

Team 1: Software Engineering Project

Final Presentation & Demo

Science Alliance Portal

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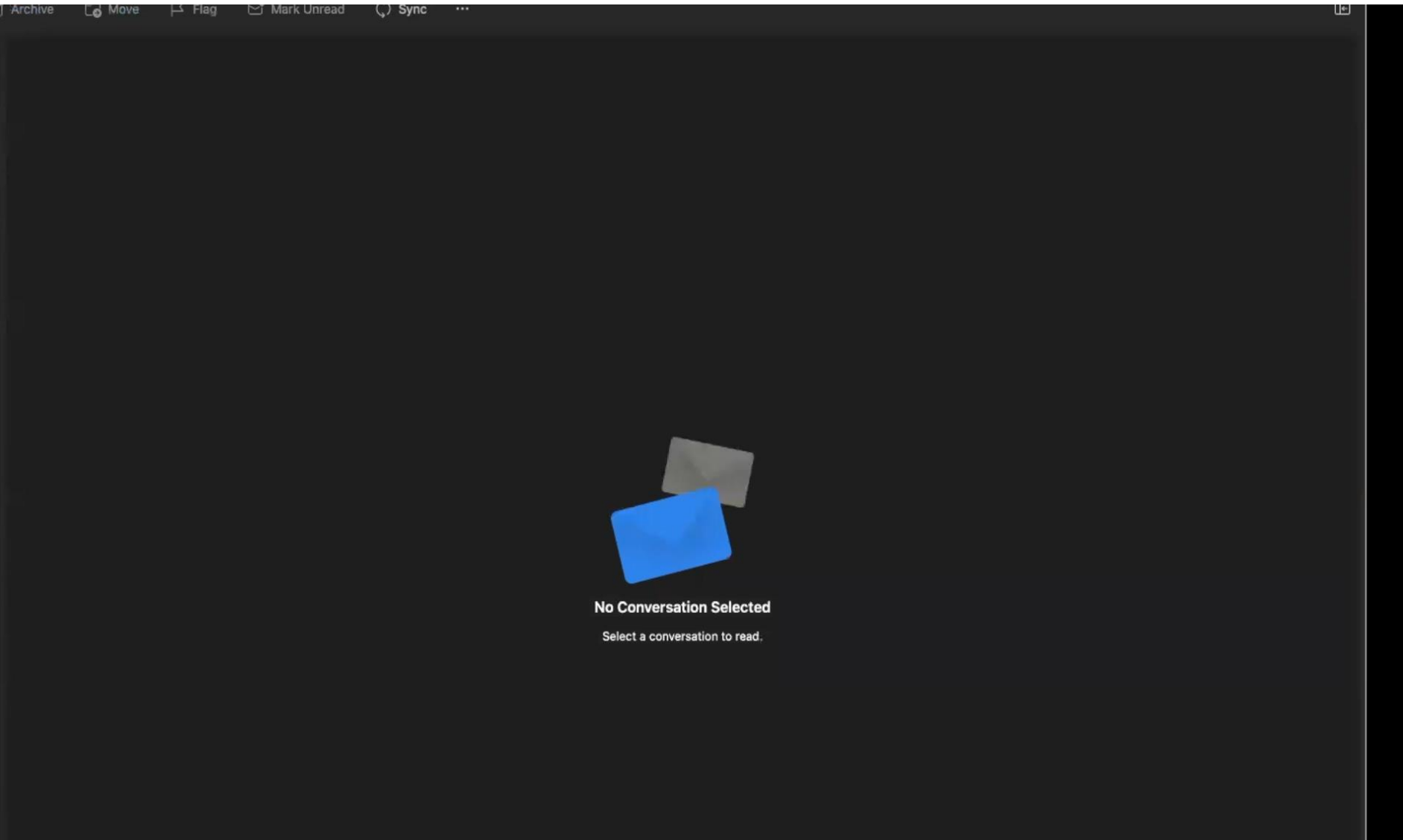
May 10, 2021

Background

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

IOWA
BIOSCIENCES
ACADEMY





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

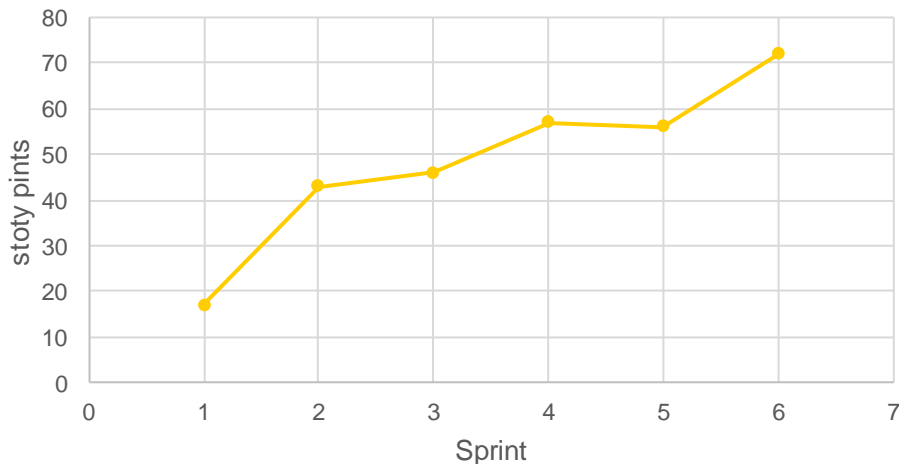
Weaknesses

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

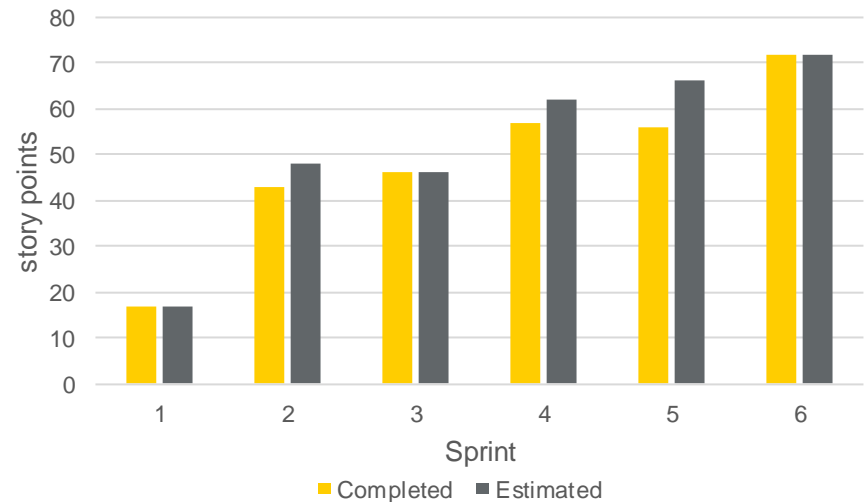
Sprint Velocity and Productivity

- 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

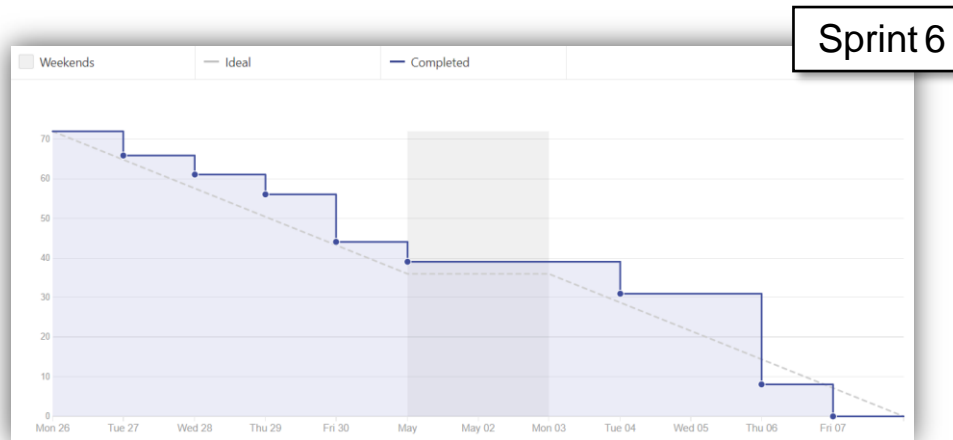
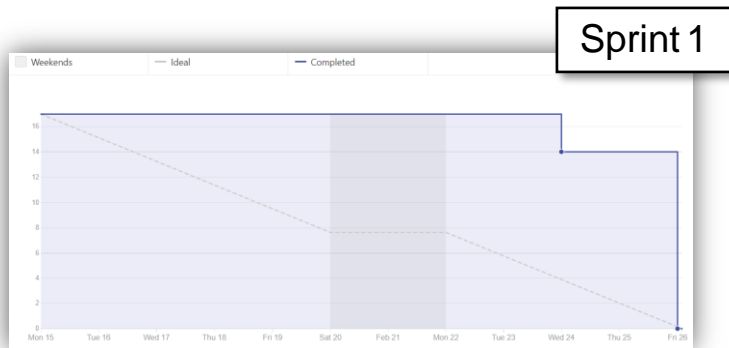
Team's capacity in 6 sprints



Velocity tracking



Burndown Report & Code Coverage



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  
🐱 ⚡ wc -l sap/views.py  
998 sap/views.py
```

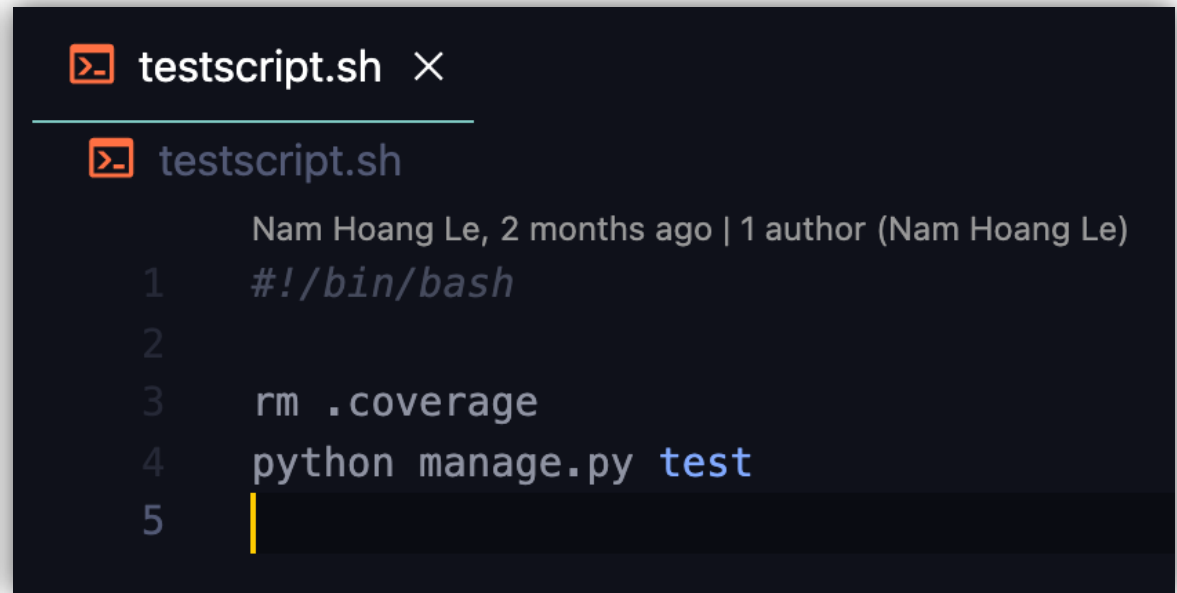
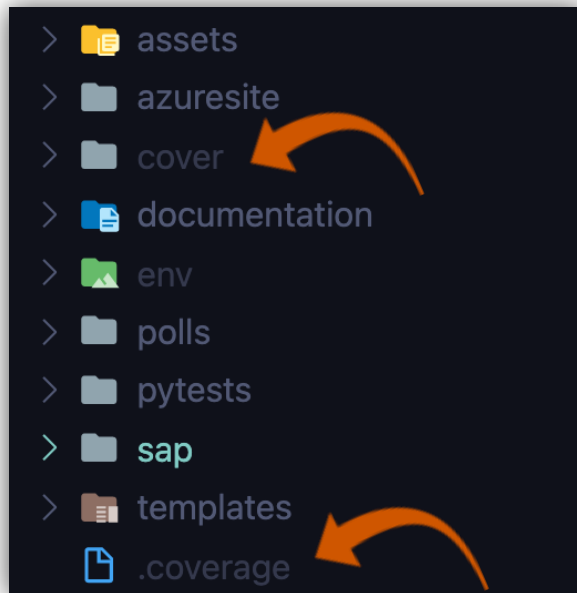
```
001_SEP2021 on | master via 🐍 system  
🐱 ⚡ wc -l sap/views_v2.py  
982 sap/views_v2.py
```

```
001_SEP2021 on | master via 🐍 system  
🐱 ⚡ wc -l sap/views_v3.py  
931 sap/views_v3.py
```

```
001_SEP2021 on | 82-announcement-board-feature-asad via 🐍 system  
🐱 ⚡ 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



The screenshot displays the GitHub Actions interface for a workflow named "Remove old artifacts" (ID #66). The workflow status is "succeeded 5 hours ago in 16s". The left sidebar shows the "Summary" tab and a list of jobs, with "remove-old-artifacts" selected. The main panel shows the job steps:

- > ☒ Set up job
- ▼ ☒ Remove old artifacts
 - 1 ▶ Run c-hive/gha-remove-artifacts@v1
 - 5 Maximum artifact age: 1 week (created before 2021-05-02T01:53:08+00:00)
- > ☒ Complete job

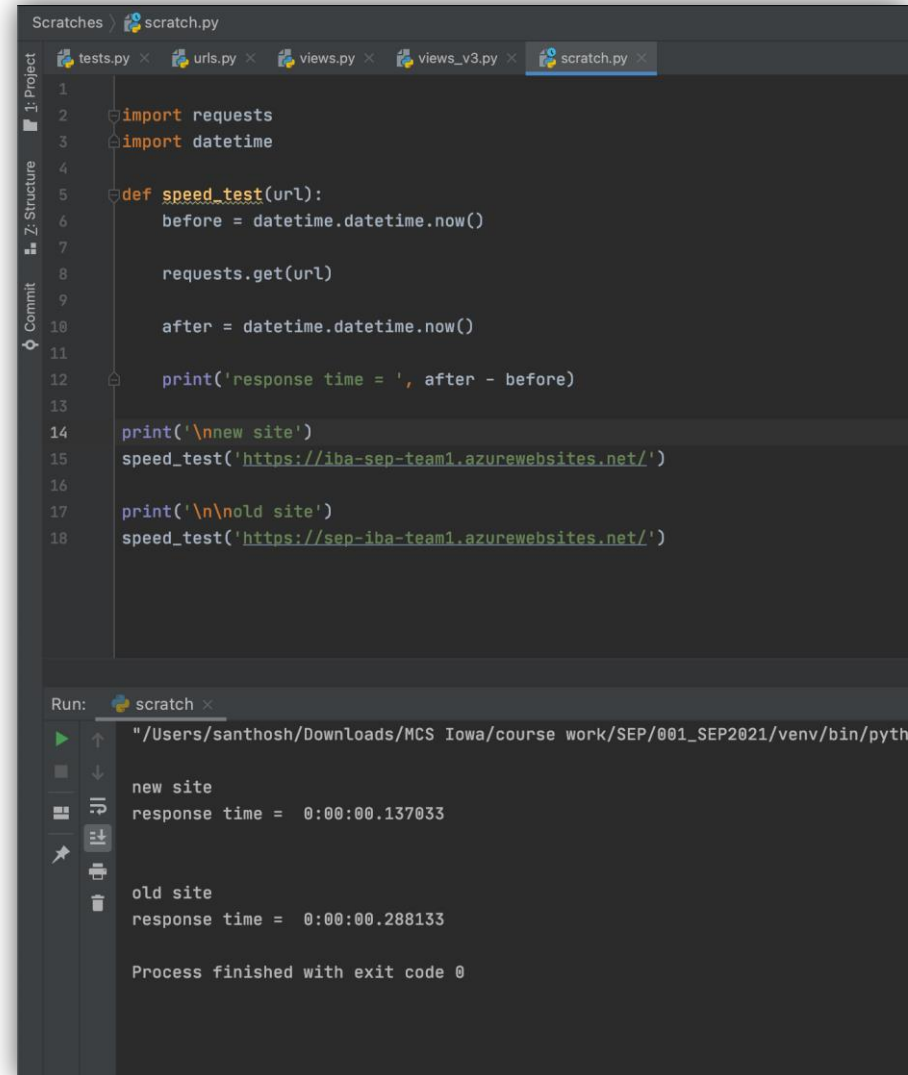
Problems Encountered contd.

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



```
Scratches / scratch.py
tests.py x urls.py x views.py x views_v3.py x scratch.py x
1
2 import requests
3 import datetime
4
5 def speed_test(url):
6     before = datetime.datetime.now()
7
8     requests.get(url)
9
10    after = datetime.datetime.now()
11
12    print('response time = ', after - before)
13
14    print('\nnew site')
15    speed_test('https://iba-sep-team1.azurewebsites.net/')
16
17    print('\nold site')
18    speed_test('https://sep-iba-team1.azurewebsites.net/')

Run: scratch x
"/Users/santhosh/Downloads/MCS Iowa/course work/SEP/001_SEP2021/venv/bin/python
new site
response time = 0:00:00.137033

old site
response time = 0:00:00.288133

Process finished with exit code 0
```

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

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Live Demo, Q&A

Thank you!

