COEN 174 Software Engineering Fall 2021

**Lab 4 (60 pts)**

**Stephen Tambussi**

In this lab, you will use a Project Management tool, Trello to make your Scrum boards and Excel to create a Burndown chart.

Hopefully, all of you have completed PreLab4 which requires you to get a free account on Trello and watched the Youtube video posted.

You will do 3 exercises in this lab, first two using Trello and the third using Excel.

**Exercise 1 (25 pts)**

Assume that *you have a small toolshed in your backyard. You plan to convert the toolshed into your work/study area. There are several activities that are involved in this conversion, for example, emptying it, painting it, installing electrical connections, setup a desk etc. Each of these activities may consist of tasks (for example, go to the paint store) You want to complete these activities within a certain time (like 2 weeks).*

To get things done in a methodical way and on time, you want to create a Trello board to keep track of things.

* Create a Trello board with your ***initials\_*toolshed***.*
* Add the following columns (lists) – **ToDo, Doing, Done (you may use column names of your choice)**
* Add the TA to the board with editing rights.
* **Add the following cards to ToDo column.**
* Cards with activities like Cleaning the shed, Painting etc.
* For each of the cards, include a small description. The activity may involve several tasks, for example, Cleaning the shed may involve getting rid of some stuff, move some stuff elsewhere etc. Include the tasks for each card. Keep the high priority items at the top of the column.
* Set up colors for the task categories – for example, green for things you can do and blue for things that you have to hire help (an electrician, for example).
* Keep the cards with higher priority to the top of the ToDo list.
* Figure 1 shows the various details you can add to a card. Add details like Due date, an image etc as applicable.
* Now, move one of the cards (the first high priority activity you must start with) to Doing column.
* Assign people to the tasks moved to Doing column.
* Move one of the cards to Done and add any details as applicable.



Fig 1: Details of a card

**Exercise 2** **(15 pts)**

* Create a Trello board with your *initials\_ProjectTeamName.*
* **Add each of your team members and the TA to the board with editing rights**.
* Set up colors for the following categories (you are free to add others of your choice) – green for administrative tasks, yellow for discussions, blue for analysis and design.
* Add the following columns, **project overview**, **product backlog**, **sprint backlog** and **review**.
* Add a card with an overview of your project to **Project Overview** column. Give a summary of your project on this card.
* Add a few (at least 2) cards to product backlog, where each card is a user-story (for your project).
* Add any other details that are relevant for your project.
* You will keep updating this board as you proceed with your project.

**Note:** Install a Chrome extension called [PlusForTrello](https://www.plusfortrello.com/p/about.html). Investigate this feature (you may do this outside of lab time) and see how you can use it for your project.

**Exercise 3 (20 pts)**

In this exercise, you will create a simple Burndown Chart using an Excel spread sheet. The chart is created by tabulating the estimated effort (no. of tasks that you plan to complete per calendar day) and the actual effort (the no. of actual tasks that are completed). The data is then plotted using the line chart option in Excel.

* Create a new spreadsheet and name it **BurndownChart1**.
* **Create three columns with values (of your choice) as follows:**

First column should have the Calendar days – you can either name them as Day1, Day2 etc. Or you can use dates, for example 19th Oct, 20th Oct and so on. Fill in values for at least 10 days.

Second column should have the no. of **Planned tasks** (this is the estimated effort) that are left to do on each day. For example, let us say that you start out with 10 total tasks on day 0 and you plan to complete 2 tasks on day 1, leaving 8 for day 2. Then on day 2, you will have 6 left if you keep this rate of completing 2 tasks per day. You will have 0 tasks left to do on day 5.

Third column should have the no. of **actual tasks** that are completed. Let us start with 10 total tasks on day 0. You have completed 2 tasks on day 1 (as planned), leaving 8 remaining tasks. Then on day 2, you could only finish 1 task, which leaves 7 tasks to be completed the following day.

**Create the columns with data of your choice.**

* Now select the 3 columns of data and click on **insert** from the options in the tool bar.



Select 2D Line chart with markers. Now you can move the chart to a desired location on the spreadsheet.

Try changing some of the values in the Planned and Actual columns and see how the chart dynamically changes.

See the sample line chart generated for the given values.



Q1: Why are the Planned and Actual values on 24th and 25th Oct remain the same for those 2 days?

**Because the team planned to work on a single task for those days and was not expecting to be finished with that task until after the 25th.**

Q2: What does it mean if the actual line goes above the estimated line?

**It means that the team has fallen behind and has not finished the amount of tasks they were planning to.**

Q3: What does it mean if the actual line goes below the estimated line?

**It means that the team has gotten ahead and has finished more tasks than they were expecting to finish.**

**Personal Trello:** [**https://trello.com/b/9nwcIe5f/sttoolshed**](https://trello.com/b/9nwcIe5f/sttoolshed)

**Team Trello:** [**https://trello.com/b/R4w7cxOQ/stsummarizr?filter=label:green,label:yellow,label:blue**](https://trello.com/b/R4w7cxOQ/stsummarizr?filter=label:green,label:yellow,label:blue)