incremental-and-Iterative model and the waterfall model work on a step by step process in which the first step is finding the requirements of the client, followed by analyzing the requirements, designing them implementing them, and testing them. Both models usually focus on one step at a time, however workflow is more lenient because other steps may also be worked on while a step is in progress.

2.7. I would use the Waterfall Model because this problem seems very static, meaning the products main goal is only to solve one issue, the cube root of 9384.2034. The waterfall model will break this problem down in a much easier and simpler process versus iteration-and-implementation. Iteration-and-Implementation will complicate this problem into too many steps. Plus, once the product is created, it will enter the last phase of the waterfall model, retirement.

3.1. The Software Process is the process of development, divided via 5 core workflows that are worked on a step by step process that should result in the creation of a product.

The Unified Process is an object orient methodology that, unlike the software process, is not specific to the step by step process, but rather is adaptable to whatever the focus of the software needs to be.

3.2. A model is UML diagrams that graphically represent aspects of the software being developed.

3.3. Phases are different incrementations of the Unified Process, there are four main ones; Inception, Elaboration, Construction, and Transition. Each phase is implemented within each workflow.

3.5. At first glance, it seems it would make sense to combine these two processes because they seem so similar. However, the requirement workflow is necessary for the client to understand what the issue is and how to develop a product that will solve the issue using natural language. Once the client understands what the product will be and do, the analysis workflow comes in and refines the product much more precisely so that it can be carried over into the proceeding workflows (design and implementation). The requirement workflow is tailored towards the client while the analysis workflow is tailored towards the developers, and if both were combined it would cause miscommunication and misunderstanding on the client’s behalf because they would not understand what the product is doing.