CST0006 – Computer Programming Foundations

INTRODUCTION to WEEK01

In this lecture and lab section we are going to learn how to use the Git Software Control Management System to track the changes of a software project and how to use a Workflow Board to manage the addition of software features . Learning these tools is essential either if you are working alone or collaborate with others on a software project. When collaborating with friends/others, be aware that nobody works the same as you do, and if you are someone that works hard and gets things done on time, make sure you choose members that have similar work ethics as you do. If you fail to do this, you're going to develop new twitches and other neurological problems. You may find yourself sticking pins into a doll that looks exactly like someone that used to be your friend.

Git

Git is a distributed Software Control Management System that was developed by Linus Torvalds, the creator of the Linux Operating System Kernel, to manage and track the changes to the Kernel. It has quickly become the most popular Software Control Management System in the world.

We will be using Git in class to not only make our lives simpler, but also to gain some real experience.

See this link for Git resources: https://git-scm.com/doc

See this link for a tutorial: https://www.atlassian.com/git

See git basics cheat sheet is available on blackboard

Workflow Boards

The design of each workflow board relies heavily on the type of development workflow you are using. Even the terms used within the board are different depending on the workflow style. As we discussed last week, there are two main categories of development workflow. Waterfall and Agile, of which Agile is the new king. We won't be going too deeply into details of each of these categories, as it is a full course on its own, but we do need to know enough to understand how to use them for now.

Workflow Terms

A workflow board can be considered link a progress chart. Each new feature is written on a card or post-it note, and added to the "to do" column. Then someone puts their name on the card, and moves it to the "in progress" column to let others know that they are the one working on that task or feature. Once they've completed adding the new feature, the card is moved to the "done" column.

For most of these boards, columns are known as lists. You can add as many of these lists or columns that you need to match your workflow.   Some people may want to add a testing list, some may wish to add an additional quality control list. It all depends on how your or your team has broken up the individual steps in your development cycle.

Usually this chart is broken down into three main lists: To Do, Doing and Done. These terms are all interchangeable, but the same theme is present no matter which workflow has been adopted.

Features to be added	Feature Development Progress	Feature Completed
To Do	Doing	Done
Backlog	In Progress	Complete
User Stories	Development	Closed
...	...	...
Issues	Working On	Finished

Since we will be using Gitlab as our main workflow tool, here is a video that will explain most of the important features of the workboard: https://www.youtube.com/watch?v=UWsJ8tkHAa8

Gitlab Issue Boards:

https://docs.gitlab.com/ee/user/project/issue_board.html#scrum-team