**CMPE 131/180 K. C. Perry**

**Assignment 1 Tools**

Each group will select one unique topic from the following selection of tools to teach your fellow software engineers on how to use it as they consider the tools they will employ for their project. On the title slide, list all members of the group and their majors. Present an overview of your topic on the next 1-2 slides including how it compares to other similar tools. Use screenshots to demonstrate its use (live demos are very risky due to class time constraints) and use the notes section of power point on where to find the tool, how to download it and any other tricks that would be useful. For each slide, put the name of the person presenting that slide on the bottom right using a font size of 20. Not all members need to present.

You will be allocated 13-15 minutes plus 1 minute setup time. To reduce setup time and ensure there will be sufficient time for all presentations, the professor’s MAC will be used for all presentations. PPT slides must be uploaded to Canvas by the exact time specified for this assignment to allow time for the slide decks to be downloaded prior to the beginning of class.

There will be 8 groups. Each group will select C++ or Java as its first task. Switch groups if the selection doesn’t match your skill set ensuring the following:

Graduate students will be evenly distributed

ISE students will be evenly distributed

Follow the exact file naming convention (including spaces) replacing the phrase *SelectedTool* with the specific one you will be presenting on:

Group X Assignment 1 *SelectedTool*

Other group and personal assignments for this course are to follow the same approach. For example, one member of Group 8 would upload the first project milestone on Requirements as:

Group 8 Milestone 1 Requirements

If I were a student uploading a third assignment called Global Essay that is to be submitted by every individual, my file name would be:

Perry Keith Assignment 3 Global Essay

A description of tools for this group assignment follows.

* **Software Configuration Management (SCM) tools:**

SCM is used to track and control changes in software. It answers the question “Something did something, how can one reproduce it?” For more information, see <http://en.wikipedia.org/wiki/Software_configuration_management>

Popular current tools are: Perforce, Subversion, CVS, & Git. More information can be found at <http://en.wikipedia.org/wiki/List_of_revision_control_software> and <http://en.wikipedia.org/wiki/Comparison_of_open_source_software_hosting_facilities> (scroll down to second chart)

Consider the benefits and drawbacks of these SCMs by describing the purpose, differences (such as centralized v.s. distributed) source control systems, scalability, access control, and normal patterns of usage.

Demonstrate how to track and control changes discussing the benefits and drawbacks of your topic.

Topics: 1. Git, 2. Subversion

* **Software hosting facilities:**

Popular hosting facilities include GitHub, Google Code, and SourceForge. For a more complete list, see: <http://en.wikipedia.org/wiki/Comparison_of_open_source_software_hosting_facilities>

Some projects prefer to self-host and use trac (<http://trac.edgewall.org/> ) for their needs. It provides a wiki and bug tracker, and you connect your own source control.

Give the class a walkthrough of how to start a new project, commit code to the project, create/process/closing issues, and how to use any other interesting features that site provides.

Topics: 1. GitHub, 2. Tigris (Subversion), 3. Google Code, 4. SourceForge, 5, trac, 6. Launchpad, and 7. GNU Savannah

* **Standalone bug trackers**

A list can be found at <http://en.wikipedia.org/wiki/Comparison_of_issue-tracking_systems>

Give the class a walkthrough of how to start a new project, commit code to the project, create process/closing issues, and how to use any other interesting features this offering provides.

Topic: 1. Bugzilla

* **Editors and IDEs**

Vim, emacs, Xcode, Eclipse, Visual Studio fit in this category. As you probably know, an editor deals only with editing text files while an IDE is a much larger environment that provides features such as code completion, source control, build system, statistical analysis, and interface design tools.

Include a demonstration of the features just mentioned above.

Topics: 1. Eclipse, 2. XCode, 3. Visual Studio

* **Project Management Tools**

Project management tools are used to plan and execute projects (see <http://en.wikipedia.org/wiki/Project_management>). Each project team will use Microsoft Project as part of their deliverable for the 131/180 project.

Demonstrate how to create, track and modify a development project.

Topics: 1. Microsoft Project, 2. Trello

**(see following pages for group selection of tools) – You must sign up on the original copy held by your professor**

**Tools Selection**

(Hardcopy provided by instructor)

List all members names putting in brackets Grad and ISE for those representatives

**Software Configuration Management**

1. Git \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. Subversion\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Software Hosting Facilities**

1. Github\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. Tigris (Subversion)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. Google Code\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. SourceForge\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. Trac\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. Launchpad \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. GNU Savannah\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Standalone Bug Tracker**

1. Bugzilla\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Editors and IDEs**

1. Eclipse\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. XCode\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. Visual Studio\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Project Management**

1. Microsoft Project\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Other**

1. Specify: \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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