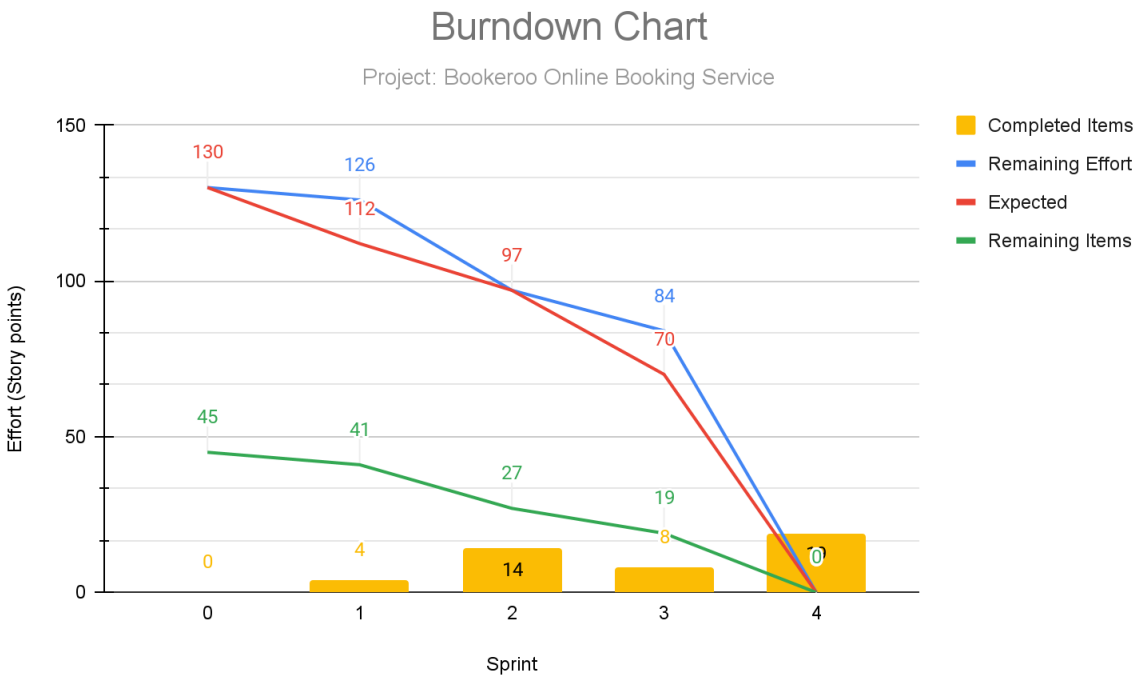
Burndown Chart



Velocity

Sprint 1:

The team decided to commit to 12 items from the product backlog:

- Admin can log in (1 story point)
- Public users can register (1 story point)
- Public users can log in (1 story point)
- Shop owners can register (1 story point)
- Shop owners can log in (1 story point)
- Users (all 3 types) can log out (1 story point)
- Admin can add books (1 story point)
- Users can view information about the company/service (1 story point)
- Users can view contact details about the company/service (1 story point)
- Visitors can search for books by name (3 story points)
- Visitors can search for books by author (3 story points)
- Visitors can search for books by ISBN (3 story points)

The following 4 items were completed:

- Admin can login (1 story point)
- Public users can register (1 story point)
- Public users can login (1 story point)
- Shop owners can login (1 story point)

$$Total\ story\ points\ completed\ (Sprint\ 1) = 1 + 1 + 1 + 1 = 4$$

So, the total story points completed in this sprint is 4 story points.

Average velocity calculation by the end of Sprint 1:

$$Average\ velocity\ (Sprint\ 1) = \frac{4}{1} = 4$$

So, the average velocity so far is 4 story points per sprint. However, this may be inaccurate due to there being only one sprint. A more inaccurate result may be obtained at the end of three sprints.

Sprint 2:

The team decided to commit to 14 items from the product backlog:

- Users (all 3 types) can logout (1 story point)
- Shop owners can register (1 story point)
- Users can view information about the company/service (1 story point)
- Users can view contact details about the company/service (1 story point)
- Admin can add books (1 story point)
- Visitor can search for books by name (3 story points)
- Visitor can search for books by author (3 story points)
- Visitor can search for books by ISBN (3 story points)
- Visitors can browse books (2 story points)
- Public users can browse books (2 story points)
- Shop owners can browse books (2 story points)
- Public users can search for books by name (3 story points)
- Public user can search for books by authors (3 story points)
- Public users can search for books by ISBN (3 story points)

All items committed for this sprint were completed by the end of the sprint.

$$Total\ story\ points\ completed\ (Sprint\ 2)$$

$$= 1 + 1 + 1 + 1 + 1 + 3 + 3 + 3 + 2 + 2 + 2 + 3 + 3 + 3$$

$$= 29$$

So, the total story points completed in this sprint is 29 story points.

Average velocity calculation by the end of Sprint 2:

$$Average\ velocity\ (Sprint\ 2) = \frac{4+29}{2} = \frac{23}{2} = 11.5$$

So, the average velocity so far is 11.5 story points per sprint. A more accurate result may be obtained by the end of the next sprint.

Sprint 3:

The team decided to commit to 12 items from the product backlog:

- Visitor can search for books by category (3 story points)
- Public users can search for books by category (3 story points)
- Users can preview book cover (2 story points)
- Users can preview book table of contents (2 story points)
- Users can reset their account password (2 story points)
- Public users can request to become shop owners (2 story points)
- Admin can approve/decline shop owner requests (1 story points)
- Admin can edit books (1 story point)
- Admin can add new users (1 story point)
- Admin can block new users (1 story point)
- Admin can edit new users (1 story point)
- Shop owners can sell their own new books (8 story points)

The following 8 items were completed:

- Visitor can search for books by category (3 story points)
- Public users can search for books by category (3 story points)
- Public users can request to become shop owners (2 story points)
- Admin can approve/decline shop owner requests (1 story points)
- Admin can edit books (1 story point)
- Admin can add new users (1 story point)
- Admin can block new users (1 story point)
- Admin can edit new users (1 story point)

$$Total\ story\ points\ completed\ (Sprint\ 3) = 3 + 3 + 2 + 1 + 1 + 1 + 1 + 1 = 13$$

So, the total story points completed in this sprint is 13 story points.

Average velocity calculation by the end of Sprint 3:

$$Average\ velocity\ (Sprint\ 3) = \frac{4+29+13}{3} = \frac{46}{3} = 15\frac{1}{3} \approx 15.3$$

So, the average velocity so far is 15.3 story points per sprint (1.d.p). This is an improvement from the previous sprint, as the average velocity has increased by 3.8 story points.

Sprint 4:

The team decided to commit to 19 items from the product backlog:

- Admin can download csv report about book transactions (5 SP)
- Admin can download csv report about user transactions (5 SP)
- Users can preview book cover (2 SP)
- Users can preview book table of contents (2 SP)
- Admin can view summary of transactions (3 SP)
- Shop owners can see their transaction history (3 SP)
- Shop owners can see the status of current orders (3 SP)
- Public users can see their transaction history (3 SP)
- Public users can see the status of current orders (3 SP)
- Public users can pay using PayPal (8 SP)
- Public users can cancel an order up to 2 hours after the order had been placed (8 SP)
- Users can reset their account password (2 SP)
- Shop owners can sell their own new books (8 SP)
- Shop owners can sell their own used books (8 SP)
- Public users can buy books (8 SP)
- Public users can sell their own used books (8 SP)
- Public users can share books (1 SP)
- Public users can review books (1 SP)
- Public users can review other users (3 SP)

All items committed for this sprint were completed by the end of the sprint.

$$Total\ story\ points\ completed\ (Sprint\ 4)$$

$$= 5 + 5 + 2 + 2 + 3 + 3 + 3 + 3 + 3 + 8 + 8 + 2 + 8 + 8 + 8 + 8 + 1 + 1 + 3$$

$$= 84$$

So, the total story points completed in this sprint is 84 story points.

Average velocity calculation by the end of Sprint 4:

$$Average\ velocity\ (Sprint\ 4) = \frac{4+29+13+84}{4} = \frac{130}{4} = 32\frac{1}{4} = 32.25$$

So, the average velocity so far is 32.25 story points per sprint. This is a major improvement from the previous sprint, as the average velocity is over double that of the previous sprint.