IOWA

Team 1: Software Engineering Project

Final Presentation & Demo

Science Alliance Portal

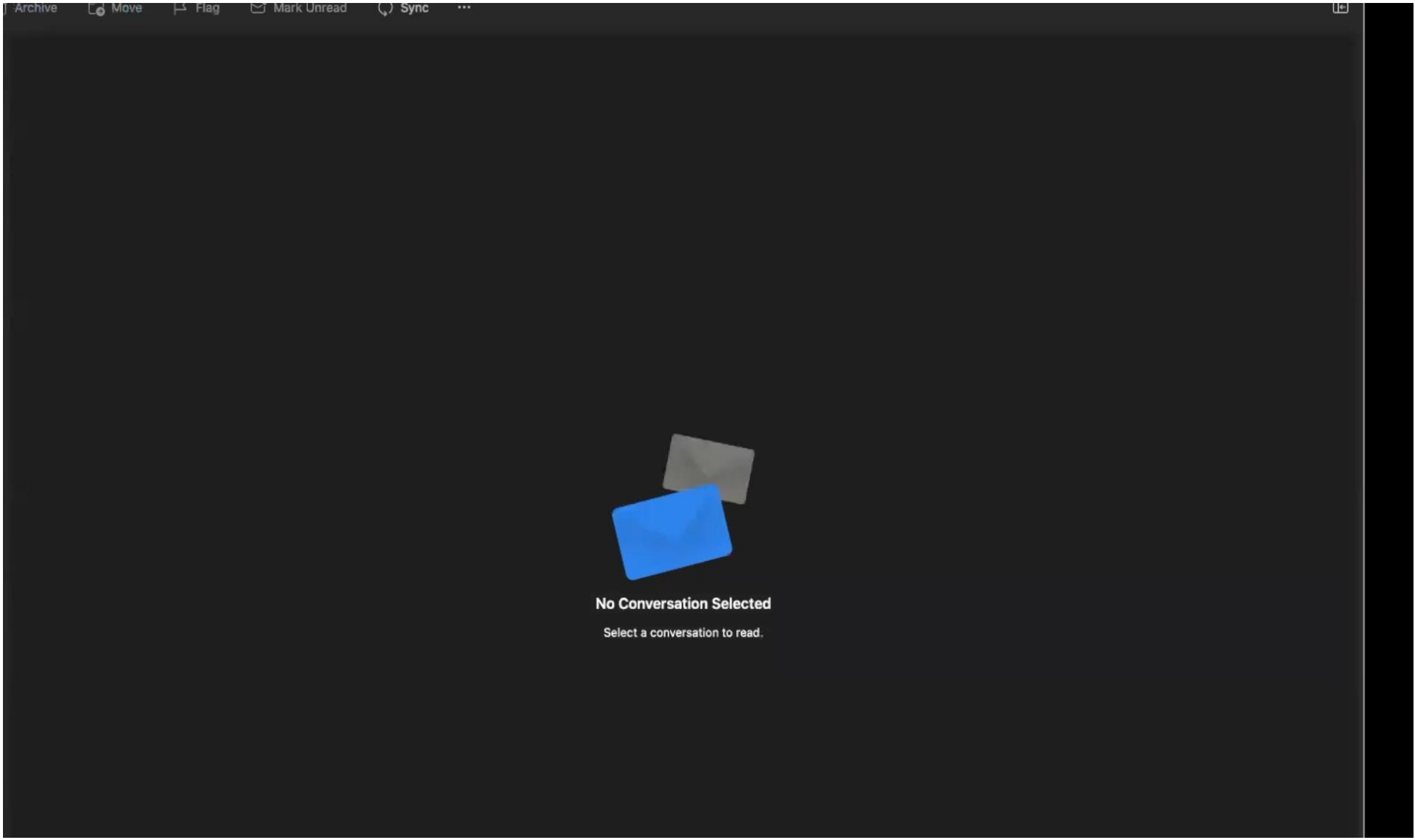
Ahmed Z., Mahmood A., Le N., Murugesan S., Shaeffer E.

May 10, 2021

Background

- Who we made it for
- Why we made it
- What does it do

IOWA BIOSCIENCES ACADEMY


Archive
Move
Flag
Mark Unread
Sync
No Conversation Selected
Select a conversation to read.

Product Recap

Administrative tool to help

- **Help provide research opportunities to undergraduates**
- **Recruit future Science Alliance Interns**
- **Track Participation within Science Alliance**

Technology Used

- We used Python django as the backend framework for our application

- The application is deployed on Microsoft Azure

- To have a working email functionality for features like Signup verification we used SendGrid

- We used pylint to make sure that our code has perfect code quality following PEP8 standards

- We used vanilla Javascript and frameworks like Momentjs for improved UX

Process Strengths & Weaknesses

Strengths

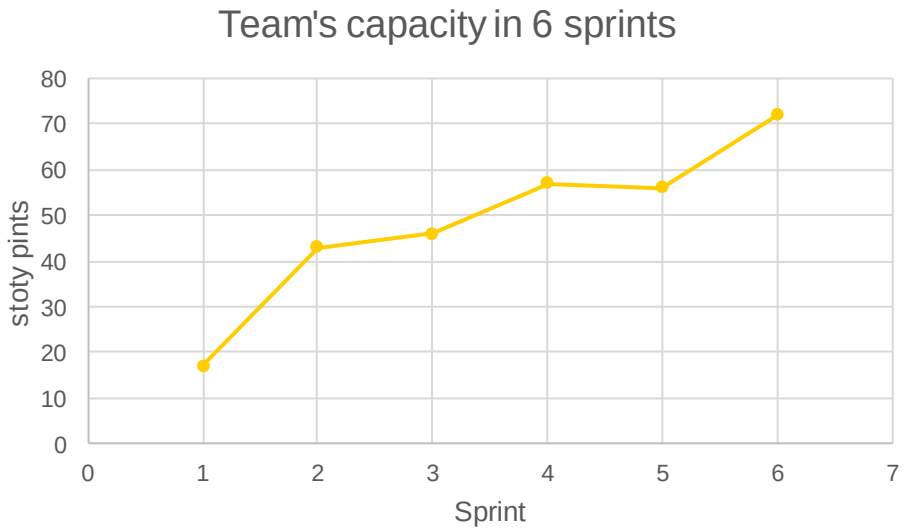
- Pair Programming
- Unit Tests
- Quality Review/ Pull Requests

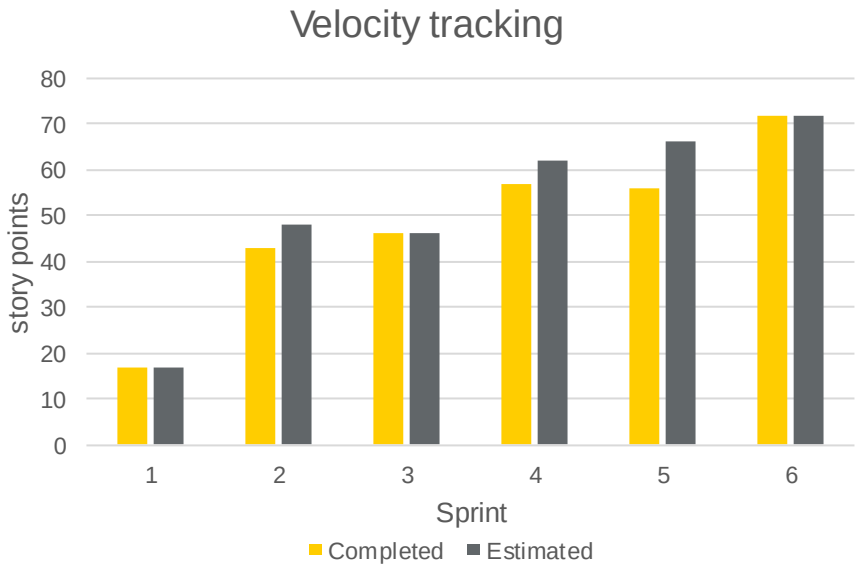
Weaknesses

- Feature testing
- Performance testing
- Not fully testing possible inputs

Sprint Velocity and Productivity

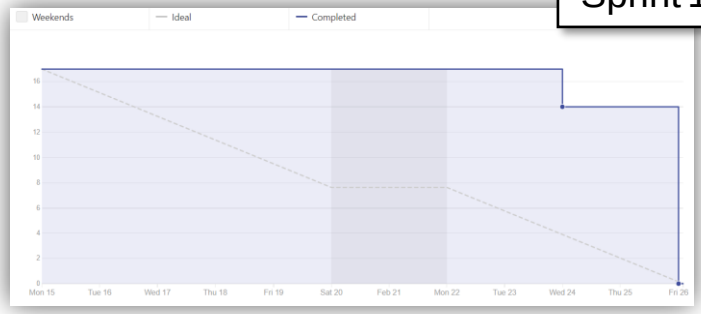
- Had a clear picture of customer's requirement before Sprint 1 starts
- Achieved the MVP at the end of Sprint 3
- All high-priority user stories successfully implemented
- User stories are categorized into Epics: user authentication, dashboard, data collection, email, events, insights, support, and documentation
- Team's capacity increases after each sprint



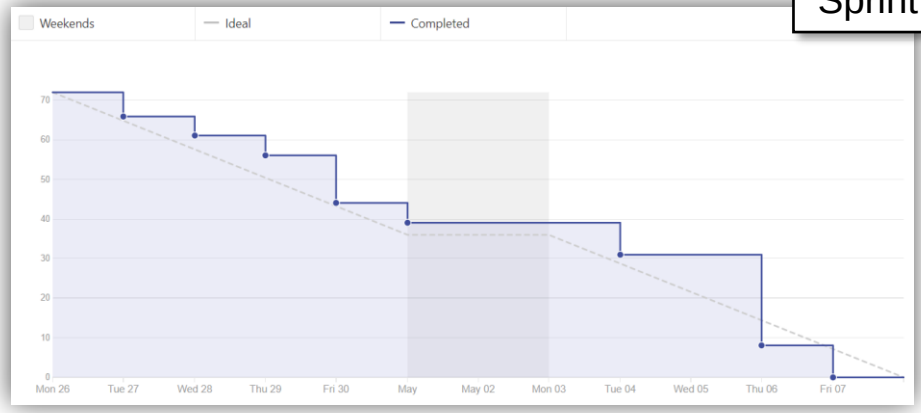


Burndown Report & Code Coverage

Sprint 1



Sprint 6




```
Name                                Stmts   Miss  Cover
-------------------------------------------------------
sap/__init__.py                         0      0   100%
sap/forms.py                           13      0   100%
sap/templatetags/__init__.py            0      0   100%
sap/templatetags/filter.py             18      3    83%
sap/tokens.py                          10      0   100%
sap/upload_resource_to_azure.py        25      0   100%
sap/urls.py                            10      0   100%
sap/views.py                          667     36    95%
sap/views_v2.py                       488     16    97%
sap/views_v3.py                       532     38    93%
-------------------------------------------------------
TOTAL                                1763     93    95%
-------------------------------------------------------
Ran 132 tests in 68.809s

OK
```

Code coverage

Problems Encountered

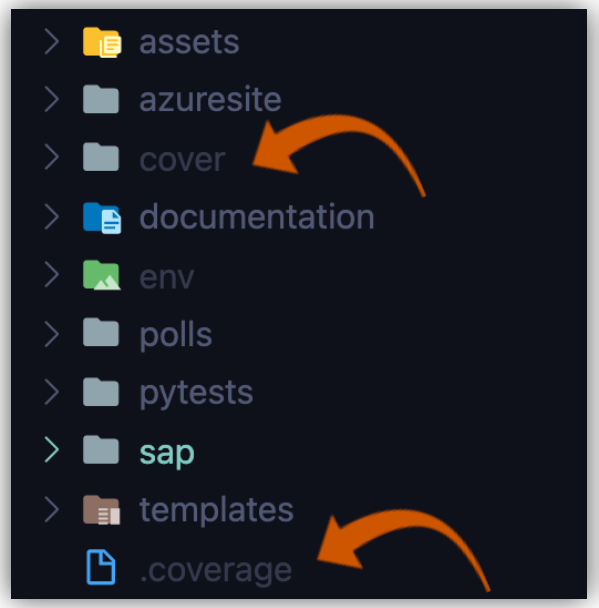
Merge Conflicts & Code Quality

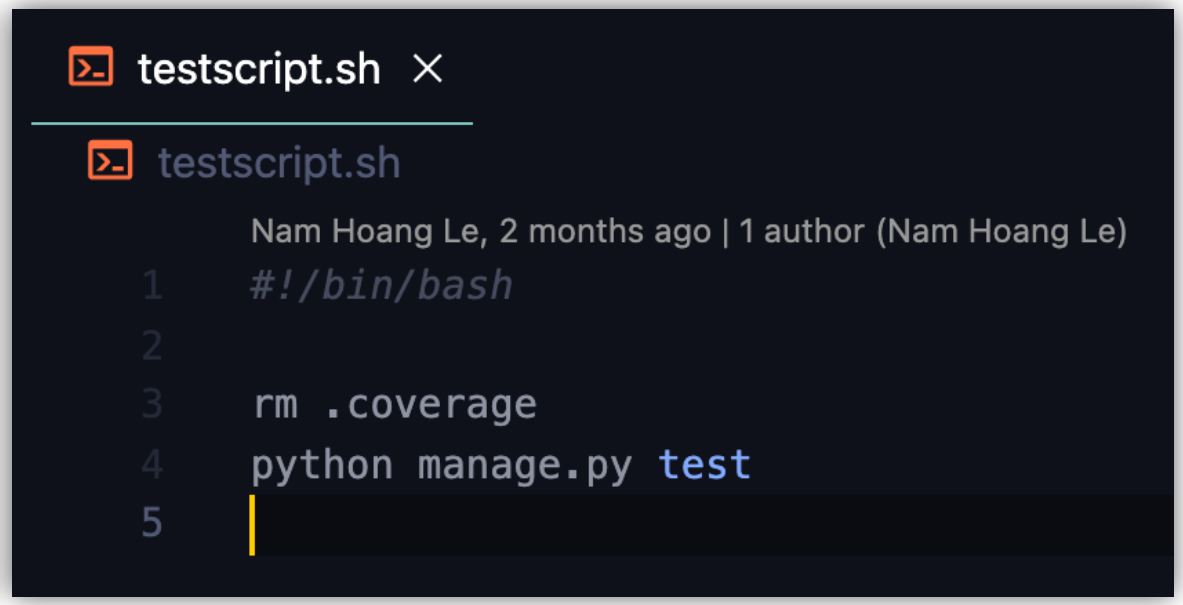
```
001_SEP2021 on ¦ master via 🐍 system
🦊 ϟ wc -l sap/views.py
     998 sap/views.py

001_SEP2021 on ¦ master via 🐍 system
🦊 ϟ wc -l sap/views_v2.py
     982 sap/views_v2.py

001_SEP2021 on ¦ master via 🐍 system
🦊 ϟ wc -l sap/views_v3.py
     931 sap/views_v3.py
```

```
001_SEP2021 on ¦ 82-announcement-board-feature-asad via 🐍 system
🦊 ϟ wc -l sap/views.py
    1565 sap/views.py
```

Problems Encountered contd.

Coverage report





Problems Encountered contd.

GitHub Artifacts

- 1Gb Limit for Organization
- GitHub Action to remove old 1 week old artifacts

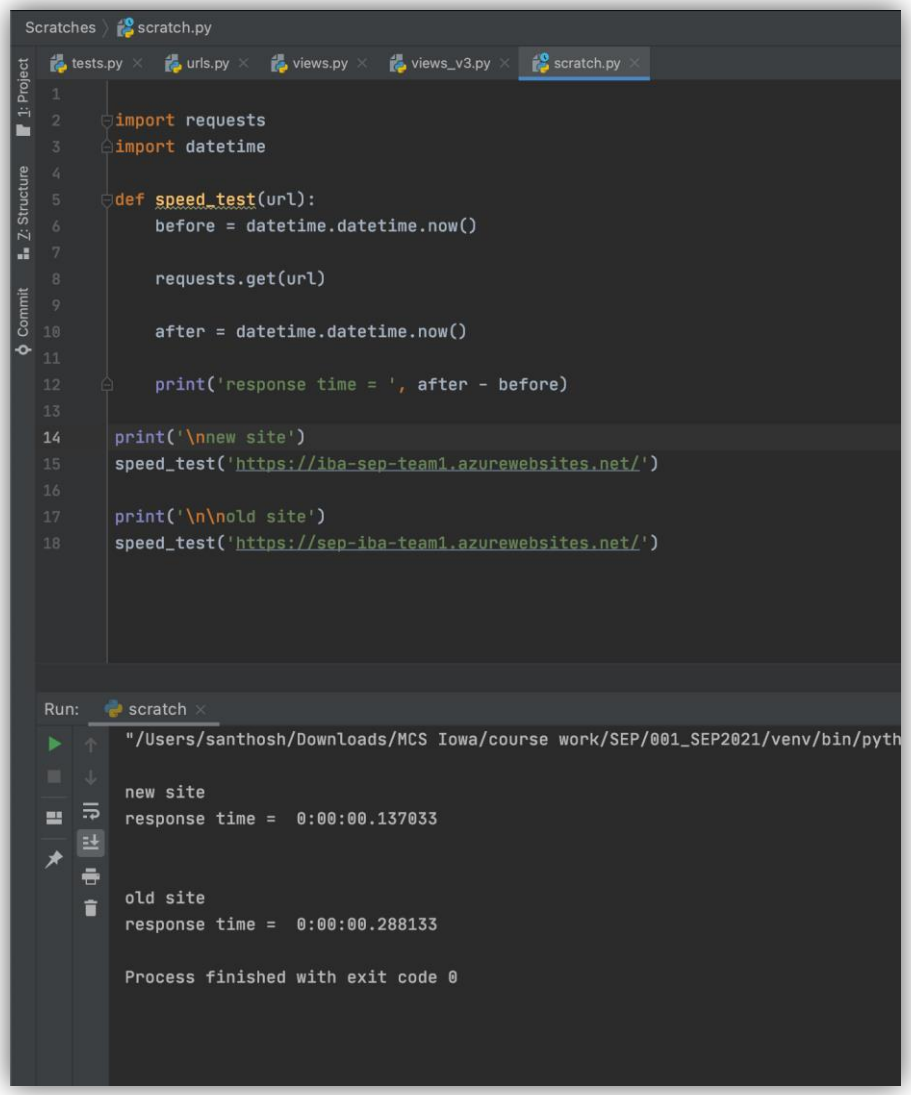
Problems Encountered contd.

Slow Azure Site Response

- Web server in US-West and Database in US-Central

Fix – Serve both from US-Central

- New Site: 0:00:00.137033
- Old Site: 0:00:00.288133



Lessons Learned

- Sprint story points estimation
- Not delay tasks till the end of sprint
- Merge to production branch more often
- Don't delete migration files

Team 1: Software Engineering Project

Live Demo, Q&A

Thank you!