Snapshot Week 10 of Group COMPLEX 8

Defence Science and Technology Group (DSTG) and Swordfish Computing Project Proposal: Distributed Decision-Making

a1734056	Hayden Lee
a1734069	Vinh Nguyen
a1743599	Nathan Van der Hoek
a1744852	Harry Bagley
a1746088	Daniel O'Connor
a1746146	Patrick Capaldo
a1748751	Sarah Damin
a1749935	Sam Davies
a1773841	Hayley Richardson

1. Product Backlog and Task Board

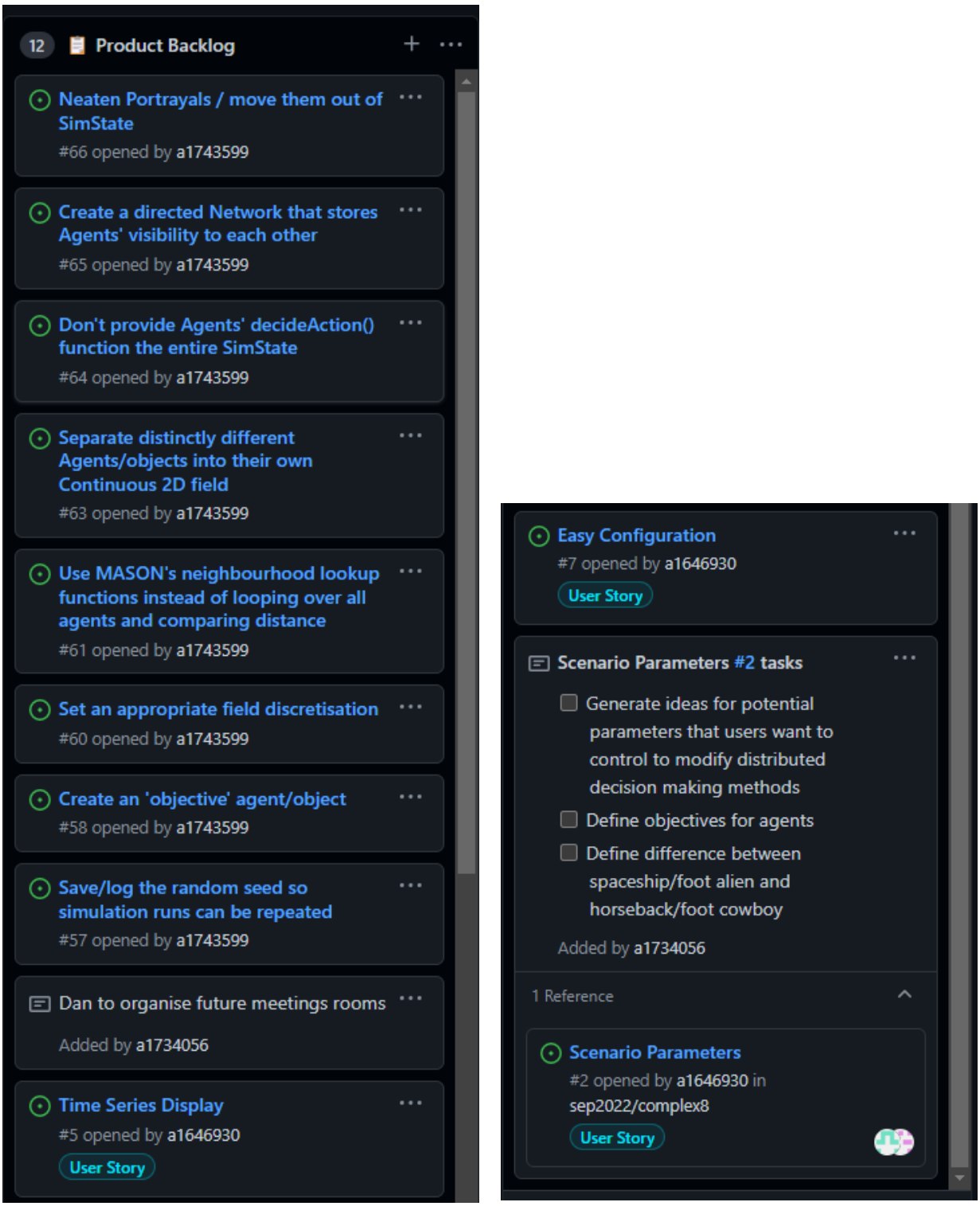


Figure 1: Product Backlog Screenshot

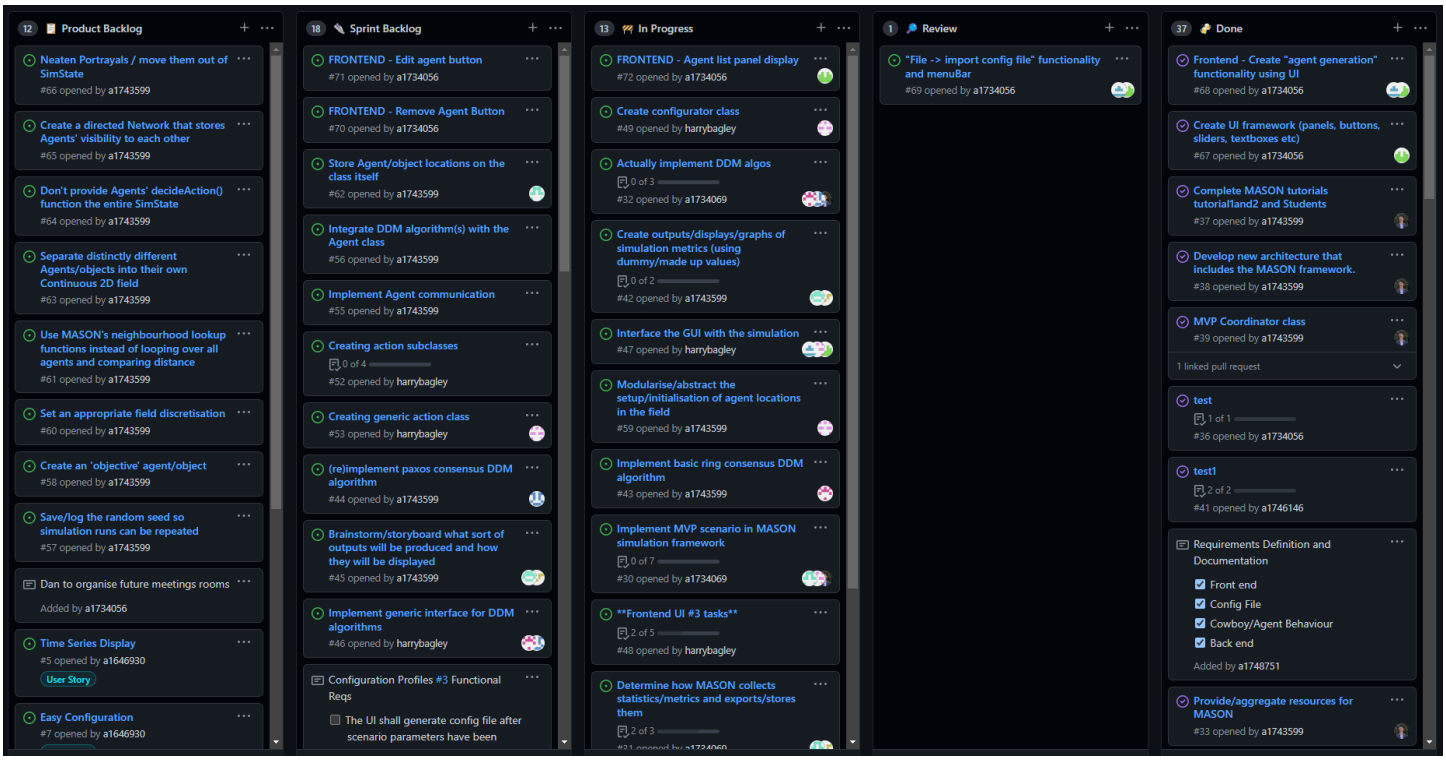
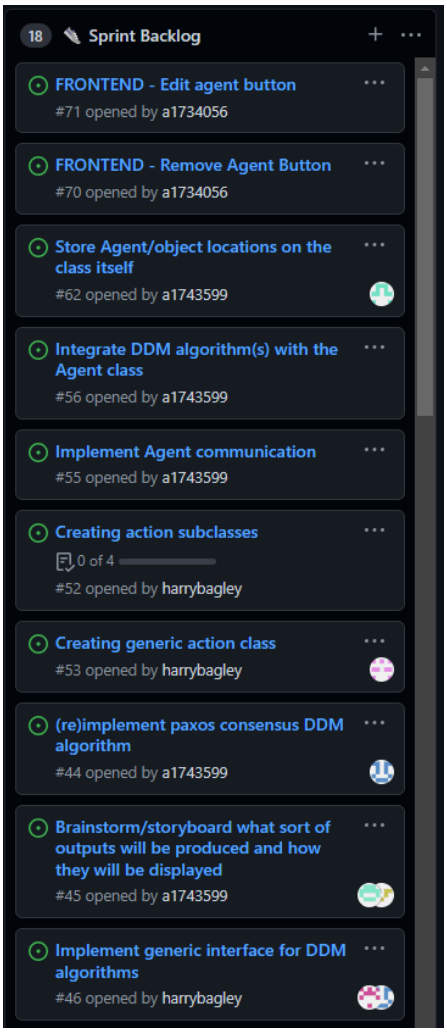
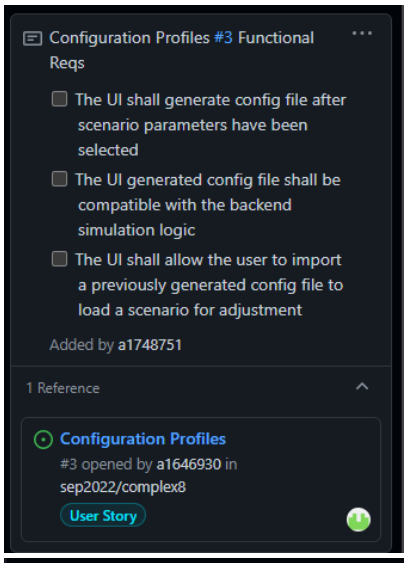
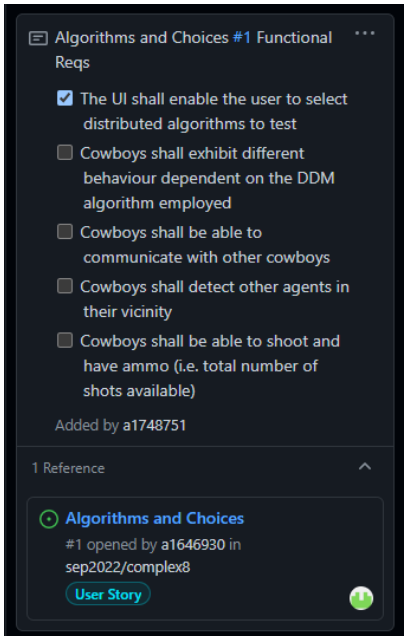


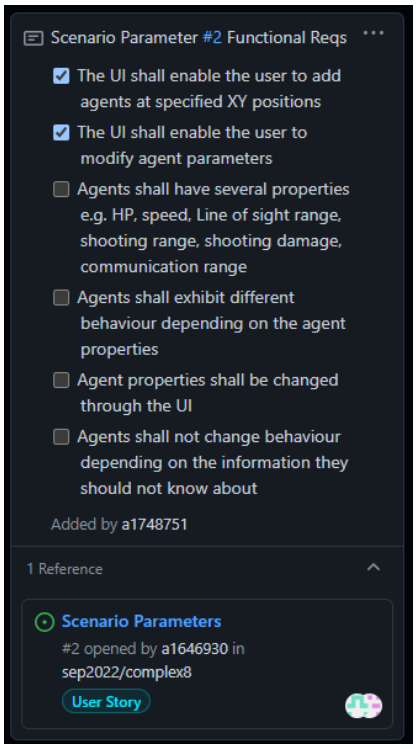
Figure 2: Task Board Screenshot

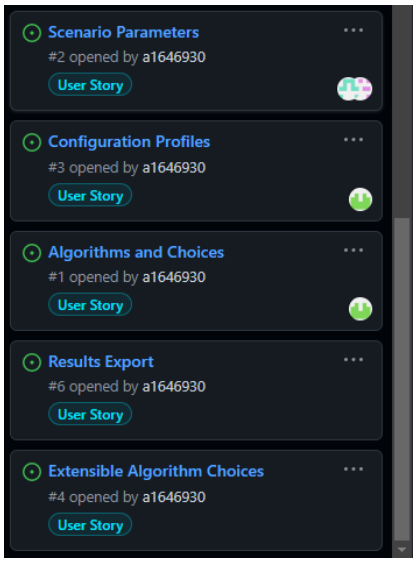
2. Sprint Backlog and User Stories:











In-progress items:

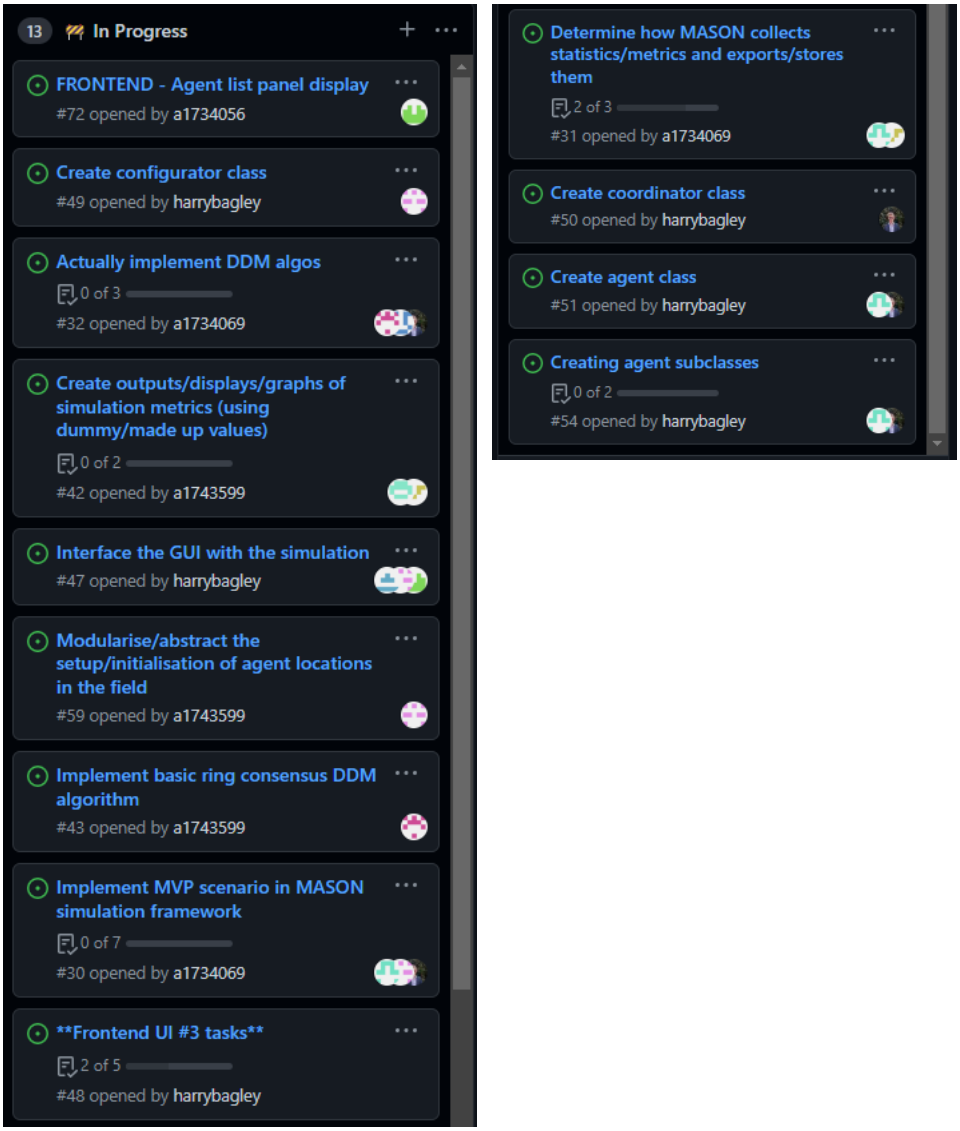


Figure 3: Sprint 4 in-progress items

The current user stories and their descriptions for this sprint are:

1. **Configuration Profiles:** saving configuration settings in some manner such that to re-run an experiment, all the parameters do not need to be manually input again.
2. **Scenario Parameters:** providing the user with control over the experimental parameters before the simulation begins.
3. **Algorithms and Choices:** allowing the user to select a type of distributed decision-making algorithm to experiment with.
4. **Results Export:** moving the logs of the simulation into a results format which are useful to the experimenter in comparing distributed decision-making algorithms.
5. **Extensible Algorithm Choices:** allowing the user to easily add new decision-making algorithms to the pre-defined list provided by “Algorithms and Choices”

There have been no additional user stories added mid-sprint.

3. Definition of Done:

- Code written and commented
- Documentation written and updated
- Code peer-reviewed
- Documentation peer-reviewed
- Code architecture conforms to specified design pattern.
- Tests written and passing
- Non-functional requirements met (UX, performance, availability)
- Acceptance criteria fulfilled

4. Summary of Changes:

Since the last team snapshot, no items have been moved from “In Progress” to “Review” or to “Done”. The last sprint saw extremely effective action planning of sub-teams and collaboration across them in developing code to realise the core functionality of the simulation platform. Unfortunately, not much progress has been made in the latter week of this sprint which is most likely due to the team’s competing commitments in other university subjects and work, and incompatibility of timetables which greatly hinders finding times to meet and discuss work.

The front-end team (Dan and Hayden) were able to integrate their previously separate and incompatible front-end designs which completed a major task within Issue #48. Patrick was able to create an implementation of the Ring algorithm in Java which was verified with Nathan regarding its integration into the backend. This saw significant progress towards completing Issue #43, yet integration was not completed and thus this issue remains in progress. Hayley has begun implementing the PAXOS algorithm but experienced some trouble with doing so in a single-threaded environment versus a multi-threaded environment where she has experience in previous implementations. Sam made progress towards a visual and extensible simulation output display board (for low-level, algorithm-based performance metrics) using Python and dummy-data and Sarah also made significant progress in her simulation-output task which focused on more high-level, scenario-based performance metrics. Nathan and Vinh have revised the use of the term “Agent” for the cowboys and aliens within the simulation and have instead decided to name them “Actors” – a term which better suits their roles. Harry has collaborated extensively with the front-end team in planning for the integration of the front-end with the backend which is a task that is now ready to begin seeing that the front-end has been consolidated and the backend is beginning to understand core parameter requirements from an algorithmic perspective.