Guys don't want to commit!

⊙ When I initially wrote this scenario, Twitter Developer Account could still be instantaneously registered. However, now it takes several days (weeks?) to process a registration requests, so chances are you have not been registered yet.
As an alternative to Twitter, consider using our SynTouch Yammer channels for sending out your message instead.
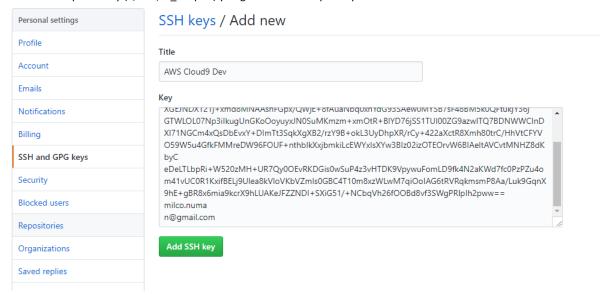Use the Yammer Python SDK (https://developer.yammer.com/docs/python-sdk) and a test token (https://developer.yammer.com/docs/test-token).

Beware, you're in uncharted waters here – but you chose a challenging assignment!

1) Use your current account at twitter or register a new account
2) Register a new app on this Twitter account, you'll need:
   a. Consumer key (API key)
   b. Consumer secret (API secret)
   c. Access token (generate)
   d. Access token secret (generated with the access token)
3) Create a new empty repository in Github (note the URL)
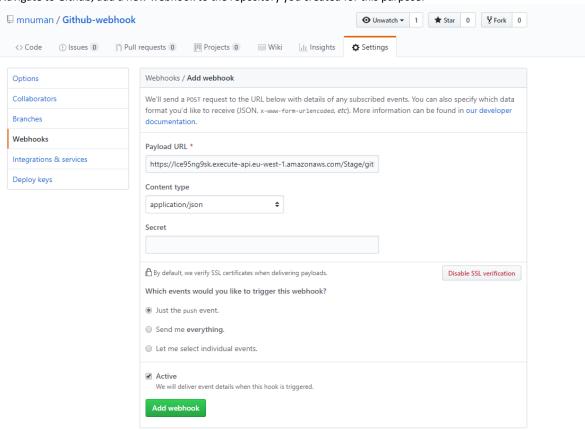4) Create a new empty repository on your Cloud9 instance (from a terminal window):

```
git init .
git remote add origin git@github.com:<your-github-username>/<Your-Github-Reponame>
```

5) Generate a new keypair from your Cloud9 terminal window:
   ssh-keygen -t rsa -b 4096 -C "**your-email-for-github**"
6) Configure your git client by setting your identity for git (Cloud9, terminal window):
   git config --global user.name "User name to show in github"
   git config – global user.email "your-github-email-here"
7) Now ad d the public key (~/.ssh/id_rsa.pub) you generated in step 6 to your Github account:

Personal settings	SSH keys / Add new
Profile	**Title**
Account	AWS Cloud9 Dev
Emails	**Key**
Notifications	XGEJNDXT21J+xmd8MNAASnFGpx/QWJE+8fAUaNbqUxnYdG93SAewUMYSB7sF48BM5k0QFtukJY36J GTWLOL07Np3iIkugUnGKoOoyuyxJN0SuMKmzm+xmOtR+BIYD76jSS1TUI00ZG9azwITQ7BDNWWCInD XI71NGCm4xQsDbEvxY+DImTt3SqkXgXB2/rzY9B+okL3UyDhpXR/rCy+422aXctR8Xmh80trC/HhVtCFYV O59W5u4GfkFMMreDW96FOUF+nthbIkXxjbmkiLcEWYxIsXYw3BIz02izOTEOrvW6BIAeItAVCvtMNHZ8dK byC eDeLTLbpRi+W520zMH+UR7Qy0OEvRKDGis0wSuP4z3vHTDK9VpywuFomLD9fk4N2aKWd7fc0PzPZu4o m41vUC0R1KxifBELj9UIea8kVIoVKbVZmIs0GBC4T10m8xzWLwM7qiOoIAG6tRVRqkmsmP8Aa/Luk9GqnX 9hE+gBR8x6mia9kcrX9hLUAKeJFZZNDI+SXiG51/+NCbqVh26fOOBd8vf3SWgPRIpIh2pww== milco.numa n@gmail.com
Billing	
SSH and GPG keys	
Security	
Blocked users	
Repositories	
Organizations	Add SSH key
Saved replies	

8) Create a new serverless application + function in Cloud9, type empty python 3.6, triggered by API Gateway on resource path /github, no security. Defaults apply.
9) Deploy the API to AWS to get an URL for the API from API gateway

10) Navigate to Github, add a new webhook to the repository you created for this purpose:

11) Test from Github that the invoke works
12) Now commit your code from Cloud9's terminal window and push this to Github. This should trigger the actual lambda function.
13) Verify in CloudWatch that your lambda function has been triggered and inspect the payload.
14) Change into your Application's directory using the Cloud9 terminal window and install the Twitter package here locally:
```
pip install tweepy -t .
```
15) Generate the requirements file and prevent the dependencies from being checked in by editing the .gitignore file:

16) Add the secrets/keys as configuration variables to your configuration template (the yaml template):

```yaml
1  AWSTemplateFormatVersion: '2010-09-09'
2  Transform: 'AWS::Serverless-2016-10-31'
3  Description: An AWS Serverless Specification template describing your function.
4  Resources:
5    GithubWebhook:
6      Type: 'AWS::Serverless::Function'
7      Properties:
8        Handler: GithubWebhook/lambda_function.lambda_handler
9        Runtime: python3.6
10       Description: 'Tweet on commit'
11       MemorySize: 128
12       Timeout: 15
13       Environment:
14         Variables:
15           CONSUMER_KEY: 5QaNYVeUSx6L4EtSqe50mR8SQ
16           CONSUMER_SECRET: P1io6NFS4Q193pRJOmzXZeH16CAKUZ9MSiuKEYVDWFeIBR4gvC
17           ACCESS_TOKEN: 966365883114409984-DPLfbbqr5biFLcXNqZjXIgbZsJZ37rq
18           ACCESS_TOKEN_SECRET: t7gEDs5ecCevXUaeLGcLZ7CeZ2cFGtDoxp34svpaEQ9yb
19       Events:
20         LambdaMicroservice:
21           Type: Api
22           Properties:
23             Path: /github
24             Method: ANY
25   GithubWebhookPermission:
26     Type: 'AWS::Lambda::Permission'
27     Properties:
28       Action: 'lambda:InvokeFunction'
29       FunctionName:
30         'Fn::GetAtt':
31           - GithubWebhook
32           - Arn
33       Principal: apigateway.amazonaws.com
34       SourceArn:
35         'Fn::Sub': 'arn:aws:execute-api:${AWS::Region}:${AWS::AccountId}:*/*/*/*'
36
```

17) Finish the implementation code in Python:

```python
import json
import os
import tweepy

# importing the environment variables - is this safe? We'll see ...
consumer_key = os.environ['CONSUMER_KEY']
consumer_secret = os.environ['CONSUMER_SECRET']
access_token = os.environ['ACCESS_TOKEN']
access_token_secret = os.environ['ACCESS_TOKEN_SECRET']

# setup authentication with twitter
auth = tweepy.OAuthHandler(consumer_key, consumer_secret)
auth.set_access_token(access_token, access_token_secret)

api = tweepy.API(auth)

def lambda_handler(event, context):
    body = json.loads(event['body'])
    mytweet = f"Hi, {body['head_commit']['committer']['name']} just commited with message {body['head_commit']['message']}!"
    status = api.update_status(status=mytweet)

    response_body = { "message": "Your tweet has been posted!"}

    return {
      "isBase64Encoded": "false",
      "statusCode": 200,
      "headers": {},
      "body": json.dumps(response_body)
    }
```

```
bash - "ip-172-31-44 ×    +

milco:~/environment (master) $ clear
milco:~/environment (master) $ git add .
milco:~/environment (master) $ git status
On branch master
Your branch is up-to-date with 'origin/master'.
Changes to be committed:
  (use "git reset HEAD <file>..." to unstage)

        modified:   GithubWebhook/GithubWebhook/lambda_function.py

milco:~/environment (master) $ git commit -m "Take author/message from head_commit instead of commits array"
[master 9b5697c] Take author/message from head_commit instead of commits array
 1 file changed, 1 insertion(+), 1 deletion(-)
milco:~/environment (master) $ date ; git push
Sun Feb 25 14:16:58 UTC 2018
Counting objects: 5, done.
Compressing objects: 100% (5/5), done.
Writing objects: 100% (5/5), 520 bytes | 520.00 KiB/s, done.
Total 5 (delta 3), reused 0 (delta 0)
remote: Resolving deltas: 100% (3/3), completed with 3 local objects.
To github.com:mnuman/Github-webhook.git
   e877214..9b5697c  master -> master
milco:~/environment (master) $ 
```

18) Now deploy the API again, since the code has changed since last push.
19) Finish up by committing your changed code to Github
20) Now you should see a message on twitter:

Milco Tweetbot
@TweetbotMilco

Hi, Milco Numan just commited with message Take author/message from head_commit instead of commits array!

⊕ Vertalen uit het Engels

06:17 - 25 feb. 2018