

# Sprint Planning

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## Milestones

### Sprint 2

#### Sprint 2 Backlog

<b>Sprint 2 Goal</b>	Implement six animation profiles US1 - US6; Create a functional visualizer that enables the function mentioned in Sprint User Stories US7 - US17				
<b>Sprint 2 - Additional Notes</b>	The team decided to focus on 16 sprint user stories this sprint.				
ID	Sprint User Story	Tasks	Priority	Estimated Story Points	Dependency
US1	As Sara, I want to see the animation of a Snake game so that I can understand how the snake's actions are planned to move and eat points.	T1-US1: Create the animation profile for the snake game.	High	5	Null
US2	As Sara, I want to see the animation of a Ferry Transport problem so that I can understand how the ferry brings the cars to different ports.	T1-US2: Create the animation profile for the Ferry Transport problem.	High	5	Null
US3	As Sara, I want to see the animation of a Driverlog problem so that I can understand how drivers are allocated from their waiting slots to carry the baggage and drive the trucks out.	T1-US3: Create the animation profile for the Driverlog problem.	High	5	Null
US4	As Sara, I want to see the animation of a Transport problem so that I can understand how the drivers are directed to send packages to locations in the city.	T1-US4: Create the animation profile for the Transport problem.	High	5	Null
US5	As Sara, I want to see the animation of a Movie night problem so that I understand how the snack count is recorded and accumulated to let the movie start.	T1-US5: Create the animation profile for the Movie night problem.	High	5	Null

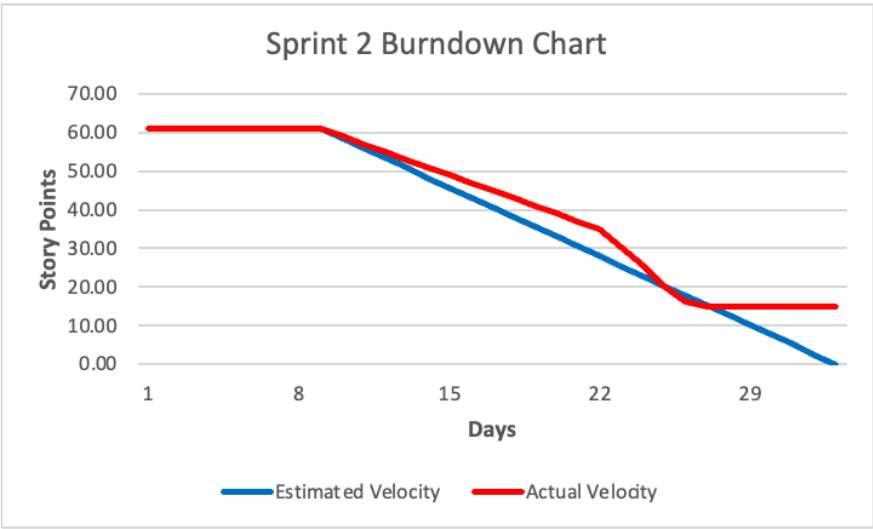
US6	As Sara, I want to see the animation of a Parking problem so that I understand how the cars are organized to park on a street with several curb locations.	T1-US6: Create the animation profile for the Parking problem.	High	5	Null
US7	As James, I want to have a website to receive files so that I can get usable data.	T1-US7: Create a logic in frontend for uploading files T2-US7: Deploy the docker to run the frontend	Medium	5	Null
US8	As James, I want my web to successfully process the received data so that I can have the visualization page capable of playing the generated animations.	T1-US8: Create a logic in the backend for handling domain, problem and animation files T2-US8: Deploy the docker to run the backend	High	8	Null
US9	As Sara, I want to play the generated animation so that I can see the general overview of the animation planning result.	T1-US9: Create a 'play icon' UI. T2-US9: Implements backend logic for play animation.	Medium	2	U2
US10	As Sara, I want to pause a generated animation that is playing so that I can stop at a specific part of the animation planning results.	T1-US10: Create a 'pause icon' UI. T2-US10: Implements backend logic for pausing.	Medium	2	U2
US11	As Sara, I want to skip some animations so that I can ignore some animation planning steps that I don't need to see	T1-US11: Create a 'fast forward icon' UI. T2-US11: Implements backend logic for fast forward.	Medium	2	U2
US12	As Sara, I want to jump back to the previous animation step so that I can review the specific steps of the animation	T1-US12: Create a 'fast backward icon' UI. T2-US12: Implements backend logic for fast backward.	Medium	2	U2
US13	As Sara, I want to watch the animation from the beginning so that I can learn the entire animation planning process again	T1-US13: Create a 'reset icon' UI. T2-US13: Implements backend logic for reset.	Medium	2	U2
US14	As Sara, I want to adjust the current playing speed so that I can watch the animations at an appropriate playing speed.	T1-US14: Create a 'speed controller' UI. T2-US14: Implements backend logic for speed controller.	Medium	2	U2
US15	As Sara, I want to jump the animation to a specific step so I can check the details of an animation planning step.	T1-US15: Create a 'step panel' UI to show the steps of planning. T2-US15: Implements backend logic for step panel.	Medium	2	U2
US16	As Sara, I want to jump directly to the end of the animation so I can directly see the result of the animation planning.	T1-US16: Create a 'final goal icon' UI. T2-US16: Implements backend logic for the final goal.	Medium	2	U2
US17	As Sara, I want to download the entire generated animation so that I can watch the animation at my local host.	T1-US17: Create an 'export icon' UI.	Medium	2	U2

## Sprint 2 Burndown Chart

This burn

Days	Estimated Velocity	Actual Velocity
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1	61.00	61.00
2	61.00	61.00
3	61.00	61.00
4	61.00	61.00
5	61.00	61.00
6	61.00	61.00
7	61.00	61.00
8	61.00	61.00
9	61.00	61.00
10	58.46	59.00
11	55.92	57.00
12	53.37	55.00
13	50.83	53.00
14	48.29	51.00
15	45.75	49.00
16	43.21	47.00
17	40.67	45.00
18	38.12	43.00
19	35.58	41.00
20	33.04	39.00
21	30.50	37.00
22	27.96	35.00
23	25.42	30.29
24	22.87	25.58
25	20.33	20.20
26	17.79	16.16
27	15.25	15.00
28	12.71	15.00
29	10.17	15.00
30	7.62	15.00
31	5.08	15.00
32	2.54	15.00
33	0.00	15.00

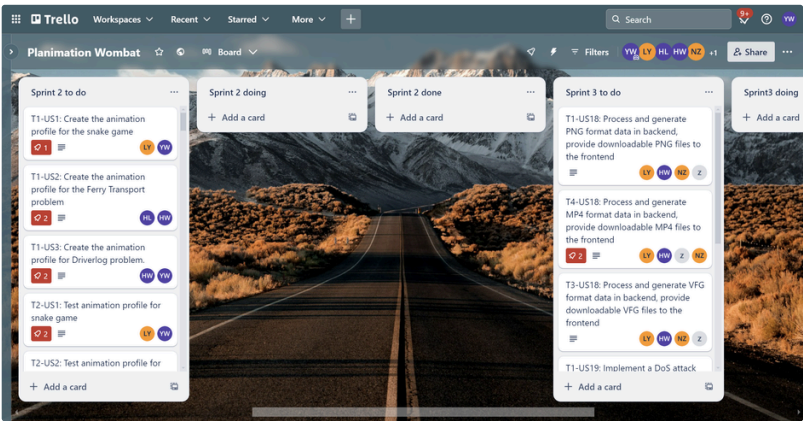


**Note:** This Burndown chart represents the progress of the project completed in sprint2. When a task is done, the corresponding story point will be reduced. From day 1 to 8, no story points were achieved because we were configuring the project developing environment. From day 9 to 25, our team mainly focused on the development of the front end and back end. The remaining 15 story points were due to bugs still existing in some AP tasks, which will be put into the next sprint for resolution.

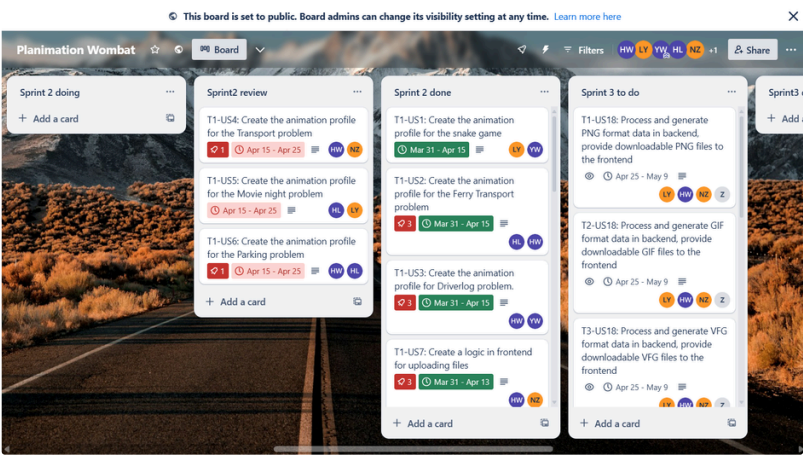
**Sprint 2 Trello**

Here is our kanban: [Wombat Trello Kanban](#)

**Sprint 2 to do**



**Sprint 2 done**



## Sprint 3

### Sprint 3 Backlog

<b>Sprint 3 Goal</b>	Implement three animation profiles US4 - US6; Implement different types of download formats US18; Develop new functions and expand creativities based on current system US20-US22					
<b>Sprint 3 - Additional Notes</b>	The team decided to focus on 7 sprint user stories this sprint.					
ID	Sprint User Story	Tasks	Priority	Estimated Story Points	Dependency	Assigned to
US4 (not completed in sprint 2)	As Sara, I want to see the animation of a Transport problem so that I can understand how the drivers are directed to send packages to locations in the city.	T1-US4: Create the animation profile for the Transport problem.	High	5	Null	@Huiyi Wang @ninghai zhang
US5 (not completed in sprint 2)	As Sara, I want to see the animation of a Movie night problem so that I understand how the snack count is recorded and accumulated to let the movie start.	T1-US5: Create the animation profile for the Movie night problem.	High	5	Null	@Haoran Li @Lantian Yan
US6 (not completed in sprint 2)	As Sara, I want to see the animation of a Storage problem so that I understand how the crates are organized to move between depots and containers.	T1-US6: Create the animation profile for the Storage problem.	High	5	Null	@Huiyi Wang @Haoran Li
US18	As Sara, I want to choose a specific download type so that I can watch the animation in different forms locally	T1-US18: Process and generate PNG format data in the backend, provide downloadable PNG files to the frontend  T2-US18: Process and generate GIF format data in the backend, provide downloadable GIF files to the frontend  T3-US18: Process and generate VFG format data in the backend, provide downloadable VFG files to the frontend  T4-US18: Process and generate MP4 format data in the backend, provide downloadable MP4 files to the frontend	Medium	8	U2	@Huiyi Wang @ninghai zhang @zixuhuang @Lantian Yan
US20	As James, I want to have an animation profile generator so that I can get an animation profile easily which is automatically generated by the generator.	T1-US20: Create an AP generator page in the frontend  T2-US20: Implement backend logic for AP generator.	Low	20	Null	@Huiyi Wang @Haoran Li @Yurun Wang @Lantian Yan @ninghai zhang
US21	As Sara, I want the website's visualization to have labels for objects so that the	T1-US21: Implement frontend logic in display labels	Medium	5	U2	@Huiyi Wang @Yurun Wang

	number of overlapping objects are known.	T2-US21: Implement backend logic in processing overlapped objects.				
US22	As Sara, I want to see the historical outcomes so that I can review past cases.	T1-US22: Create the database for storing historical animation outcomes  T2-US22: Create the UI that allows Sara and other students to access and review historical outcomes  T3-US22: Implement backend logic for adding historical records to the database	Low	5	U2	@Lantian Yan @Yurun Wang

## Potential Issues and Solution

### 1. Technical Difficulties:

- Risk: Encountering unexpected technical issues or bugs that are difficult to resolve.
- Mitigation: Regularly review and test the code to catch issues early. Use online resources and seek help from mentors when stuck. Break down problems into smaller, manageable tasks.

### 2. Lack of Experience

- Risk: Inexperience with tools and technologies.
- Mitigation: Allocate time for learning. Watch online tutorials or forums. Start with simpler tasks to build confidence before tackling more complex ones.

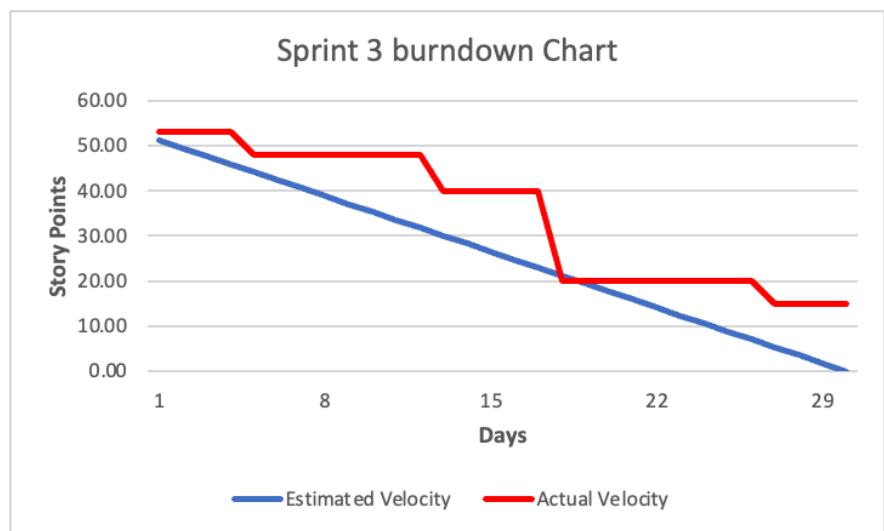
### 3. Time Management

- Risk: Poor time management can lead to rushed work and missed deadlines.
- Mitigation: Create a detailed schedule with milestones and deadlines. Use Trello to track progress. Allocate specific times for coding, testing, and documentation.

## Sprint 3 Burndown Chart

Days	Estimated Velocity	Actual Velocity
1	51.23	53
2	49.46	53
3	47.70	53
4	45.93	53
5	44.16	48
6	42.40	48
7	40.63	48
8	38.86	48
9	37.10	48
10	35.33	48
11	33.56	48
12	31.80	48
13	30.03	40
14	28.26	40
15	26.50	40
16	24.73	40
17	22.96	40
18	21.20	20

19	19.43	20
20	17.66	20
21	15.90	20
22	14.13	20
23	12.36	20
24	10.60	20
25	8.83	20
26	7.06	20
27	5.30	15
28	3.53	15
29	1.76	15
30	0.00	15

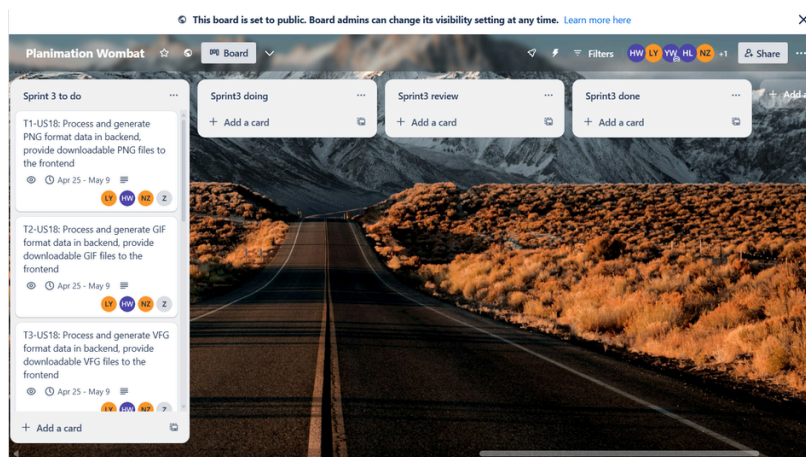


**Note:** For this sprint, we firstly managed to animate one of our AP problems out at around day 4. Then we put our effort into the downloading function, it takes some time, and it is done on day 12. Then we focus on the establishment of the AP generator website and get it done on day 18. We have debugged the overlapping problem successfully on day 27. The APs of Transport and Movie still have some technical issues and are left to be done.

### Sprint 3 Trello

Here is our kanban: [Wombat Trello Kanban](#)

### Sprint 3 to do



## Sprint 4

### Sprint 4 Backlog

<b>Sprint 4 Goal</b>	Implement three animation profiles US4, US5. Deploy completed features.					
<b>Sprint 4 - Additional Notes</b>	The team decided to focus on 2 sprint user stories and prepare the deployment of completed features to the production environment this sprint.					
ID	Sprint User Story	Tasks	Priority	Estimated Story Points	Dependency	Assigned to
US4 (not completed in sprint 3)	As Sara, I want to see the animation of a block problem so that I can understand how blocks are moving on the table.	T1-US4: Create the animation profile for the block problem.	High	5	Null	@Huiyi Wang @ninghai zhang

### Deployment Task

Team discussed that these tasks are required for deployment, therefore no story points are given here, all these tasks are assigned as high priority.

- Review of Completed Features - @Huiyi Wang @Haoran Li
  - T1-D1: Review the features and functionality completed in previous sprint.
  - T2-D1: Ensure that all completed features are ready for deployment.
- Creation of Pull Requests - @Lantian Yan @Yurun Wang
  - T1-D2: Identify the code changes and features that are ready to be deployed to the production environment.
  - T2-D2: Create pull requests for the identified code changes.
  - T3-D2: Ensure that each pull request includes a clear description of the changes and links to related user stories or issues.
- Code Review Process - @ninghai zhang @zixuhuang
  - T1-D3: Define the code review process and criteria for evaluating pull requests.
  - T2-D3: Conduct thorough code reviews and provide feedback on the proposed changes.
- Merge and Deployment - @Huiyi Wang @Haoran Li @Yurun Wang @Lantian Yan @ninghai zhang @zixuhuang
  - T1-D4: Merge approved pull requests into the main codebase.
  - T2-D4: Coordinate with client to ensure alignment with project's architecture and user expectations.

### Potential Issue

- Since the technical difficulties of US4 and US5 are very high, it is still possible that these two planned tasks are not finished.
- Transparency issue between two groups. Due to some inconsistent information, we may have a conflict version with other teams in deployment if both teams have accidentally done the same job.

### Solution for potential issues

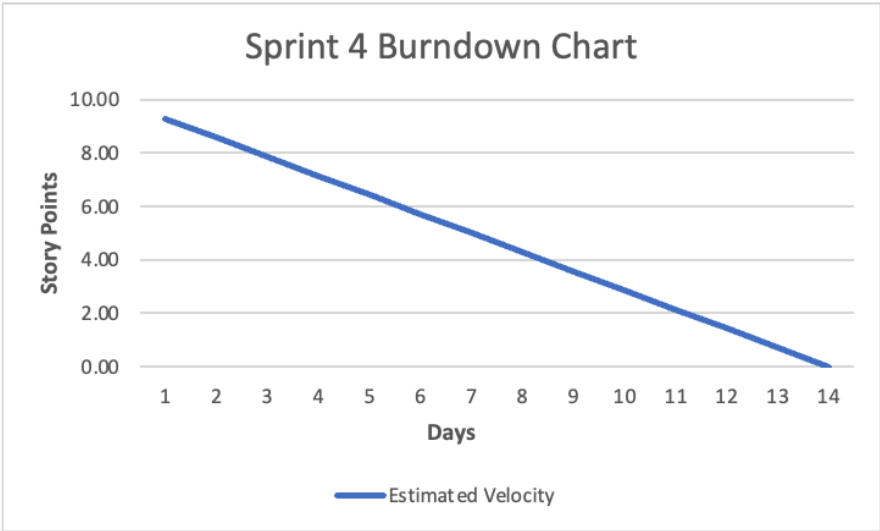
- If these two AP tasks have relatively high difficulties, we could try on other problems as replacement
- Set a specific time to chat with the communicator in Koala to ensure transparency. Compare functionalities if some artefacts are done under the same purpose and decide on a final version to create a pull request.

### Sprint 4 Burndown Chart (Estimation)

Days	Estimated Velocity
1	9.29
2	8.57
3	7.86
4	7.14
5	6.43
6	5.71
7	5.00
8	4.29



9	3.57
10	2.86
11	2.14
12	1.43
13	0.71
14	0.00

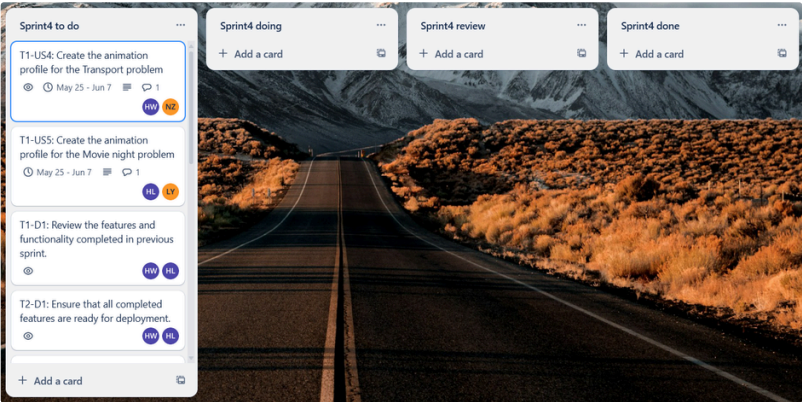


**Note:** Estimated velocity for two animation profiles 'Movie' and 'Tranport'.

**Sprint 4 Trello**

Here is our kanban: [Wombat Trello Kanban](#)

**Sprint 4 to do**



**Milestones**

Milestone	Owner	Deadline	Status
1. Deploy the docker environment for developing and testing purposes	@all members	3/31	Completed
2. Generate 6 animation profiles for 'Snake Game', 'Ferry Transport', 'Driverlog', 'Movie', 'Transport' and 'Storage', and ensure the	@Yurun Wang @Huiyi Wang @Haoran Li @Lantian Yan	5/23	In progress

animation runs correctly in logic.			
3. Debug the frontend uploading functionality and ensure it works	@Yurun Wang @Huiyi Wang @Haoran Li @Lantian Yan	4/13	Complete
4. Debug the backend animation functionality	@Yurun Wang @Huiyi Wang @Haoran Li @Lantian Yan	4/13	Complete
5. Implement functionalities to Create an interactive visualizer	@all members	4/20	Complete
6. Implement functionality to support downloading files in the format of GIF, PNG, MP4 and VFG	@Lantian Yan @Huiyi Wang @ninghai zhang @zixuhuang	5/15	Incomplete
7. Implement a Dos attack alarm	@zixuhuang @ninghai zhang	5/15	Incomplete
8. Implement functionality of an animation profile generator	@Haoran Li @Huiyi Wang @Lantian Yan @Yurun Wang @ninghai zhang	5/15	Incomplete
9. Implement good logic in displaying labels and process overlapping objects well	@Huiyi Wang @Yurun Wang	5/15	Incomplete
10. Create the database for storing historical animation outcomes	@Yurun Wang @Lantian Yan	5/15	Incomplete
11. Implement functionality for accessing historical outcomes	@Yurun Wang @Lantian Yan	5/15	Incomplete