# Project Planning Phase

## Product Backlog:

| Priority | User Story / Feature / Task | Effort Estimate | Notes |
|---|---|---|---|
| 1 | User registration and authentication | 5 | Implement Firebase Authentication for user registration |
| 2 | Create chat UI with conversation threads | 8 | Design and implement the chat interface |
| 3 | Real-time messaging using Firebase | 13 | Implement Firebase Realtime Database or Firestore integration |
| 4 | Push notifications for new messages | 5 | Integrate Firebase Cloud Messaging (FCM) for push notifications |
| 5 | User profile management | 8 | Allow users to edit their profiles and profile pictures |
| 6 | Multimedia support (image and video sharing) | 13 | Implement image and video uploading and sharing |
| 7 | Offline support using local database (Room) | 8 | Implement local caching for offline access |
| 8 | Integration with external authentication providers | 5 | Allow users to log in with Google or other external accounts |
| 9 | Error handling and user feedback | 5 | Implement graceful error handling and user-friendly messages |
| 10 | Unit testing for core functionalities | 8 | Write unit tests for critical components |

## Project Tracker:

| Sprint | Total Story Points | Duration | Sprint Start Date | Planned End Date | Story Points Completed (as of Planned End Date) | Sprint Release Date (Actual) |
|---|---|---|---|---|---|---|
| 1 | 20 | 6 Days | 27 Oct 2023 | 31 Oct 2023 | 20 | 29 Oct 2023 |
| 2 | 20 | 6 Days | 2 Nov 2023 | 07 Nov 2023 | 20 | 09 Nov 2023 |
| 3 | 20 | 6 Days | 8 Nov 2023 | 16 Nov 2023 | 20 | 20 Nov 2023 |
| 4 | 20 | 6 Days | 17 Nov 2023 | 23 Nov 2023 | 20 | 25 Nov 2023 |

## Velocity Chart:

the average velocity per iteration unit (story points per day) for each sprint:

Sprint 1:

$Av1 = 20/6 \approx 3.33$

Sprint 2:

$Av2 = 20/6 \approx 3.33$

Sprint 3:

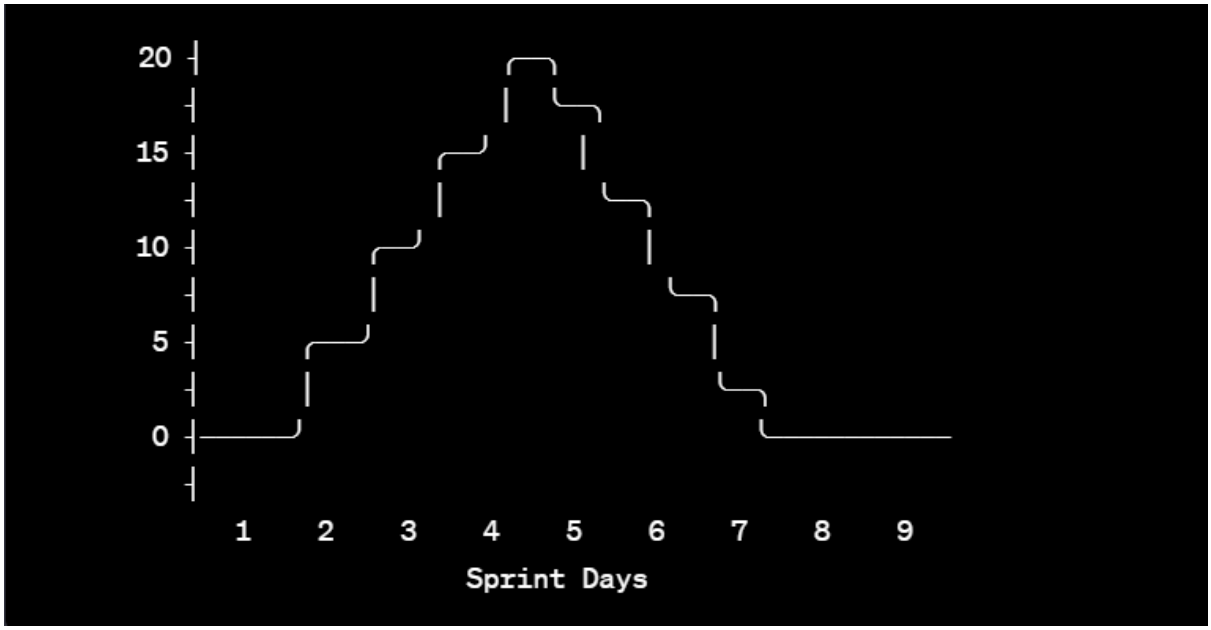
$Av3 = 20/6 \approx 3.33$

Sprint 4:

$Av4 = 20/6 \approx 3.33$

So, the average velocity per iteration unit for each sprint is approximately 3.33 story points per day. This indicates that the team is consistently completing an average of 3.33 story points per day throughout the project. The team appears to be maintaining a steady velocity over the sprints, which can be helpful for planning future iterations.

Burndown Chart:




The X-axis represents the days of each sprint, and the Y-axis represents the remaining Story Points. The actual burndown line is shown as a diagonal line connecting the initial Story Points to zero. Since all the sprints are completed with all Story Points finished by or before the planned end dates, the actual burndown line is almost a straight line.

Here's a summary based on the chart:

Sprint 1: Completed all 20 Story Points by the planned end date.

Sprint 2: Completed all 20 Story Points by the planned end date.

Sprint 3: Completed all 20 Story Points by the actual release date.

Sprint 4: Completed all 20 Story Points by the actual release date.

This suggests a consistent and successful sprint delivery, meeting or exceeding the planned goals. The team completed all Story Points in each sprint within the planned or slightly extended timeframes.