



# COMPUTING & DIGITAL MEDIA PROJECT MANAGEMENT ASSIGNMENT 5C

**Team Gravity** 

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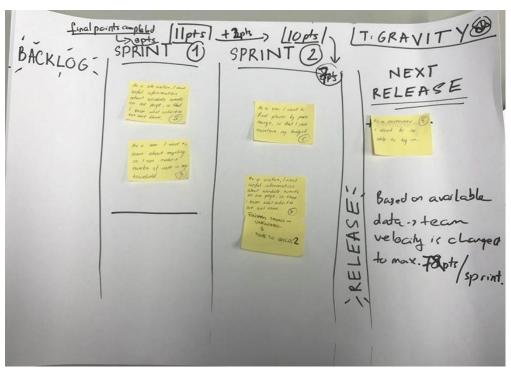
Thomas Burke – G00362619

Date: 19/03/2020

# 1. Sprint progress (snapshots)

# 1.1. During Sprint 2

i) <u>Updated Release plan after sprint 1</u>



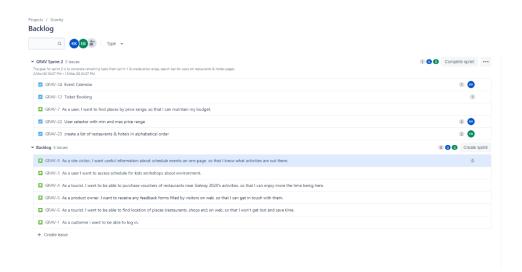
Img 1.1.i Sprint Release Plan Updated for Sprint 2 – 02/03/2020

ii) <u>Updated Release plan burndown chart after sprint 1</u> - 28/02/2020

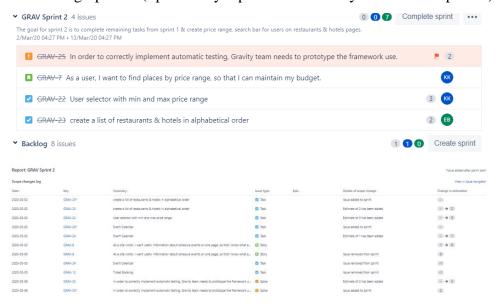


### iii) *Sprint 2 plan*

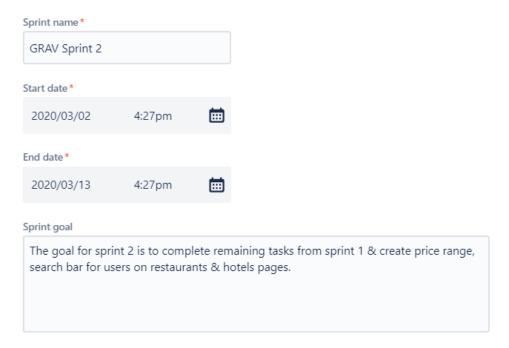
# a) Stories and related tasks



# Change made during Sprint 2 (Spike Story replaced initial story included in Sprint 2)



# b) Sprint goals



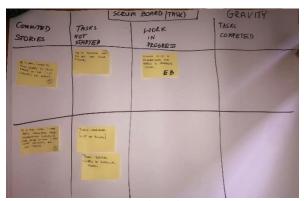
# c) Sprint confidence vote

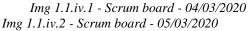
For the purpose of confidence vote, "one in five" technique was used, where 1 is confident about plan, 5 is not confident about plan. Team members vote 1 (each) which means they all are confident about project plan. All team's members are confident with the sprints.

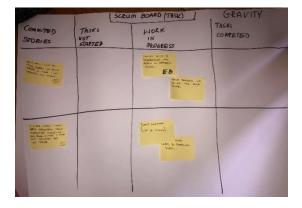
# d) Risks

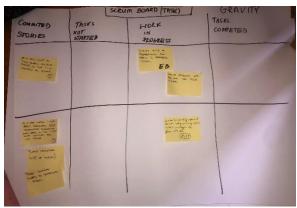
- Software issues
- Miscommunication
- Misunderstanding tasks
- Not attending daily stand-up meeting & brainstorming session
- Insufficient knowledge & expertise
- Insufficient testing

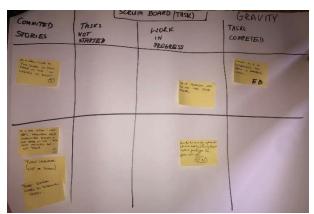
### iv) Sprint 2 Initial daily Scrum board











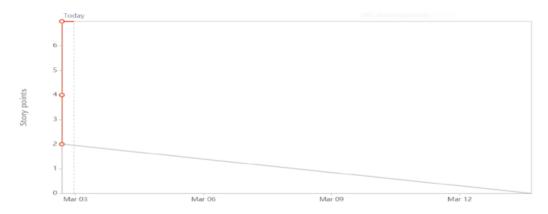
Img 1.1.iv.3 - Scrum board - 06/03/2020 - Replace Img 1.1.iv.4 - Scrum board - 07/03/2020

Sprint 1's remaining tasks with SPIKE



Img 1.1.iv.5 - Scrum Board - 09/03/2020 Img 1.1.iv.6 - Scrum Board - 10/03/2020

# v) Sprint 2 Initial Sprint burndown chart - 02/03/2020



Burndown chart for Sprint 2

### vi) Final update to the Sprint Burndown chart



# vii) <u>Description of any changes to plan during the sprint</u>

PO introduced a new SPIKE story into the backlog. The purpose of story is to investigate automated unit testing, automated acceptance testing and to put together plan to perform automated testing going forward as well as the amount of work involved.

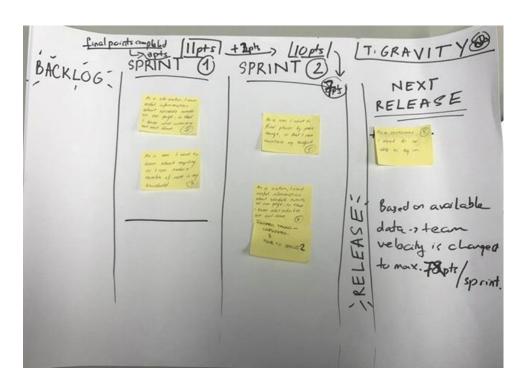


### viii) Description of Issues and associated actions, captured during daily stand-ups

- ➤ Insufficient information about Spike more research required by team members
- Insufficient knowledge about automated testing more research required by team members
- > Tests and reviews have not been carried out in a satisfactory way
- Coronavirus resulted in lock-down (communication moved online)

ix) Evidence of having a sprint refinement meeting to prepare for the next sprint

Team Gravity completed Sprint 1 and Sprint 2 planned for first and final release.



x) Evidence of rigorous story testing, test plans, test scripts, and test results
Tools used for testing HTML files:

https://validator.w3.org/



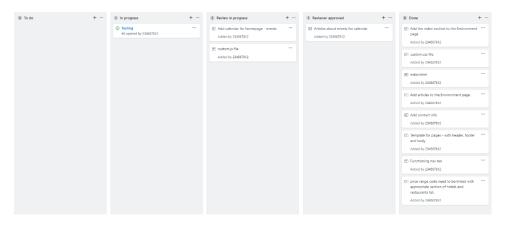
# Tools used for testing CSS files:

http://www.css-validator.org/



No JavaScript testing have been done.

Code review progress done using GitHub Projects



# Results:

Hotels.html test result



### Index .html test result

Document checking completed. No errors or warnings to show.

#### Restauraunts.html test result

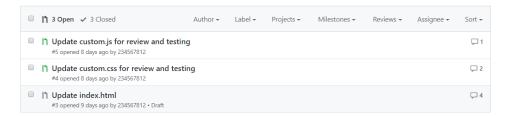


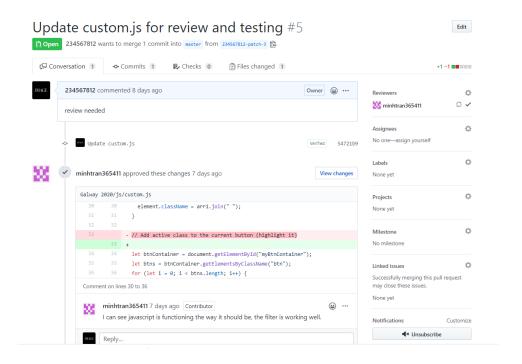
### CSS file

### W3C CSS Validator results for TextArea (CSS level 3 + SVG)

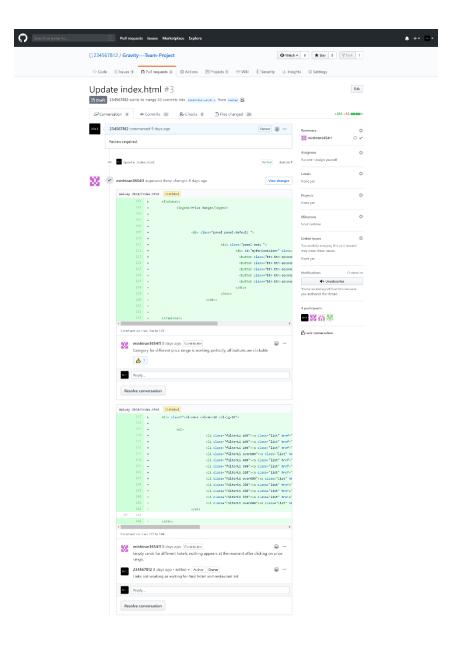


# xi) <u>Evidence in GitHub of code reviews and code inspections by all development</u> team members









### **1.2.** End of the Sprint 2

### 1.2.1. Spike Story

a) Evidence of the testing framework spike story being added to the product and sprint backlogs and decision by the PO on what story to be taken out of the sprint so that the spike story can be added



# b) Report on Spike Research

- 1. Due to team failing to complete story in sprint 1, PO decided to introduce Sprint Story. The Product Owner makes a Spike as an investment to find out what needs to be installed and how the team can build it before it really starts. The Product Owner now allocates a little bit of the team's Velocity, ahead of when the story needs to be delivered so the team knows what to do when the story comes into the sprint.<sup>1</sup>
- 2. Team conducted a research on tools used in Spike. Most used tools are ApacheJMeter and Loadrunner. Apache tool is an open source tool that works in Java environment and test applications performance and behavior. Loadrunner on the other hand is paid software that can test applications by many users. Team agreed to do more research on ApacheJMeter as it was free, and originally designed for Web Applications. It can be used to test static and dynamic resources and Dynamic Web applications.<sup>2</sup>,<sup>3</sup>
- 3. The plan to introduce and use automated unit and acceptance testing going forward

The team first sprint didn't go well, as we failed in estimating the team velocity and didn't do the testing for code. The PO introduced SPIKE.

<sup>&</sup>lt;sup>1</sup> Visual-paradigm.com. 2020. What Is Spike In Scrum?. [online] Available at: <a href="https://www.visual-paradigm.com/scrum/what-is-scrum-spike">https://www.visual-paradigm.com/scrum/what-is-scrum-spike</a> [Accessed 19 March 2020].

<sup>&</sup>lt;sup>2</sup> Guru99.com. 2020. *What Is Spike Testing? Learn With Example*. [online] Available at: <a href="https://www.guru99.com/spike-testing.html">https://www.guru99.com/spike-testing.html</a> [Accessed 19 March 2020].

<sup>&</sup>lt;sup>3</sup> Jmeter.apache.org. 2020. *Apache Jmeter - User's Manual: Getting Started*. [online] Available at: <a href="https://jmeter.apache.org/usermanual/get-started.html">https://jmeter.apache.org/usermanual/get-started.html</a> [Accessed 19 March 2020].

*Spike:* In order to correctly implement automatic testing, Gravity team needs to prototype the framework use.

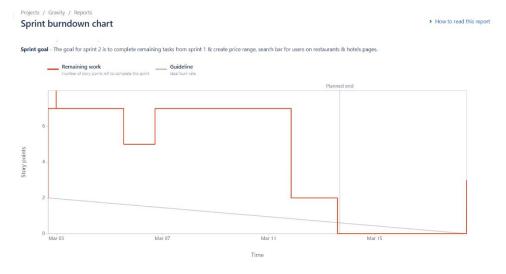
Automated Unit Testing: For unit testing is test each small parts of the spike story separately, there are 2 choices of method that the team need to choose to go with ApacheJMeter and Loadrunner and we went with JMeter. The software will be introduced to team and the Gravity team will be trained to get familiar with the testing software, after training process, team is expected to use JMeter to carry out testing process.

**Testing method:** For this, we will have our team to do research on JMeter, as well as running a mock program to test, so that team can get an understanding of how the program works and how tests are structured.

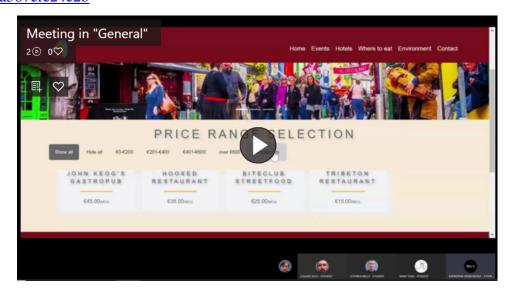
Acceptance Testing: For this acceptance testing, after carrying out the whole testing process, team will validate the Unit Testing, training process and the results of SPIKE. If development team, Scrum Master and the Product Owner is happy with the result, then Gravity team can finish the spike and progress with the project.

### **1.2.2.** *Sprint*

a) The end of sprint burndown chart and end SCRUM Board snapshots



b) The video recording of sprint2 demo/review <a href="https://web.microsoftstream.com/video/7b0b9ff0-a829-48d3-87b7-a567efe24c2b">https://web.microsoftstream.com/video/7b0b9ff0-a829-48d3-87b7-a567efe24c2b</a>



c) The status of user stories completed in the sprint as per the definition of DONE and user stories rejected and reasons why

<u>User Story 1:</u> As a user, I want to find places by price range, so that I can maintain my budget.

Status: Done

<u>Definition of done:</u> the story's solution is completely specified and integrated, with test cases included.

*Task1: Selector with min and max price range* 

Task2: Create a list of restaurants & hotels in alphabetical order

<u>Spike Story:</u> In order to correctly implement automatic testing, Gravity team needs to prototype the framework use.

Status: Done

### Rejected story.

<u>User Story 2:</u> As a site visitor, I want useful information about schedule events on one page, so that I know what activities are out there.

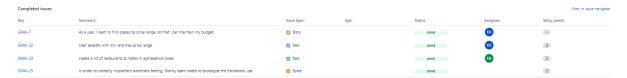
Status: Not done

<u>Definition of done:</u> the story's solution is completely specified and integrated, with test cases included.

### Task1: Event calendar

PO introduced a new SPIKE story into the backlog. The story has been prioritized as urgent. The PO and team agreed to bring the story into the current sprint. The PO and the development team agree on Story 2 to be remove from the current sprint so that this story can be fitted in.

d) For each user story, the list of tasks, the final task status, and task owners





This sprint contains 4 completed issues.

That's all of them - well done!

e) Evidence of having an impartial sprint retrospective meeting, the input and outputs of the sprint retrospective meeting with evidence of impartial/anonymous brain storming and a description of how the retrospective meeting was conducted

For the purpose of this task, team used Google Forms. Anonymous survey was created and distributed among team members.

What went well?

5 responses

As we learnt from first sprint, our second sprint went well with better understanding about team velocity and gradually testing. I think the team did communicate well with better engagement in group work.

Group was very organised

Everyone worked well on project and attempted to complete Stories assigned. Team had to do a lot of research to complete the tasks so everyone took initiative.

We learned from our issues in the last sprint. We improved our communication

- 1. Selecting stories for Sprint 2
- 2. Coding done in time without issues

What went wrong?

5 responses

I think we learnt a lot from first sprint, so in this second sprint we aremore open to genuine communication, so whatever a team member felt wrong, the issue is then right away be represented to team.

Group involvement

GitHub had to be setup at very beginning along with Jira software setup properly.

Team members understanding of spike differed

- 1. Insufficient testing and reviews
- 2. Team members missing stand-ups and brainstorming sessions
- 3. Software issues (GitHub)
- 4. Team didn't fully understand what is Spike

What need to be improved

5 responses

Maybe we can be more iniative and active in our project. Our coding/technical skills need to be improved as well.

Group involvement

Meeting attendance needs to be improved or if meeting missed, updated Minutes to be set up and posted on Teams that would allow all team members participate in Project.

Team members need to attend meetings. More communication between programmers

- 1. Testing and reviews
- 2. Better communication required
- 3. Team members need to actively participate in meetings

f) Code baseline before sprint begins and after the sprint has finished Index page: start of Sprint 2



# Index page: end of Sprint 2

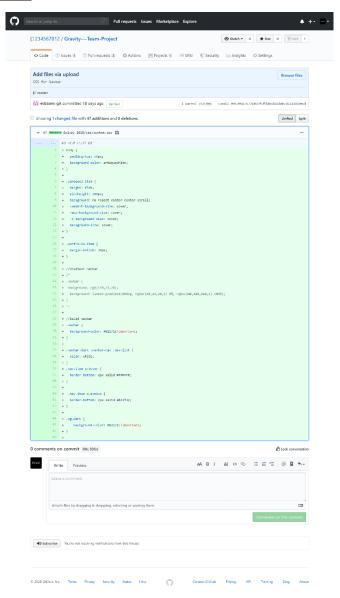


# Hotel page/Restaurants page: Sprint 2

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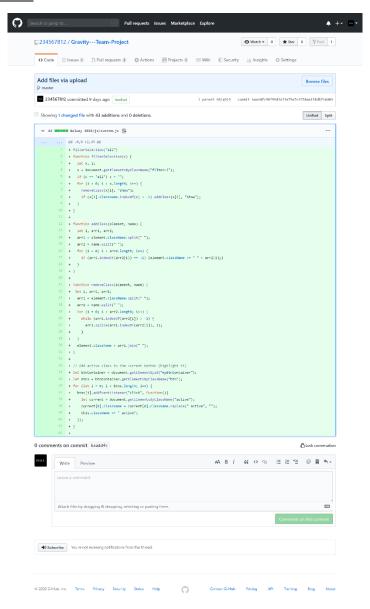
# CSS file: start of Sprint 2



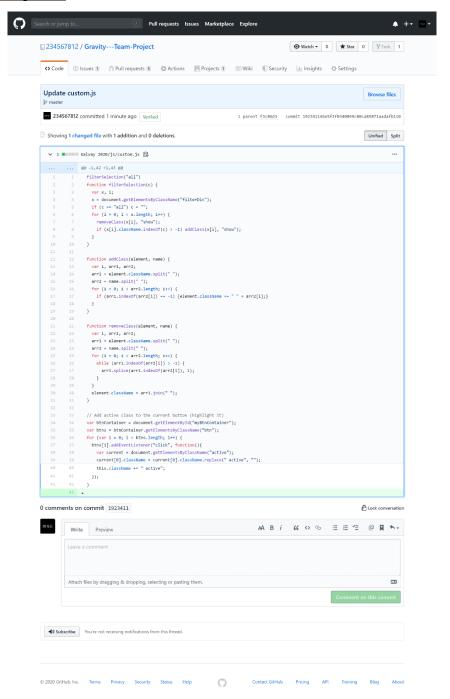
# CSS file: end of Sprint 2



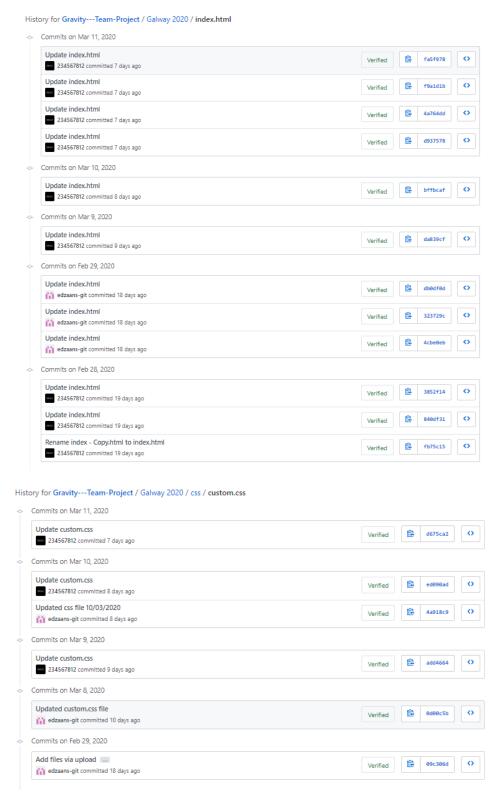
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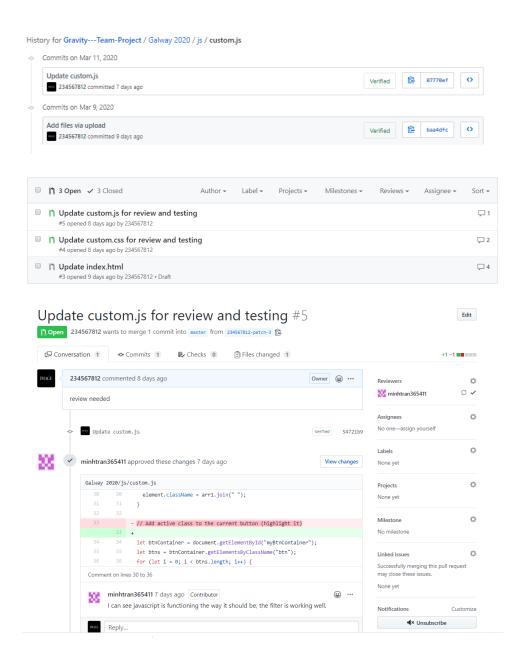


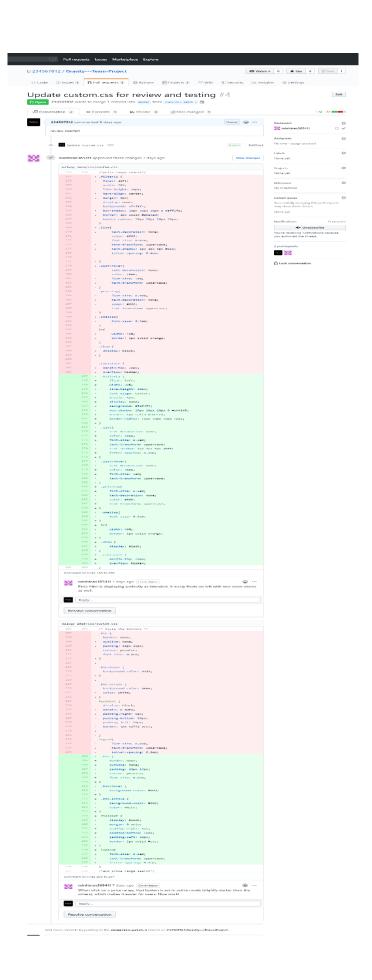
# JS file: end of Sprint 2

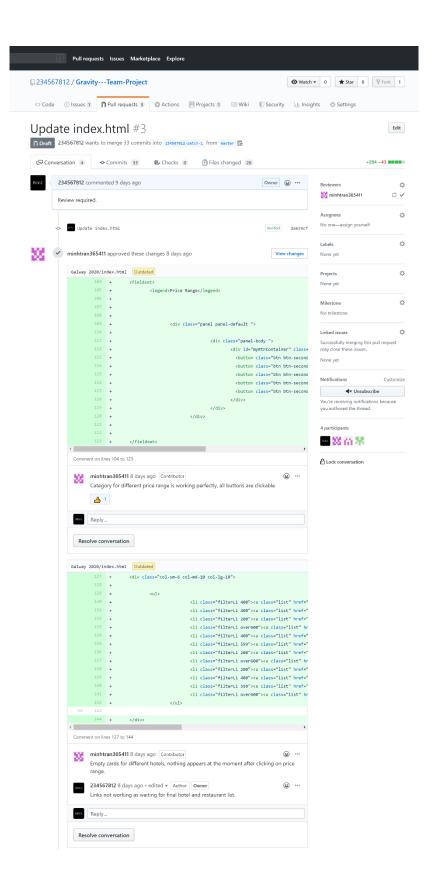


# g) Show evidence of code and artifact reviews by the team members









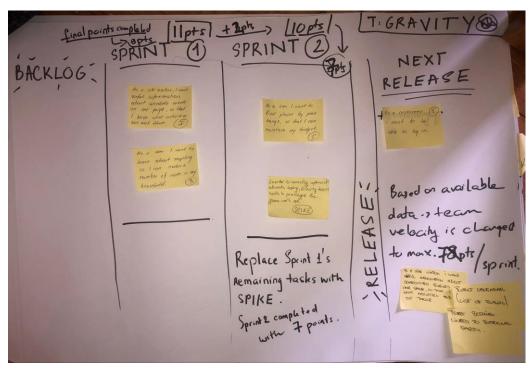
h) Links to associated documentation, document revisions, document reviews by the team, related to the project, stored in GitHub, including release plan(s), release burn down(s), sprint plan(s), Scrum board snapshots, sprint burndown chart snapshots, product backlog, team photo, inception deck, test plans, tests scripts, test results, DOD, DOR, Team working agreement, risks, brainstorming sessions, stories, etc...

This is the link to GitHub repository.

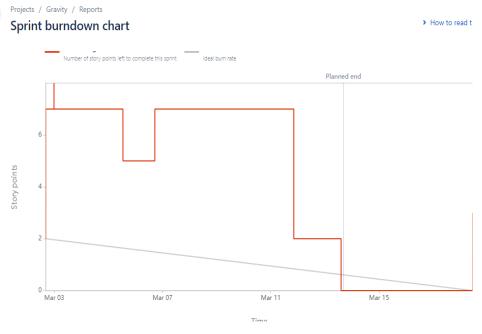
This is the link to Jira Project.

This is the link to TEAMS.

i) Update release plan and release burndown chart after end of sprint 2



Img 1.2.2.j.1 - Release Plan after the end of Sprint 2



Img 1.2.2.j.2 - Release Burn Down Chart after the end of Sprint 2

j) Flipchart sheets, stickies, explanations to show evidence of team brainstorming, confidence votes, etc....



# References

Guru99.com. 2020. What Is Spike Testing? Learn With Example. [online] Available at: <a href="https://www.guru99.com/spike-testing.html">https://www.guru99.com/spike-testing.html</a> [Accessed 19 March 2020].

Jmeter.apache.org. 2020. *Apache Jmeter - User's Manual: Getting Started*. [online] Available at: <a href="https://jmeter.apache.org/usermanual/get-started.html">https://jmeter.apache.org/usermanual/get-started.html</a> [Accessed 19 March 2020].

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### Pictures:

https://media-cdn.tripadvisor.com/media/photo-s/0f/61/1e/02/tribeton-restaurant.jpg

https://media-cdn.tripadvisor.com/media/photo-s/0d/54/8f/6c/biteclub-diner-on-street.jpg

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https://www.thegalmont.com/

https://www.galwaybayhotel.net/

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https://www.tribeton.ie/

http://www.hookedonhenryst.com/menu