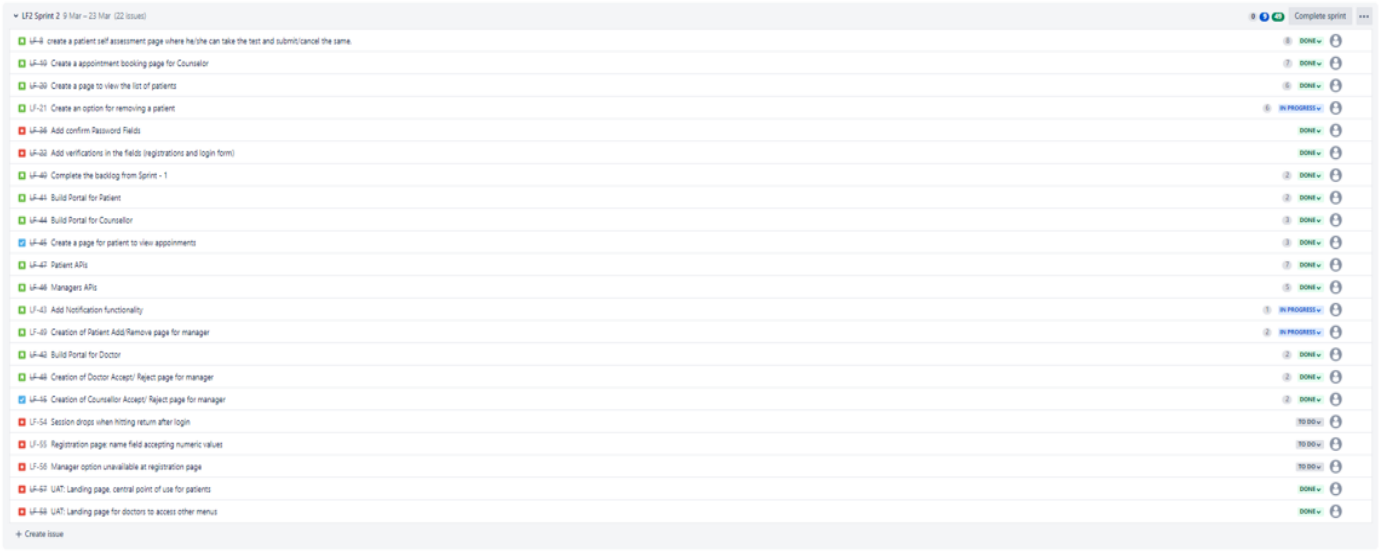
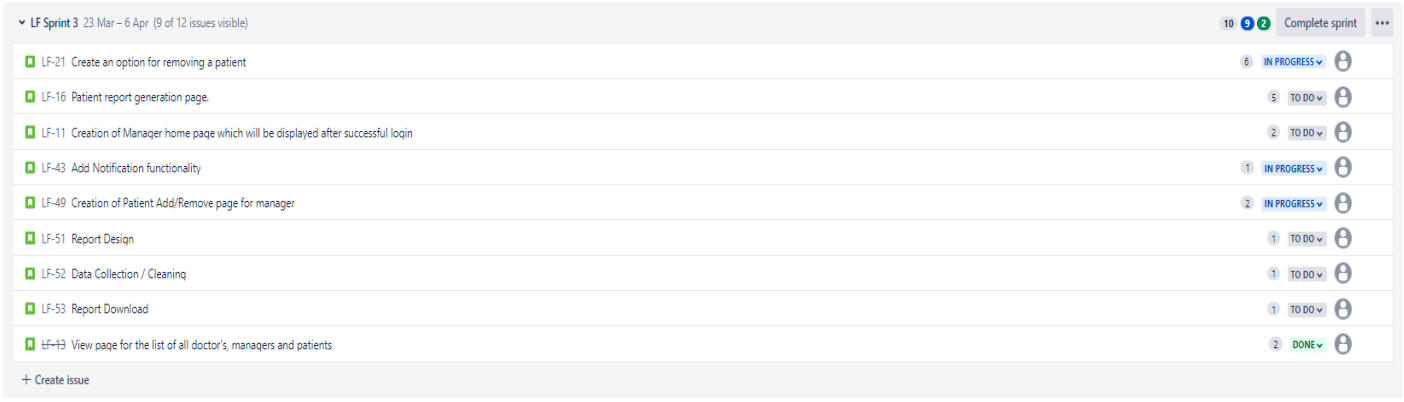
SPRINT 2 REPORT

1.User Stories Backlog

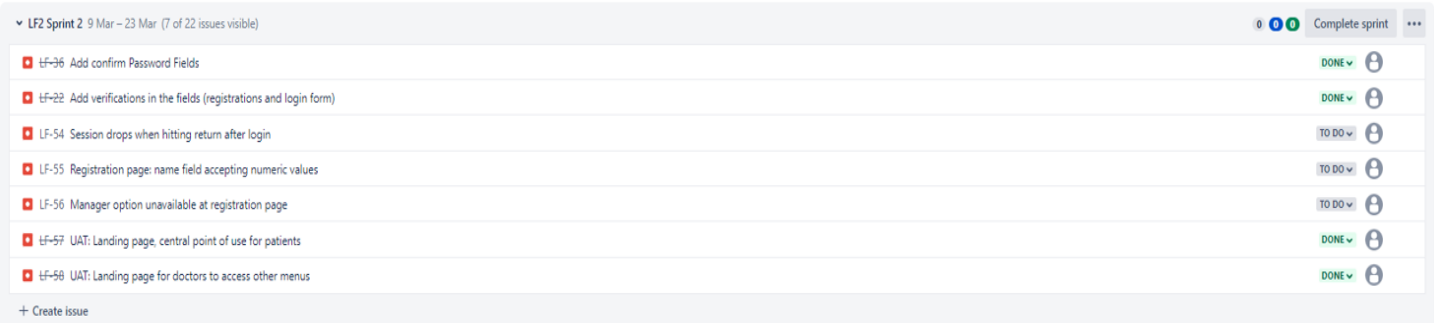
Sprint 2: - 9thMarch- 23rd March (Completed)



Sprint 3 Backlog



Defects Backlog



2. Acceptance Test Cases

Note: - In the excel file attached.

3. Risk management for the functionality developed in the sprint

Sr. No	Risk Item	Risk Category	Risk Management Technique
1	Story points are higher than finished in sprint 1, Finishing all story points in time	Estimation risk	Mitigation 1. Divided the team in 2 parts and worked in parallel to increase the speed and efficiency. 2. Planned and had regular meetings to help task between teams.
2	Integration of code within team	Integration risk	Mitigation 1. Planned a meeting with people from both sub-team's developer to discuss and merge the code.
3	Some of the tasks need more time than estimated	Estimation risk	Mitigation 1. Discussed the updates on development in regular meetings and coordinated with the Team leads to help other members wherever required.

4	Overriding source codes of other team members	Integration risk	Avoidance 1. Created a git repository to save whole source code, so for each change it can be traversed and get the original file.
5	Development issues (Any technical roadblock faced by dev team while developing the project)	Technology risk	Mitigation 1. Planned regular scrum meetings to discuss
6	Dependency on other team members	Dependency risk	Mitigation 1. Prioritized dependencies, which task should be done first, to avoid stalling. 2. Frequent communication with the other team members about the task status. 3. Ensured the dependent tasks are completed on time.
7	Poor quality code	Quality risk	Avoidance 1. Set a coding standard for the dev team. 2. After scrum meetings, extra session time for peer review of developed codes.

4. Iteration and Release Burndown Charts

Here with the help of burn down chart, we visually represented the progress made by a team during a sprint in agile project management. It shows the amount of work completed versus the amount of work remaining in the sprint.

If a sprint has "burn down" it means that it was not completed successfully and may have been terminated before completion due to various reasons such as technical difficulties, resource constraints, or changing project requirements. In such a case, a burnt down chart would show incomplete or partially completed tasks, with the remaining work appearing as a gap or a downward trend on the chart.

Here, in Sprint 2 , as we completed 49 story points out of 58 points we couldn’t achieve the ideal graph as we did in our previous sprint but we achieved a graph which is very near to ideal as majority of the stories were completed and we have moved the rest to sprint 3.

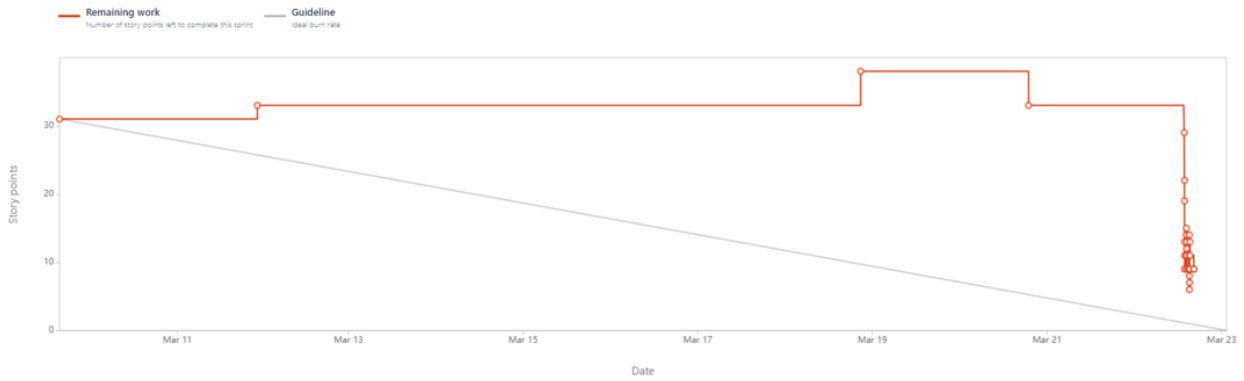
Sprint burndown chart

› How to read this rep

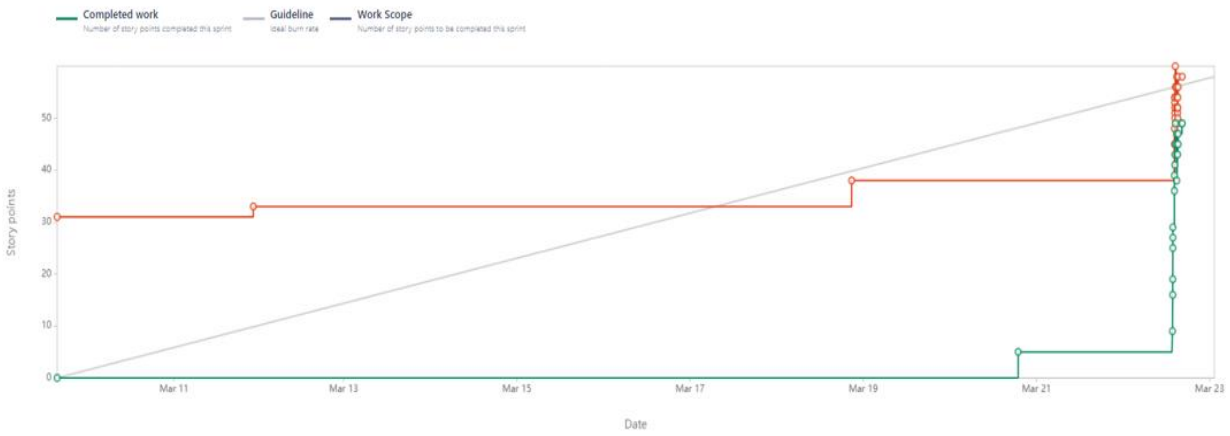
Sprint: LF2 Sprint 2

Estimation field: Story points

Date - March 9th, 2023 - March 23rd, 2023

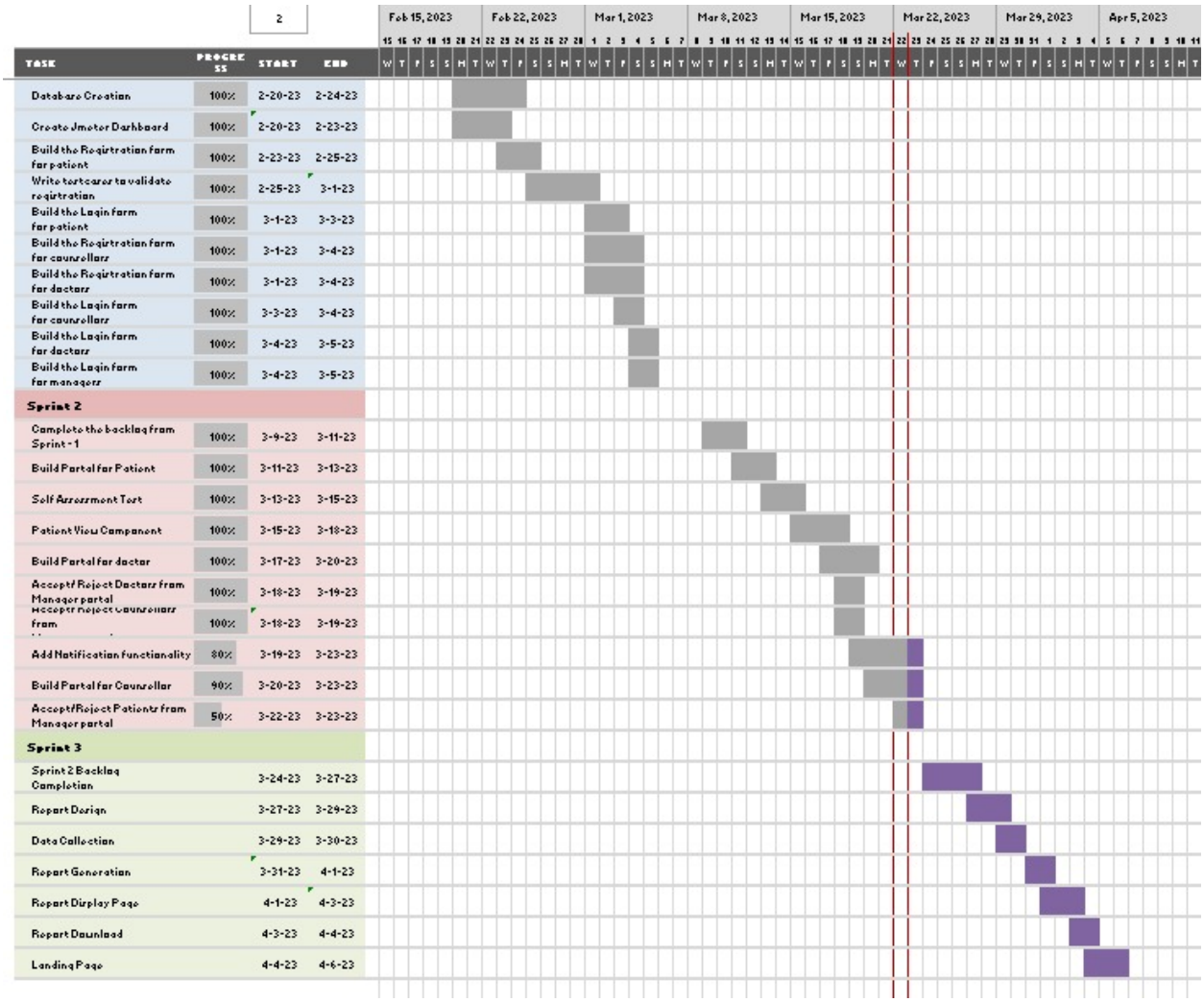


Date - March 9th, 2023 - March 23rd, 2023



Gantt Chart: -

Sprint 2 started from March 9th and ended on March 23rd. A total of 10 user stories were included including stories involving doctor, counsellor, patient and manager modules. A total of 7 user stories were completed on schedule as planned. 3 user stories are partially completed and thus will be moved to the Sprint 3 backlog. These 3 backlog stories will be completed in priority when Sprint 3 starts on March 24th.



5.Sprint 2 Meeting Events

Sprint 2 Planning

Date/Time – 9th March 2023, (20:00 -20:30)

Venue – Zoom meeting (online)

Attendees -

Aditi Aditi (Project Manager)	Angha(Developer)
Aditya, Shivam(UI/UX Designer / Developer)	Bhargav Pragya (Developer)
Simar (QA)	Madhav (QA)
Divya ,Soham(QA and Database)	Kenish(QA and Manager)

Major Points Discussed:

1. Assessment Test was planned to do in this Sprint from the previous Sprint.
2. We updated the estimations of some stories because they are very similar to previous stories so reduced the estimation time.
3. Team Members signed up for stories. We assigned two people to each user story in order to have pair-programming practice.

Standup Meeting

Date/Time - 12th March 2023, (22:00 -22:20)

Venue – Zoom meeting (online)

Attendees -

Aditi Aditi (Project Manager)	Angha(Developer)
Aditya, Shivam(UI/UX Designer / Developer)	Bhargav Pragya (Developer)
Simar (QA)	Madhav (QA)
Divya ,Soham(QA and Database)	Kenish(QA and Manager)

Major Points Discussed:

1. 2 team members said they are still working on implementing the UI of assessment part
2. Database team finished the database and object modeling.

Standup Meeting

Date/Time - 16th March, 2023, (22:00 -22:20)

Venue – Zoom meeting (online)

Attendees -

Aditi Aditi (Project Manager)	Angha(Developer)
Aditya, Shivam(UI/UX Designer / Developer)	Bhargav Pragya (Developer)
Simar (QA)	Madhav (QA)
Divya ,Soham(QA and Database)	Kenish(QA and Manager)

Major Points Discussed:

1. Team members confirmed that the logic and the UI of the assessment is done.
2. There is a problem in passing usernames among different pages after login. One team member is assigned to go to help to solve the issue.
3. Testing team should start writing and evaluating acceptance test on assessment test

Standup Meeting

Date/Time – 19th March 2023, (22:00 -22:20)

Attendees -

Aditi Aditi (Project Manager)	Angha(Developer)
Aditya, Shivam(UI/UX Designer / Developer)	Bhargav Pragya (Developer)
Simar (QA)	Madhav (QA)
Divya ,Soham(QA and Database)	Kenish(QA and Manager)

Major Points Discussed:

1. Testing team Confirmed that taking assessment implementation could pass the acceptance test.
2. Dev team confirmed the implementation of major components decided for this sprint is done.
3. 1 team member stated that the logic of one of the user story is not completed yet due to dependency on other user story.
4. Other dev team members confirmed that they started working on Counselor/Doctor user stories part
5. Testing Team should start writing and evaluating acceptance tests for Counselor/Doctor Visitation.

Standup Meeting

Date/Time - 21th March, 2023, (22:00 -22:20)

Venue – Zoom meeting (online)

Attendees -

Aditi Aditi (Project Manager)	Angha(Developer)
Aditya, Shivam(UI/UX Designer / Developer)	Bhargav Pragya (Developer)
Simar (QA)	Madhav (QA)
Divya ,Soham(QA and Database)	Kenish(QA and Manager)

Major Points Discussed:

1. Testing team Confirmed that all implementations could pass the acceptance test criteria.
2. Few devs stated they are still working on the implementation of 2 user stories but they have another submission deadline.

Review Meeting

Date/Time – 22nd March, 2023, (22:00 -22:30)

Venue – Zoom meeting (online)

Attendees -

Aditi Aditi (Project Manager)	Angha(Developer)
Aditya, Shivam(UI/UX Designer / Developer)	Bhargav Pragya (Developer)
Simar (QA)	Madhav (QA)
Divya ,Soham(QA and Database)	Kenish(QA and Manager)

Major Points Discussed:

1. Team Demonstrate the flow and functionality of completed stories.
2. 3 user stories and 2 defects are moved to next (final) sprint.
3. Team completed the Sprint 2 Document and demonstrated in the review meeting.

Retrospective Meeting

Date/Time - 22nd March 2023, (22:30 -23:00)

Venue – Zoom meeting (online)

Attendees -

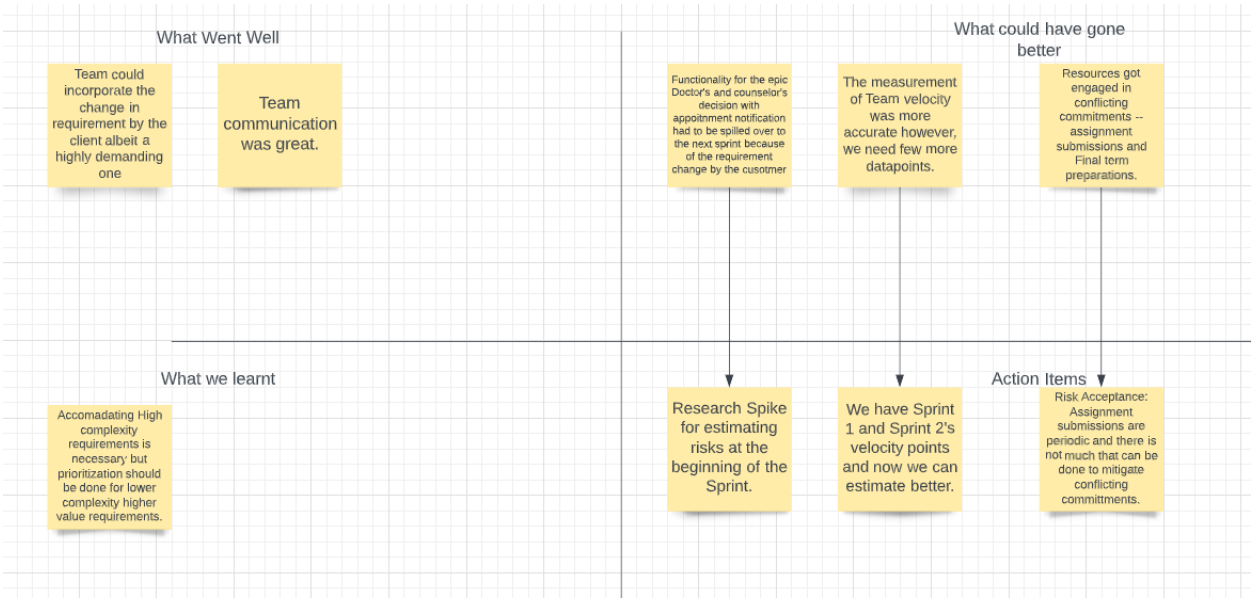
Aditi Aditi (Project Manager)	Angha(Developer)
Aditya, Shivam(UI/UX Designer / Developer)	Bhargav Pragya (Developer)
Simar (QA)	Madhav (QA)
Divya ,Soham(QA and Database)	Kenish(QA and Manager)

Major Points Discussed:

1. Team discussed what went well, what we learnt, what could have gone better, and the action items.
2. We discussed about why our velocity was low and what is the expected velocity for the next meeting:

What went well:
Team could incorporate the change in requirements by the client albeit a highly demanding one. Team communication was great.
What we learnt:

Accommodating high complexity requirements is necessary but prioritization should be done for lower complexity, high value requirements.	
What could have gone better:	Action Item:
Functionality for the Doctor/Counselor Decision story moved to the next sprint because of the change request by the customer.	We should have research spike for estimating the risk at the beginning of the sprint
The measurement of team's velocity was better than before. However, we still need to have more accurate estimation	Now, we have more datapoints and information about our team capabilities. So, we could have better estimation for the future.
Resources got engaged in conflicting commitments such as assignments and preparing for final term exams.	We decided to accept this risk. Cause these types of assignment are periodic and there is not much that can be done to mitigate this risk.



6.Measurement data on success indicators.

1) Goal Attainment:

The team was able to deliver 49 story points of the 58 estimated for this Sprint. Functionality pertaining to the following stories were delivered:

1) Patient Portal

2) Counselor Portal
3) Doctor Portal
4) Self-Assessment Test Component

Goal	To complete the Sprint 2 deliverable on time and within budget and delivered 49 Story points.
Question	How well did we complete the milestones or deliverable on time and within budget?
Indicator	Burndown Charts.
Metrics	Goal attainment, measured by the **Story Points** completed in the Sprint.

2) Quality:

A few things and 5 defects/bugs were found which were compromising the quality of the project. 3 of them were resolved and 2 defects are being tracked and moved to the next Sprint.

Goal	To ensure software quality meets established standards.
Question	How many defects or bugs were found in testing or production?
Indicator	JIRA tickets for bug tracking are in progress.
Metrics	**Defect density**, measured as the number of defects or bugs per unit of software code or functionality.

3) Innovation:

The Team worked on introducing new features constantly to enhance the Patient, Doctor, Counselor and Self-Assessment components in the best way possible.

Goal	To introduce new features or improve existing features.
Question	What is the number or percentage of new or improved features?
Indicator	The Team has enhanced 85% of all the components present in the project and came up with 2 new features for the Self-Assessment component.
Metrics	**Innovation percentage**, measured as the number or percentage of new or improved features.

4) Stakeholder Satisfaction:

The stakeholders, such as customers, investors, and team members are quite satisfied with the all the developments, work done till date and received a positive Customer feedback in the last Sprint.

Goal	To ensure stakeholder satisfaction.
Question	How satisfied are stakeholders, such as customers, investors, or team members?
Indicator	Stakeholder satisfaction score – 91

Metrics	Stakeholder satisfaction, measured through **surveys or feedback** channels.

5) Usability:

The Front-End team ensured that the software is easy to access and kept the UI/UX simple while developing the application. The Testing team acted as a User and tested the application on attributes mentioned below and provided a Usability testing score.

1) Accuracy - No outdated or incorrect data like contact information should be present, no broken links should be present.
2) Efficiency - Little navigation required, uniformity in the format of pages in application.
3) Effectiveness of the system - Is the application easy to learn, are colors, content, icons aesthetically pleasing?
4) User-Friendliness - Controls are self-explanatory.

Goal	To ensure the software is user-friendly and easy to use.
Question	How well does the software meet usability standards?
Indicator	Usability testing scores – 85
Metrics	Progress towards usability goals, measured as the **percentage of usability goals** that have been achieved or completed.

6) Maintenance:

The application is quite easy to maintain as the Team followed the following best practices -

1) Used Version Control - To keep track of changes to the code, collaborate with other developers, and roll back changes if necessary.

2) Documented everything - Kept track of what has been done and what still needs to be done. This includes project requirements, project goals, project timeline, technical specifications, and user documentation.
3) Follow coding best practices - Followed best practices such as writing clean, readable code, commenting the code, help us write high-quality code that is easy to maintain.
4) Use of tools: Tools like JUnit and Postman saved time while testing the API and source code.

Goal	To ensure the software can be easily maintained and updated.
Question	How much time and effort is required to maintain and update the software?
Indicator	Maintenance score is 85 as time or resources required for maintenance and updates is quite less.
Metrics	Progress towards maintenance goals, measured as the percentage of maintenance goals that have been achieved or completed.

8)Effort:

The amount of work expended for conflicting commitments (part-time jobs and other subject assignments) reduced the team throughput to 85%. GQIM model is deployed to mitigate the risk and improve effort.

Goal	To restore the team throughput to 100%
Question	Is the team effort increasing?
Indicator	The Sprint was shorter as compared to the previous one but the Team still managed to have a Team velocity/throughput of 85%.

Metrics	**Team Velocity** at the end of the sprint.

9)Cost Effectiveness:

Cost: **-**The cost expenditure of all the features implemented in this Sprint are at par with the budget estimated for the particular Sprint.

Expenditures on resources for 85% commitments were visualized. Finding a workaround on the API outage took the resources of CAD $800 in project budget. Final spends –$4,480.

Goal	To ensure the project or feature is cost-effective and spend $4890 on Sprint 2.
Question	What is the cost of the Project/Sprint or feature compared to the expected return on investment?
Indicator	The Team is currently at par with the budget for this Sprint.
Metrics	**Cost effectiveness**, measured as the cost of the project or feature as compared to the expected return on investment.

Comparison between Measurement Data on Success Indicators b/w Sprint 1 & 2

Success Indicator	Sprint 1	Sprint 2
Progress / Goal Attainment	The Team was able to deliver **41 Story Points** out of 41 estimated Story points.	The Team was able to deliver **49 Story Points** out of 58 estimated story points, moving the remaining 9 Story points to the next Sprint.
Defects Density	The Team found **5 defects** during the Sprint and **resolved 3** of them whereas the other 2 were moved to next Sprint and being tracked on the JIRA board.	The Team found **5 defects** during the Sprint and **resolved 2** of them whereas the other 3 were moved to next Sprint and being tracked on the JIRA board.
Efforts	The Team's **throughput** was affected due to conflicting commitments (Midterms) and resulted in a value of **75%.**	The duration of the Sprint 2 was shorter as compared to Sprint 1 but the Team still managed to produce a **throughput of 85%** even though it had other commitments (Part-time jobs and other assignments)
Cost Effectiveness	The Team **spent $4,420** out of the $4,830 estimated budget for the Sprint including the 75% expenditures on the resources and other miscellaneous costs.	The Team **spent $4,480** out of the $4,890 estimated budget for the Sprint including the 85% expenditures on the resources and additional $800 on API outage and Database resources.

Analysis of the result -

Based on the above comparison data, we can see that the **team's progress** or goal attainment has **increased from Sprint 1 to Sprint 2**. In Sprint 1, the team was able to deliver 41 Story Points out of 41 estimated Story points, indicating that they were able to complete all the work that

they had planned for that sprint. In Sprint 2, the team was able to deliver 49 Story Points out of 58 estimated story points. Although they were not able to complete all the work that they had planned for this sprint, they were able to deliver more than what they delivered in Sprint 1. Additionally, they have carried over the remaining 9 story points to the next sprint, which can be considered as progress towards achieving their overall goal. The team **learnt** that they need to **work efficiently** in the similar manner to **maintain/improve the progress further**.

In terms of **Defect Density**, we can see that the values do **not show a significant change or rather declined a little** between Sprint 1 and Sprint 2. In Sprint 1, the team found 5 defects and resolved 3 of them, meaning that the team was left with 2 unresolved defects at the end, which were moved to the next sprint for further resolution. In Sprint 2, the team found the same number of defects (5) during the sprint, but resolved only 2 of them, leaving 3 unresolved defects to be carried over to the next sprint. However, the team **learnt** that they may need to **monitor** the number of defects and the rate at which they are being resolved to **ensure that there is no increase in defect density in the upcoming sprint**.

In terms of **Efforts**, we can see that there has been an **increase in Efforts or throughput from Sprint 1 to Sprint 2**, despite the fact that the team had other commitments in both sprints. In Sprint 1, the team's throughput was affected due to conflicting commitments (Midterms), resulting in a value of 75%.

In Sprint 2, even though the duration of the sprint was shorter than Sprint 1, the team managed to produce a throughput of 85%. It's worth noting that the team **learnt** that may need to **monitor their capacity and availability** in the upcoming sprints to ensure that they are **not overburdened with commitment**s, which can affect their throughput.

Analyzing in terms of **Cost Effectiveness**, we can see that the Cost Effectiveness has **decreased from Sprint 1 to Sprint 2**. In Sprint 1, the team spent $4,420 out of the estimated budget of $4,830 which indicates that the team was able to complete the sprint within the budget. In Sprint 2, the team spent $4,480 out of the estimated budget of $4,890. Although the team was able to complete the sprint within the budget, only 85% of the expenditures were used on the resources, and an additional $800 was spent on API outage and Database resources which resulted in a lower percentage of the expenditures being used on the resources. The team **learnt** may need to **monitor their expenses and the percentage of expenditures** used on the resources to ensure that they are **maintaining cost-effectiveness** in the upcoming sprints.

7.Sprint 3 Planning

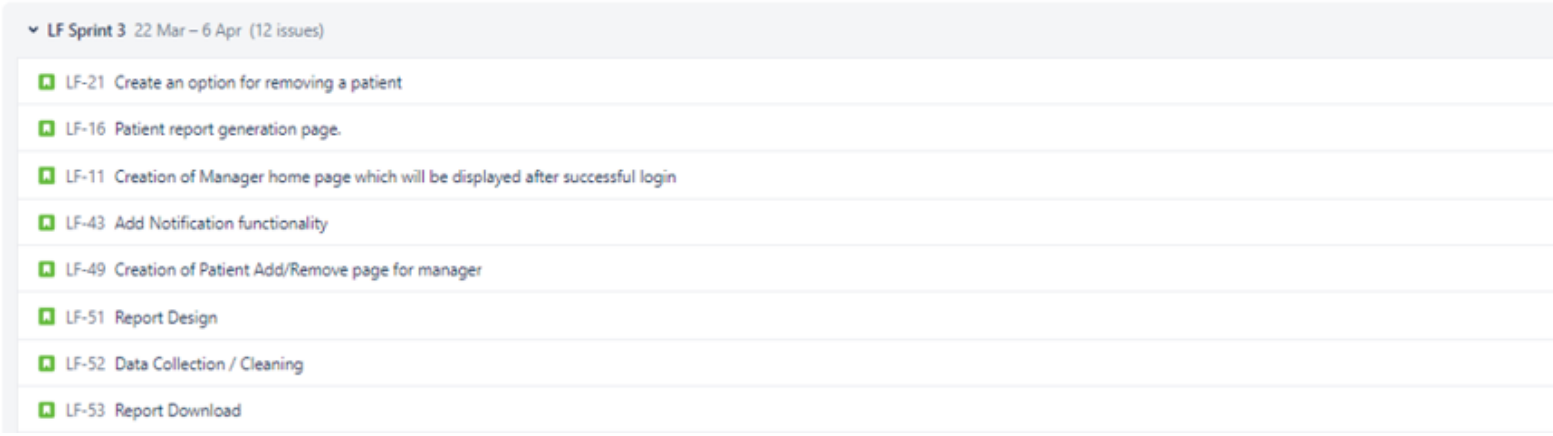
The team was able to deliver 49 SPs as opposed to the planned 58 SPs. Team's progress seems little bit behind as compared to sprint 1 but we covered important stories first so yes, it is overall good.

We planned 12 SPs for sprint 3 and there is an additional 9 SPs for the spilled-over user stories. This accounts for a total of 21 SPs for sprint 3.

Targeting 21 SPs for sprint 3 does not seem feasible looking at the team velocity in Sprint 2.

Estimation method: **Planning Poker**

We used the same method for effort estimation at the start of the project. All the team members participated and here are the estimated:

As noted in the Retrospective Meeting, there were two major problems that contributed to the team's slow velocity. One of these was requirement revisions, and the other was deadlines for practically all team members. As we discussed, it seems that members are more comfortable with the technology and they will have more free time during the upcoming Sprint as it was little bit less time during this sprint . Mangers api were most important so we covered it in thi sprint as compared to the patient's Api.

Also, only less stories are left for Sprint 3 with few defects, and our team estimated that we can cover it easily in the upcoming sprints.