Assignment 06. Taiga - Project Report

CSE 563 Software Requirements and Specification

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Product Backlog

ID	As a	I want to be able to…	So that…	Estimation	Priority
1	user	See a GUI	I can interact with screen	1	1
2	user	Create a dot on GUI	To generate multiple dots	2	1
3	user	See the clusters	I can see the dots on the screen linked to show connections	3	1
4	user	Load a file	To visualize retrieved information	2	2
5	user	See random dots printed on the screen	I don't have to make too many dots	2	2
6	user	Run the clusters	To run the clustering actions	1	2
7	user	Enter an integer	I the user can input distance parameter for clustering	1	2
8	user	Save a file	To backup clustering connections with data	2	2
9	user	Clear the screen	To restart the visualization	1	3
10	user	Have a software with	We can visualize	15	XL

		ability to create clusters with dots	clustering		

Sprint Backlog

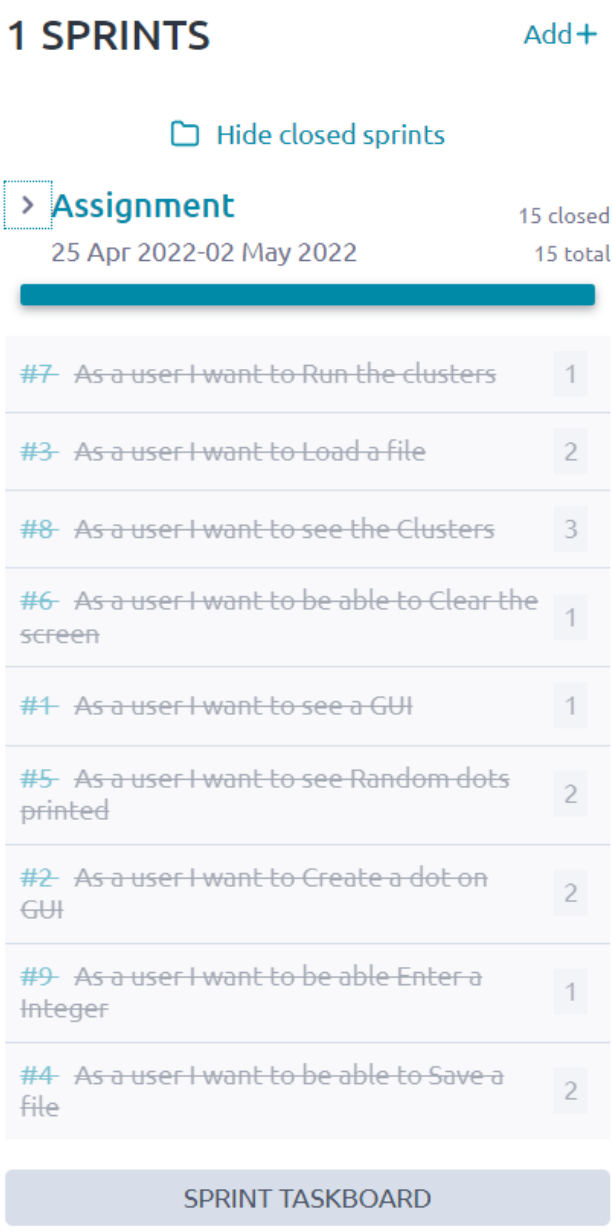

Figure 1: Sprint Backlog [1] [2]

Sprint Task Board

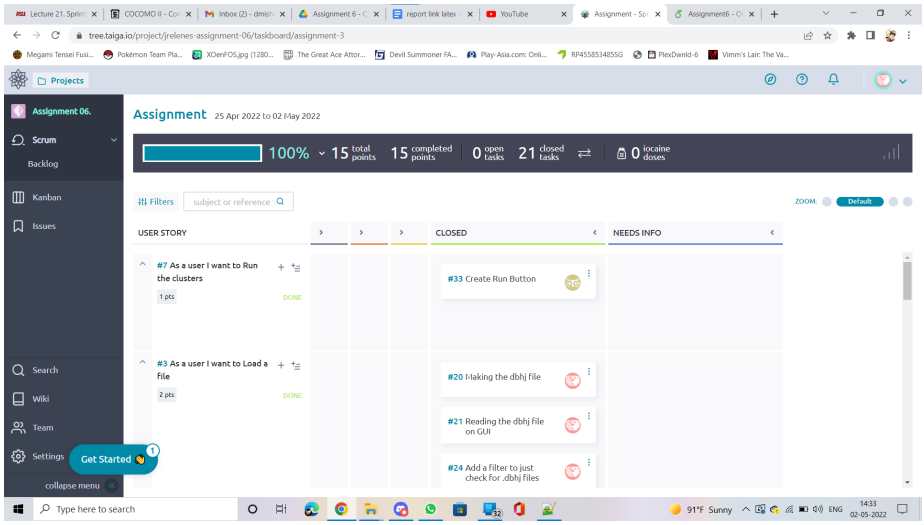

Figure 2: Sprint Task Board [1]

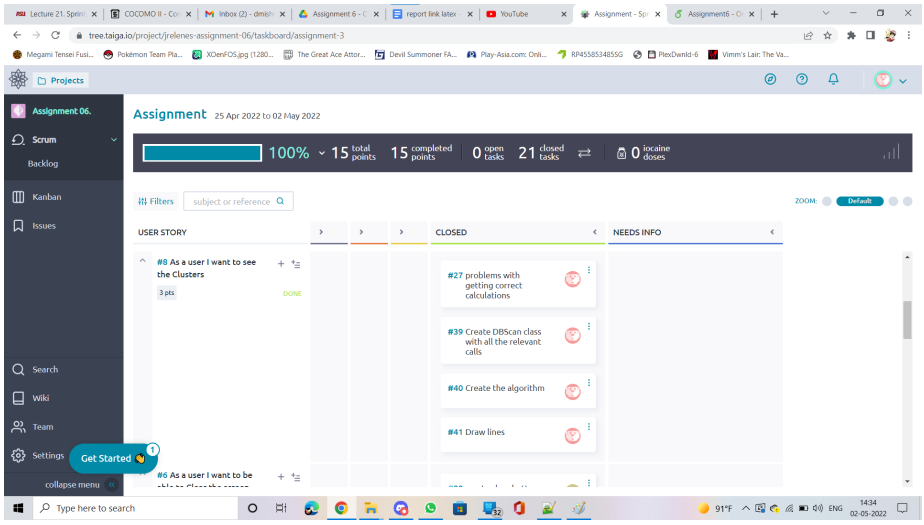

Figure 3: Sprint Task Board [2]

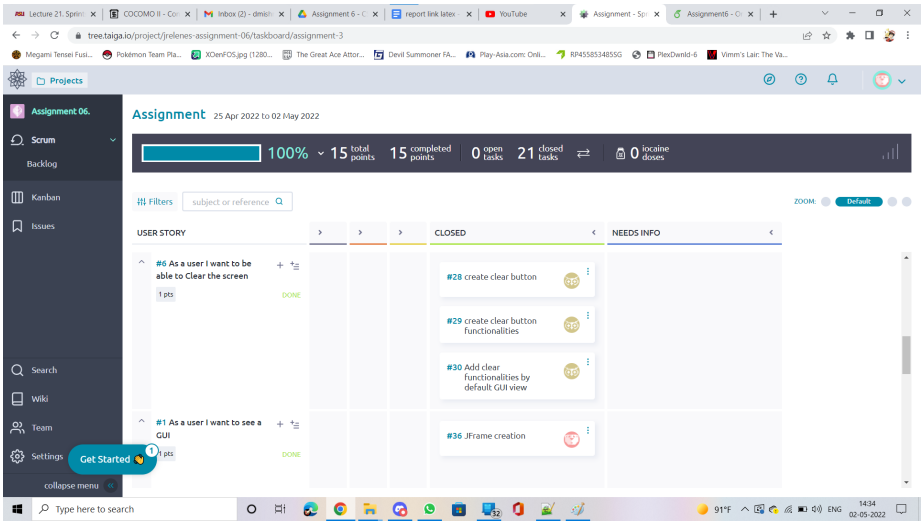

Figure 4: Sprint Task Board [3]

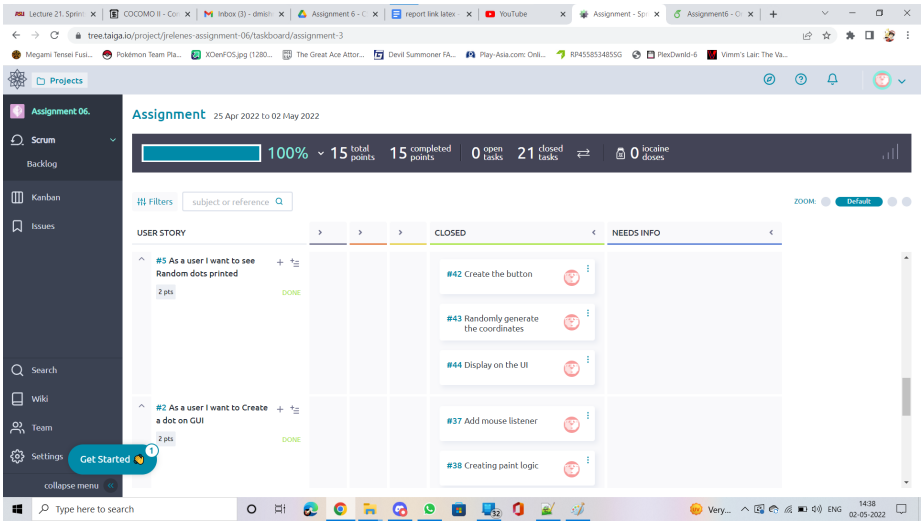

Figure 5: Sprint Task Board [4]

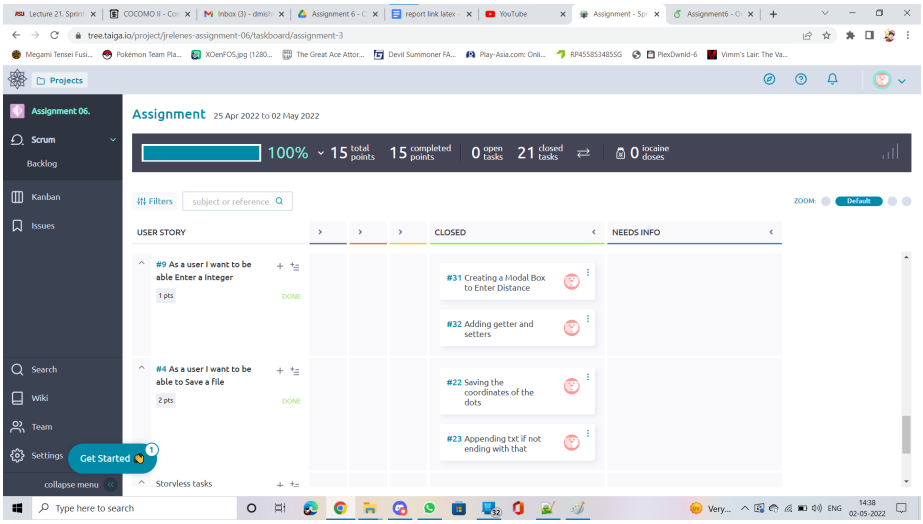

Figure 6: Sprint Task Board [5]

Burn Down Chart

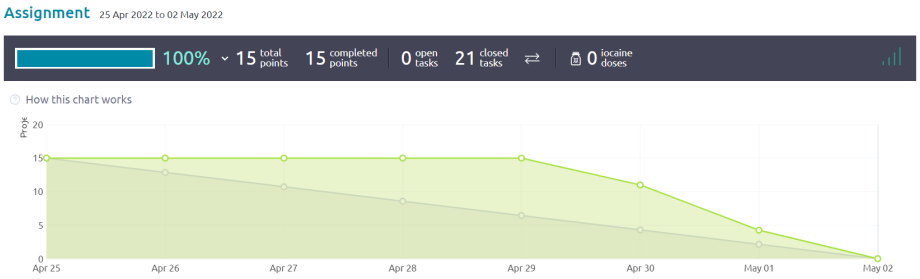

Figure 7: Statistics of the sprint

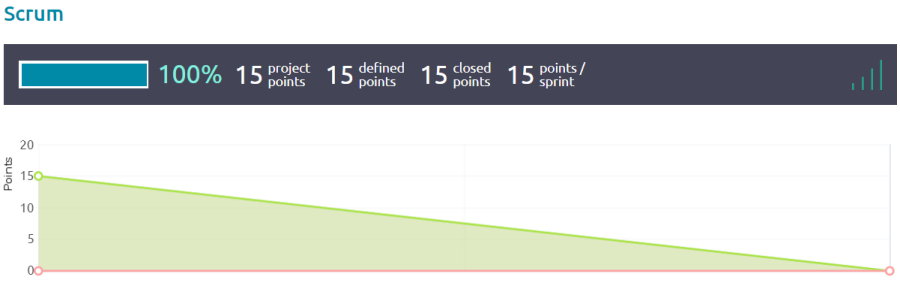

Figure 8: Burn Down Chart

Sprint Review

This project was only for one sprint. In this sprint we managed to build a Java GUI application for the clustering algorithm as per requirements stipulated by the Professor.

Sprint Retrospective

In this sprint, majority of the work was done by the end of the sprint which actually overloaded few of the members. This could have been rectified if we had started making progress as soon as the sprint had started.

Jose Elenes

The software taiga was new and a little confusing to use. I met with the group since I had an implementation issue with DBSCAN. I created a prototype but had issues with the tests I performed. I got additional help when I had problems understanding the pseudo algorithm for DBSCAN. After several hours of analysis I passed my concerns to Hassan and the issue was solved. Everything was better than originally planned and finished on time. Most of the issues were related in understanding how to use the software Taiga for me.

Maharshi Rajendrakumar Patel

As a beginner to the Java programming language, initially I faced difficulty in understanding object oriented concepts. I learned from online tutorials and successfully implemented all tasks which were assigned to me. I had previous agile experience so interacting with taiga software has sharpened my concepts. Debesh and Hassan helped me by explaining some trivial code parts and also with the integration of my functions.

Debesh Mishra

Being new to JAVA GUI coding even though I had prior knowledge on JAVA language itself, I faced some initial challenges on how to implement the menu bar which had been assigned to me. So I had to spend some time looking online to find tutorials on how to do the same. Eventually I was able to finish all of the tasks that had been assigned to me with help of other members.

Hassan Ismaeel

The sprint started with a fairly even work distribution, given the prior knowledge of the team individuals and how long each would to complete their tasks. My initial task was to make the GUI, dots, randomize dots, and add click-to-dot functionality. I was done with that fairly quick, but as the days progressed, we still had no DBScan implemented from Jose, so I decided to take over and wrote

it from scratch- I also added the lines feature between dots during the clustering process. Overall, the team could have done a better job with work distribution, and individual members should have estimated their capability/comfort with a task better so that it does not overflow to others.

Contributions

Jose Elenes

I created the product backlog, spring backlog, latex document preparation. I worked on DBSCAN, and GUI block. I had issues with the code I wrote after testing the specific interface and got help by Hassan. He got the section to compile successfully. I created the repository with the basic java class structured template. Everything else was inserted and modified according to group needs after testing.

Maharshi Rajendrakumar Patel

In this assignment, I have learned about Java language from scratch, I followed some of the beginner level tutorials to understand more about the core java and implemented clear button functionality which clears the canvas. Moreover, I have added a code block in the application to handle blank GUI for the default mode. I have implemented a modal pop up box to read the integer value of distance for the DBScan algorithm. I assisted and partnered with the team with the brainstorming sessions to ensure the timely progress and delivery. I also performed the UI Testing of GUI and tried to cover all the edge cases so that we can provide the best user experience.

Debesh Mishra

I worked on the Menu Bar items of the GUI which included the Load and Save function. I created a unique extension called .dhmj (based on the initials of all group members) which is used by the application. I also refactored the buttons which were created by other group members to the Menu Bar so that the canvas space is freed up for the dots. Other than this I implemented the delaying functionality that needs to happen after each iteration of tree clusters in the DBSCAN class. Also I created the final jar file.

Hassan Ismaeel

I worked on creating the GUI that included the dots and the lines. I also worked on the Randomize and show dots, and the "click to place" a dot feature. Furthermore, I took over Jose's DBSCAN structure, and wrote the DBScan brute fore algorithms, and made it show the lines between points. Debesh added time delays in showing clusters. I mainly created the classes Grid, Dot, and DBScan and had contributions of 460 Lines of Code.

Bibliography

[1] [Online]. Available: https://tree.taiga.io/project/jrelenes-assignment-06/timeline

[2] "Github link." [Online]. Available: https://github.com/jrelenes/GUI-main