

T3am

SJSU - Summer 2018
CMPE 202

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Professor Gopinath Vinodh

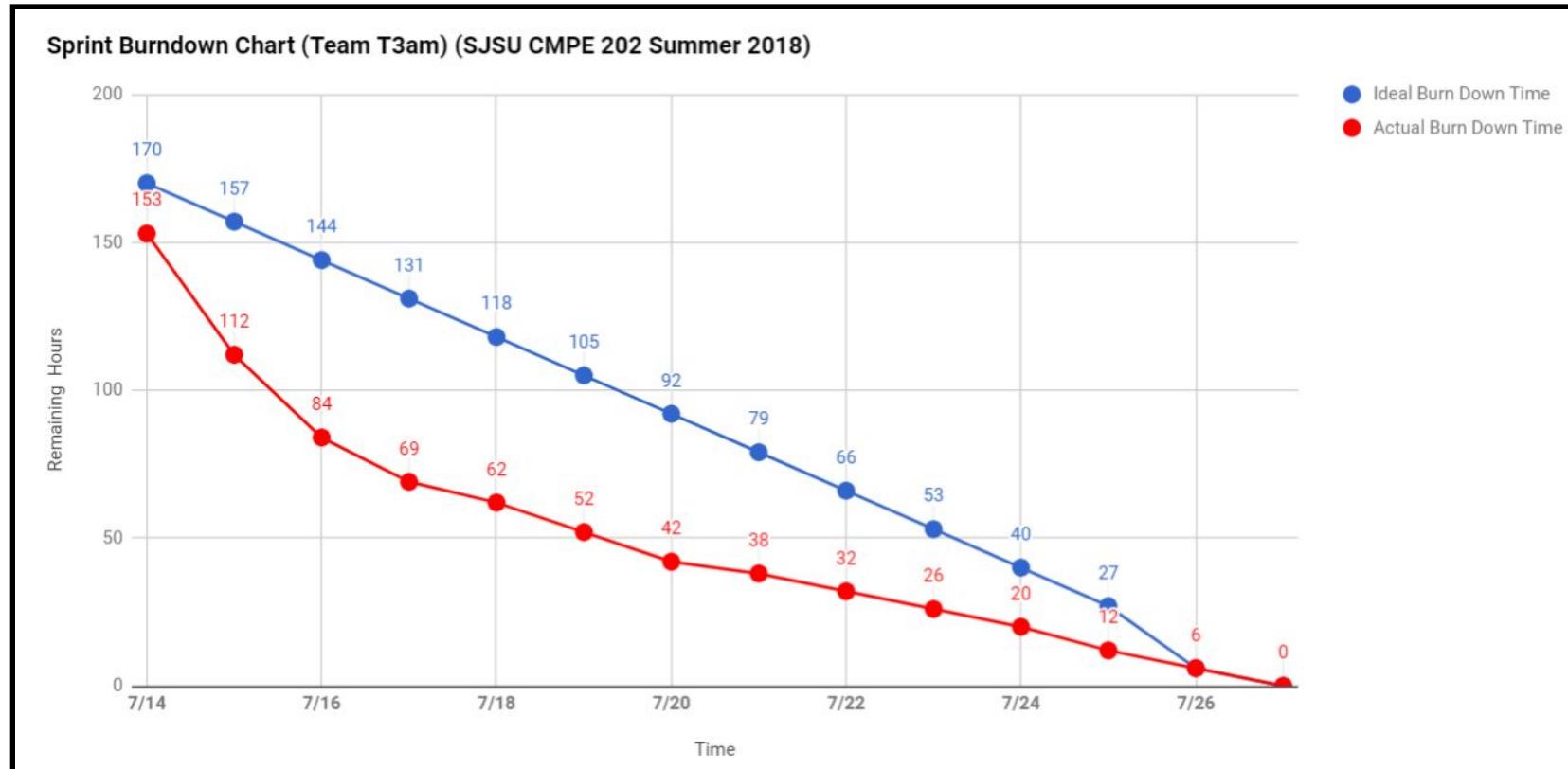
Members

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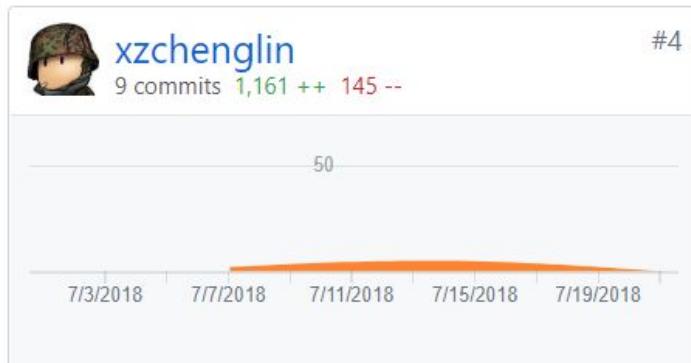
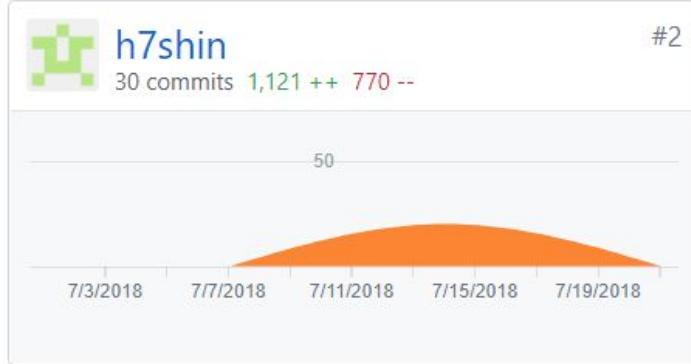
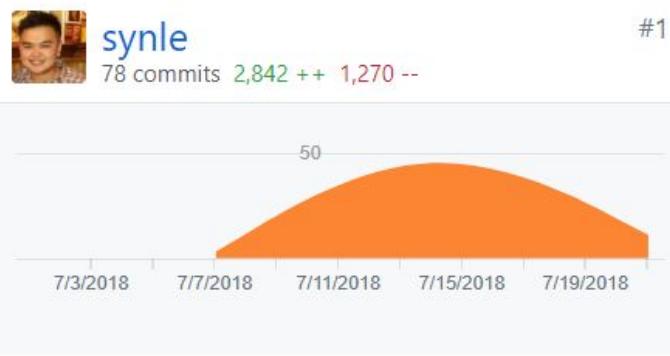
Epics we completed...

- Back end / REST API
- Persisting data to AWS RDS
- Deployed app as Docker Image in AWS Elastic Container Registry and AWS Fargate
- Front end web app deployed in Heroku

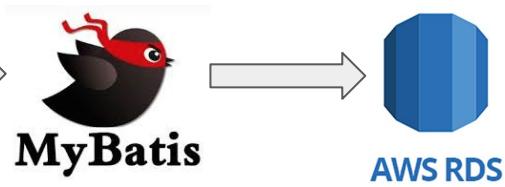
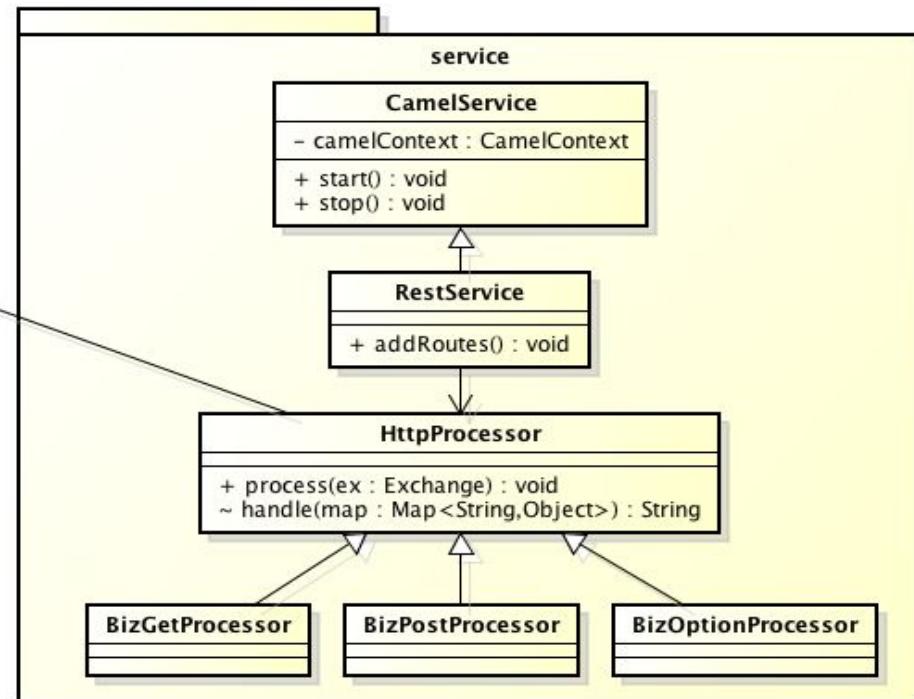
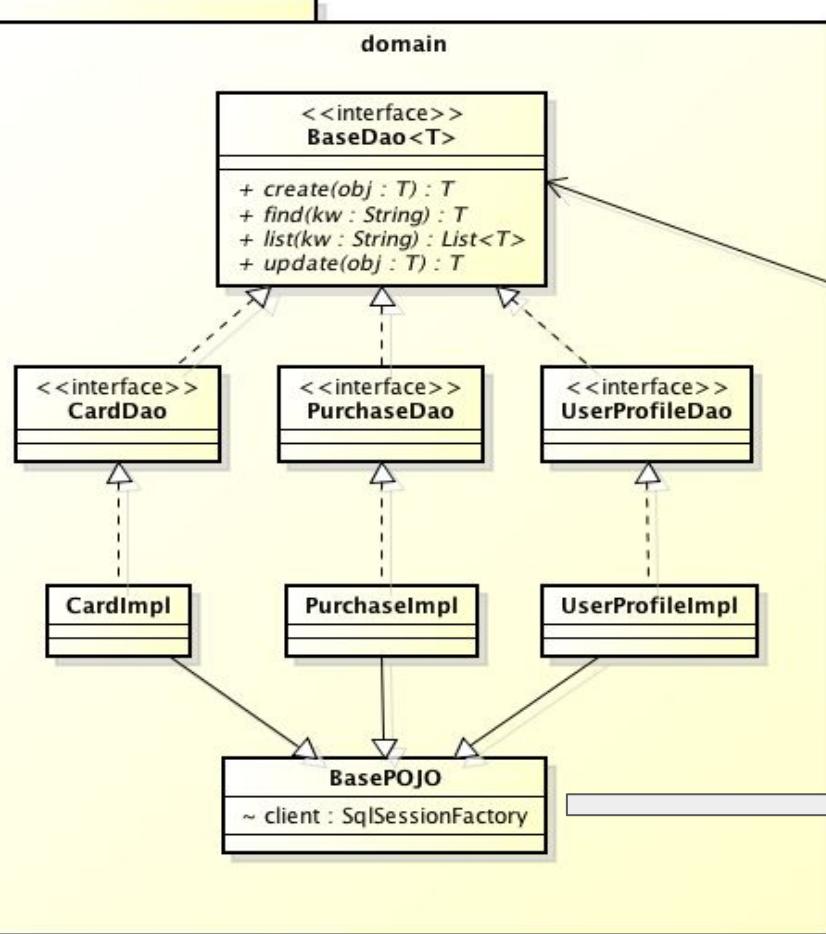
Team Sprint (170 hours)



Code Contribution Chart



Backend



AWS RDS

Docker - push image upstream to AWS

- Push the docker image up to AWS Elastic Container Registry (ECR)
- docker tag t3am
914381644891.dkr.ecr.us-east-1.amazonaws.com/t3am
- docker push
914381644891.dkr.ecr.us-east-1.amazonaws.com/t3am

```
[root@ip-172-31-3-105 t3am]# docker tag t3am 914381644891.dkr.ecr.us-east-1.amazonaws.com/t3am
[root@ip-172-31-3-105 t3am]# docker push 914381644891.dkr.ecr.us-east-1.amazonaws.com/t3am
The push refers to a repository [914381644891.dkr.ecr.us-east-1.amazonaws.com/t3am]
a76d79f03ef5: Pushed
35c20f26d188: Layer already exists
c3fe59dd9556: Layer already exists
6ed1a81ba5b6: Layer already exists
a3483ce177ce: Layer already exists
ce6c8756685b: Layer already exists
30339f20ced0: Layer already exists
0eb22bfb707d: Layer already exists
a2ae92ffcd29: Layer already exists
latest: digest: sha256:816288955be83bf80de4d9cb02703024897909d8a1e944ad65cb65c8b3160969 size: 2212
```

Docker - Run Image from Fargate

Details Tasks Events Auto Scaling Deployments Metrics

Load Balancing

Target Group Name	Container Name	Container Port
ecs-t3am-s1	t3am-c	8202

Network Access

Health check grace period	0
Allowed VPC	vpc-541c5533
Allowed subnets	subnet-1ebe6a57
Security groups*	sg-708e0a0a
Auto-assign public IP	ENABLED

Service discovery

Service discovery endpoint	t3am-s.local	
Service discovery name	t3am-s	
DNS record type	Contain...	TTL
A	--	60

Behind LB

Service Auto Scaling Do not adjust the service's desired count Configure Service Auto Scaling to adjust your service's desired count

Minimum number of tasks Automatic task scaling policies you set cannot reduce the number of tasks below 1.

Desired number of tasks **Automatic Provisioning**

Maximum number of tasks Automatic task scaling policies you set cannot increase the number of tasks above 3.

Task status: Running Stopped

Filter in this page

Task	Task Definition	Last status	Desired status
3da8ebe2-e253-48f7...	t3am-t:1	RUNNING	RUNNING
5c2e6761-bfc4-4226...	t3am-t:1	ACTIVATING	RUNNING
7bf7dfb1-4f07-4c17...	t3am-t:1	PENDING	RUNNING

DB Schema

public.sb_user

Columns

□ user_id	CHARACTER VARYING
□ email	CHARACTER VARYING
□ full_name	CHARACTER VARYING
□ password	CHARACTER VARYING
□ balance	NUMERIC
□ date_added	BIGINT

public.sb_card

Columns

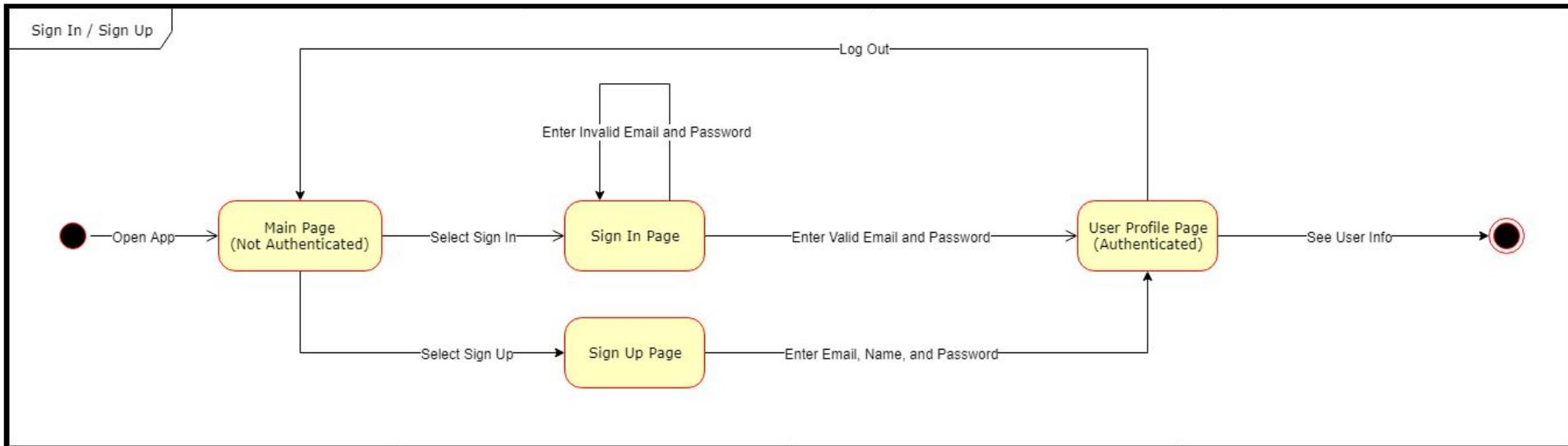
□ card_id	BIGINT
□ uid	CHARACTER VARYING
□ number	CHARACTER VARYING
□ code	CHARACTER VARYING
□ balance	NUMERIC
□ date_added	BIGINT

public.sb_purchase

Columns

□ purchase_id	BIGINT
□ uid	CHARACTER VARYING
□ balance	NUMERIC
□ date_added	BIGINT
□ note	CHARACTER VARYING

Front End - State Diagram



Front End - Technologies

- Bootstrap / jQuery UI
- jQuery
- Moment.js
- (live demo will be given at the end of the demo...)

Front End - Heroku Deployment

- App is deployed on Heroku

The screenshot shows the Heroku dashboard interface. At the top, there's a search bar labeled "Jump to Favorites, Apps, Pipelines, Spaces...". Below it, the user's profile icon and the word "HEROKU" are visible. In the center, there's a navigation bar with "Personal" and "cmpe202-t3am-starbucks-webapp". To the right of the app name are "Open app" and "More" buttons. Underneath, a GitHub integration section shows "synle/cmpe202-t3am-starbucks-webapp" with a "master" branch. A navigation menu below includes "Overview", "Resources", "Deploy", "Metrics", "Activity", "Access", and "Settings". The main content area displays "Free Dynos" and an "Upgrade to Hobby..." button. A message about "Web Dyno Autoscaling" is present. On the right, there's a "Hide" button and a "Learn More" link. At the bottom, a "web node index.js" entry is shown with a toggle switch, a price of "\$0.00", and a edit icon.

This screenshot shows a detailed view of the Heroku app configuration settings. It lists various app details:

Region	United States
Stack	heroku-16
Framework	Node.js
Slug Size	17.3 MiB of 500 MiB
GitHub Repo	synle/cmpe202-t3am-starbucks-webapp
Heroku Git URL	https://git.heroku.com/cmpe202-t3am-starbucks-webapp.git

Unit Testing and CI/CD

- JUnit for unit testing Java packages
- Python unit test for end-to-end testing
- Jenkins to deploy mock web-server and run end-to-end testing

```
python -m unittest api_tests
...
-----
Ran 3 tests in 0.249s
OK
dock2 ~/wses/su18-202-t3am/jenkins/tests$
```

```
python-requests/2.6.0 CPython/2.7.5 Linux/3.10.0-862.3.2.el7.x86_64 -
.
-----
Ran 3 tests in 0.635s

OK
make[2]: Leaving directory `/var/lib/jenkins/workspace/API Testing/su18-202-
t3am/jenkins/tests'
make[1]: Leaving directory `/var/lib/jenkins/workspace/API Testing/su18-202-t3am/jenkins'
+ set +x
sed -i "s/value=\"_your_db_password\"/value=\"****\"/g" starbucks2-
domain/src/main/java/sql-maps-config.xml
++ ps -ef
++ grep 'java.*jar'
++ grep -v grep
++ grep Rest
++ awk '{print $2}'
+ kill -9 3706
make: *** [run] Killed
Finished: SUCCESS
```

Team - Live Demo

- Demo Link
 - <http://cmpe202-t3am-starbucks-webapp.herokuapp.com>
 - username: **syle@gmail.com**
 - password: **password**