Lab 4: Configuration Management

1. OBJECTIVE

1) Decide configuration management.
2) Setup change management.
3) Prepare release plan.
4) Decide design strategies towards maintainability.

2. LABORATORY

This lab will be conducted in the Software Lab 3 (N4-B1C-14) in SCSE.

3. EQUIPMENT

- PCs (Windows OS)
- Version Control System, e.g., Github

4. INTRODUCTION and SCOPE

In previous labs, your team has not only drafted out a complete plan for your project, but also built a prototype of your project. In this lab, the scope is for you to demo your prototype to the lab supervisor and for you to prepare for the release and delivery of the product. Releases and delivery of the product are part of configuration management. In the lab class, you will discuss the key points concerning the control of changes and management of your releases. Please document your discussions in meeting minutes and do after-class study on configuration management for your project.

After this lab, the configuration management plan and the release plan should be documented.

The system design should be reviewed towards maintainability. As the development team prepares for system design, the QA team will prepare change management policies and procedures.

5. EXPERIMENT

5.1 Hold the team meeting and complete the meeting minutes

In the meeting, the deliverables of this lab are discussed. Tasks and deadlines are identified and the tasks should be assigned. By end of the lab session, the minutes should be shown to the lab supervisor and submitted to the Wiki. In the minutes, the strategy for designing the software system should be included and a list of releases to be planed should be identified as well as the idea of change management should be described.

5.2 Design for Maintainability

After considering maintenance of the development software, the design of the system should be discussed towards better maintainability. Some design strategies, such as design in small, test driven development, use of architectural design patterns, frameworks and Service Oriented Architecture (Web Services), would be considered and decided for the system design and implementation.

5.3 Configuration Management by Tool(s)

Access to Github tool server will be assigned to teams in the project. A frequent usage of this tool provided by the lab for configuration management is recommended as the history of using it and items managed by this tool will be assessed after the lab session is finished.

Identify and confirm configuration items to be checked in. Discuss and decide policies for configuration management measurement and activities.

Based on your experience and findings in prototyping of using tools and best practices, prepare as part of the configuration management plan how the team plan to use various tools and best practices.

5.4Prepare Change Management

Discuss and set baselines for the project. Discuss the roles and procedures for change management after the baseline. Decide the change request form and change process workflow and state tracing system.

5.5Prepare Release Plan

Software development can be iterative, with multiple releases. For example,

- Release 0.1, for baseline
- Release 1.0, for the first release of the complete product
- Release 2.0, for the extended features
- Release 3.0, …

Release 1.x is a refinement of Release 1.0, including bug fixes and Release 2.0 includes new features compared to Release 1.0.

6. DELIVERABLES

The following items should be delivered by the end of the in-class lab session:

1. Meeting minutes of the in-class discussion
2. Prototype demonstration

Have the following ready (hosted/uploaded/compiled) by the next lab session:

3. Wiki: Design report on software maintainability
4. Wiki: Configuration Management Plan
5. Wiki: Change management plan
6. Wiki: Release plan
7. Wiki: Backlog
8. Wiki: Meeting minutes