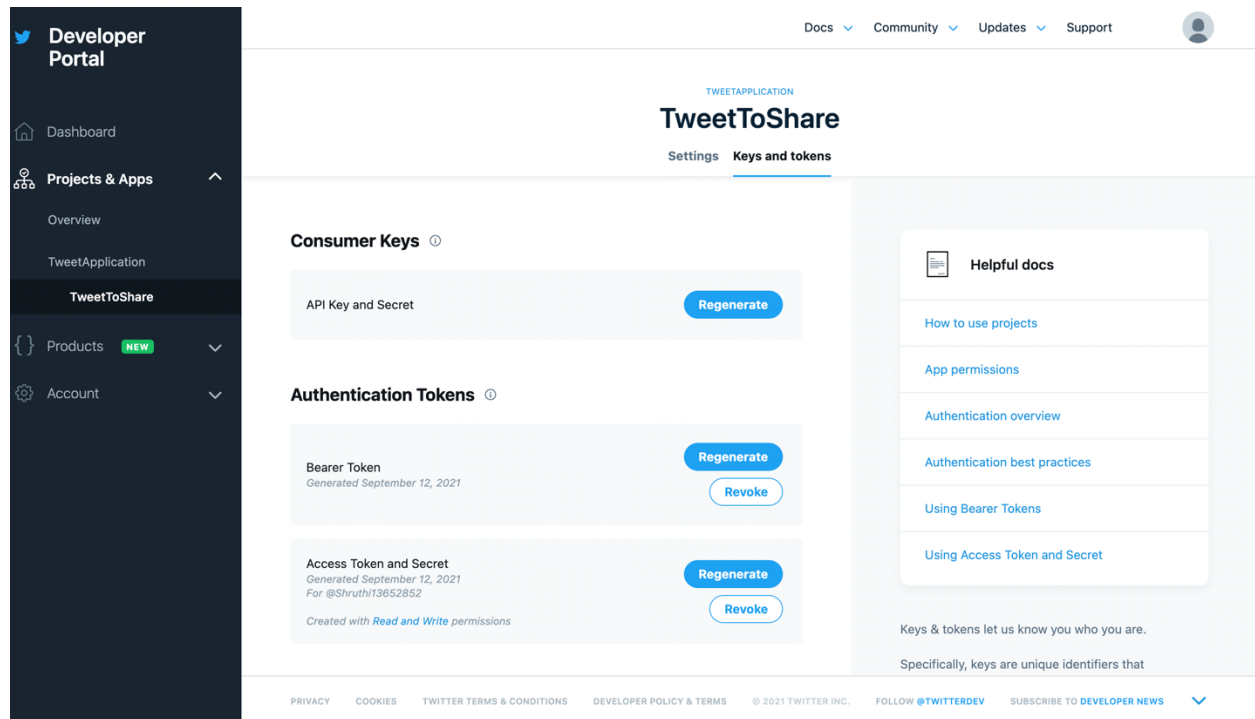# TWITTER API IMPLEMENTATION

Team – Optimus

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PREREQUISITE

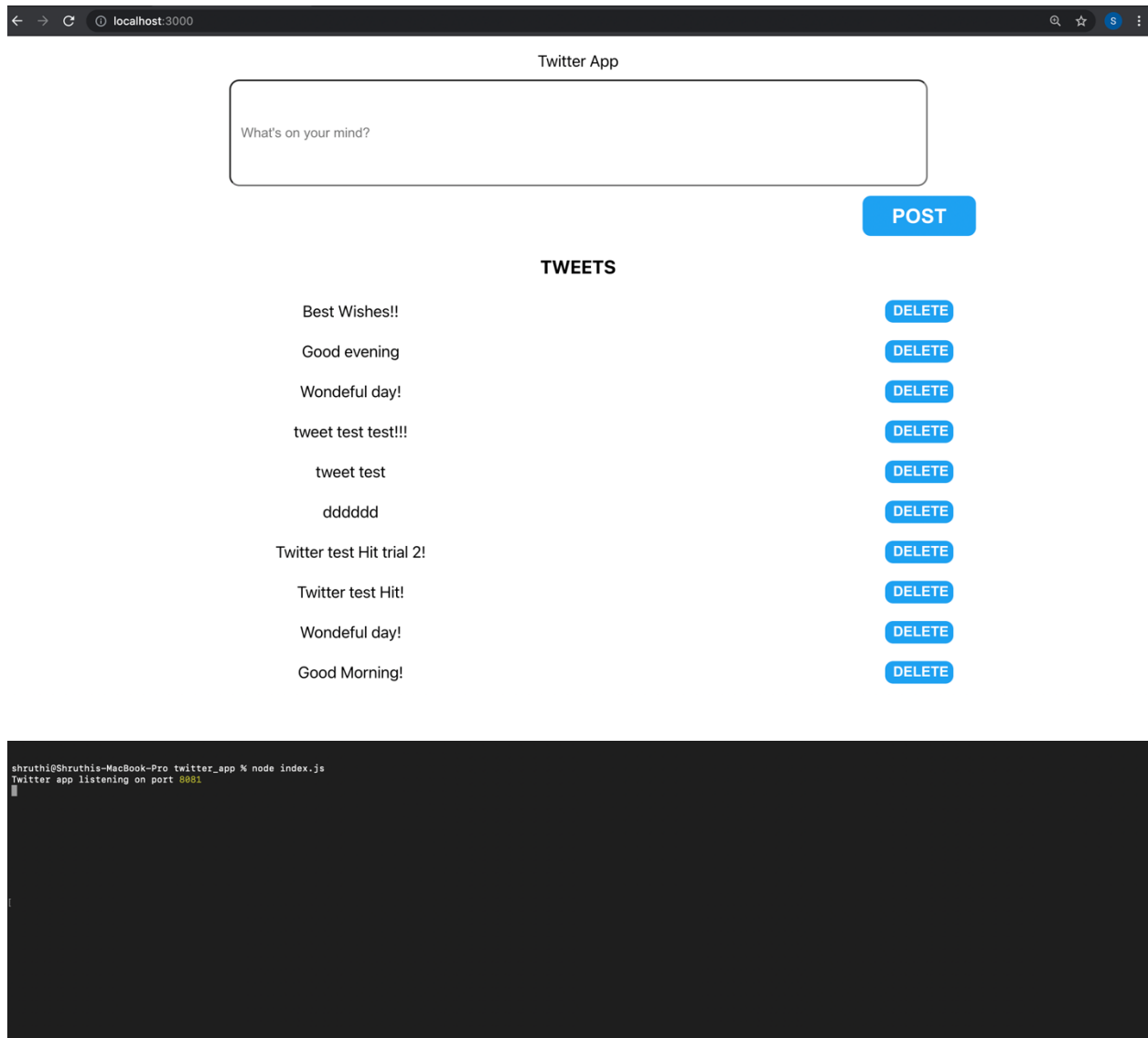Create a project in Twitter Dev Account to get API Key and the secret ,Access Token and the Secret

TECHNOLOGY

- Implemented Twitter Services using Node JS and Express framework.
- Implemented the UI in React.
- Implemented test cases using Mocha.

IMPLEMENTATION

The client side web application is running on port 3000.
The service application is running on port 8081.
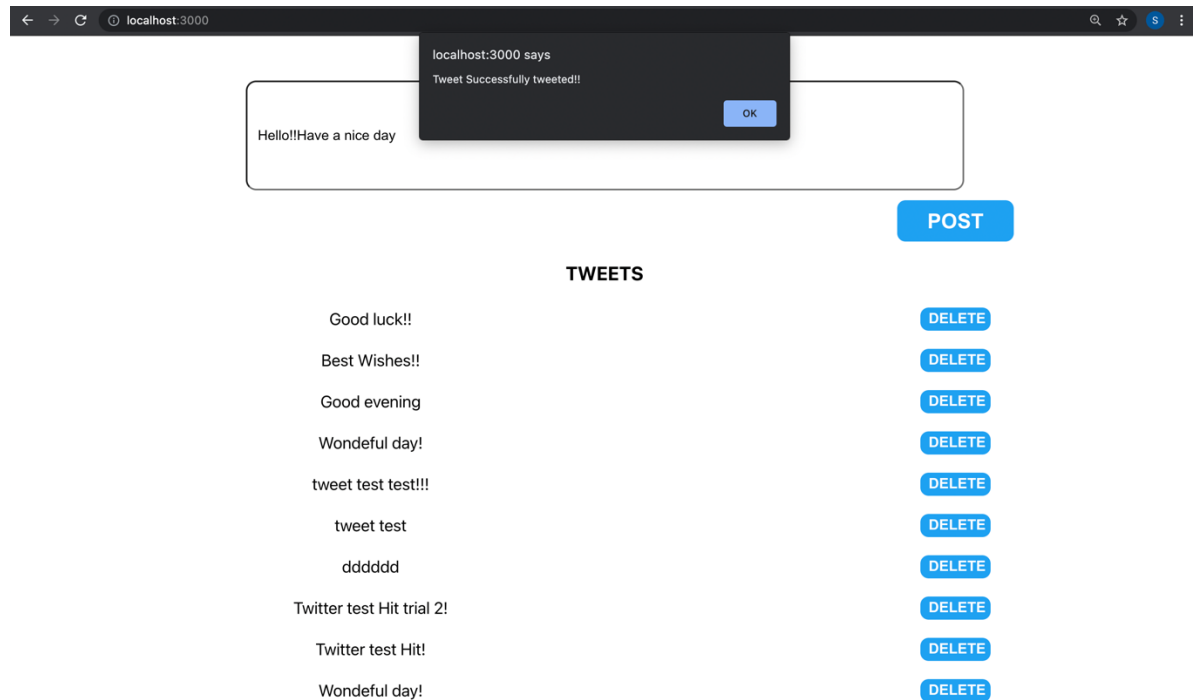
Screenshot:

REST APIS IMPLEMENTATION

POST:

Twitter provides an endpoint called statuses/update to programmatically post tweets onto the homepage timeline

Status/update end point is hit by passing the status to be posted in the body of the request. On success , the end point returns an object that contains the tweet posted along with the ID of the tweet and the created_at field.

Screenshot

Sample output:

```
{
  created_at: 'Sun Sep 26 23:05:49 +0000 2021',
  id: 1442264171886776300,
  id_str: '1442264171886776328',
  text: 'Hello!!Have a nice day',
  truncated: false,
  entities: { hashtags: [], symbols: [], user_mentions: [], urls: [] },
  source: '<a href="https://help.twitter.com/en/using-twitter/how-to-tweet#source-labels" rel="nofollow">TweetToShare</a>',
  in_reply_to_status_id: null,
  in_reply_to_status_id_str: null,
  in_reply_to_user_id: null,
  in_reply_to_user_id_str: null,
  in_reply_to_screen_name: null,
  user: {
    id: 1436454038241833000,
```

    id_str: '1436454038241832963',
    name: 'Shruthi Srinivasan',
    screen_name: 'Shruthi13652852',
    location: '',
    description: '',
    url: null,
    entities: { description: [Object] },
    protected: false,
    followers_count: 0,
    friends_count: 0,
    listed_count: 0,
    created_at: 'Fri Sep 10 22:18:34 +0000 2021',
    favourites_count: 0,
    utc_offset: null,
    time_zone: null,
    geo_enabled: false,
    verified: false,
    statuses_count: 14,
    lang: null,
    contributors_enabled: false,
    is_translator: false,
    is_translation_enabled: false,
    profile_background_color: 'F5F8FA',
    profile_background_image_url: null,
    profile_background_image_url_https: null,
    profile_background_tile: false,
    profile_image_url:
'http://abs.twimg.com/sticky/default_profile_images/default_profile_normal.png',
    profile_image_url_https:
'https://abs.twimg.com/sticky/default_profile_images/default_profile_normal.png',
    profile_link_color: '1DA1F2',
    profile_sidebar_border_color: 'C0DEED',
    profile_sidebar_fill_color: 'DDEEF6',
    profile_text_color: '333333',
    profile_use_background_image: true,
    has_extended_profile: true,
    default_profile: true,
    default_profile_image: true,
    following: false,
    follow_request_sent: false,
    notifications: false,
    translator_type: 'none',
    withheld_in_countries: []
  },
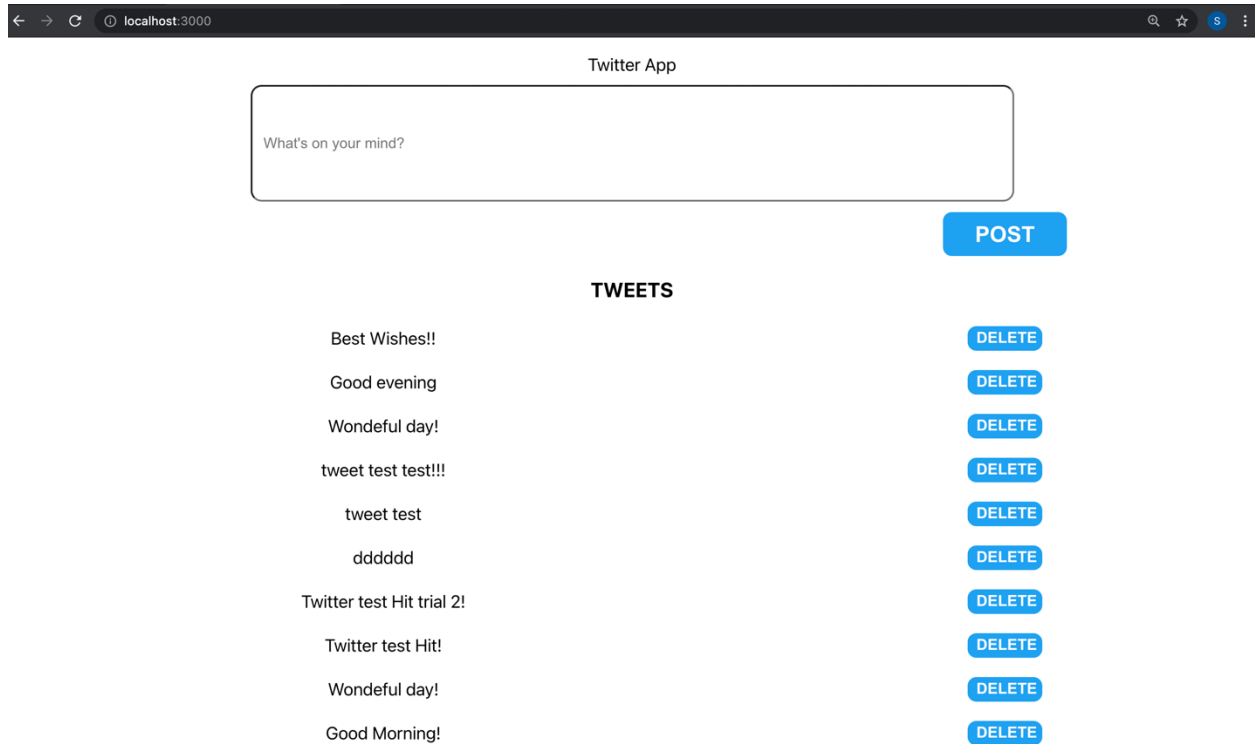 geo: null,

```
  coordinates: null,
  place: null,
  contributors: null,
  is_quote_status: false,
  retweet_count: 0,
  favorite_count: 0,
  favorited: false,
  retweeted: false,
  lang: 'en',
  _headers: Headers {
    [Symbol(map)]: [Object: null prototype] {
      date: [Array],
      pragma: [Array],
      server: [Array],
      status: [Array],
      expires: [Array],
      'set-cookie': [Array],
      'content-type': [Array],
      'cache-control': [Array],
      'last-modified': [Array],
      'x-transaction': [Array],
      'content-length': [Array],
      'x-access-level': [Array],
      'x-frame-options': [Array],
      'content-encoding': [Array],
      'x-xss-protection': [Array],
      'content-disposition': [Array],
      'x-content-type-options': [Array],
      'x-twitter-response-tags': [Array],
      'strict-transport-security': [Array],
      'x-connection-hash': [Array],
      connection: [Array]
    }
  }
}
```

GET:

The user will be able to retrieve the tweets by using an end point called statuses/home_timeline. The api returns the list of all the tweets posted by the user.

Screenshot:

Sample Output:

```
{
  created_at: 'Sun Sep 12 18:33:06 +0000 2021',
  id: 1437122112863424500,
  id_str: '1437122112863424512',
  text: 'Tweet Test',
  truncated: false,
  entities: { hashtags: [], symbols: [], user_mentions: [], urls: [] },
  source: '<a href="https://help.twitter.com/en/using-twitter/how-to-tweet#source-labels" rel="nofollow">TweetToShare</a>',
  in_reply_to_status_id: null,
  in_reply_to_status_id_str: null,
  in_reply_to_user_id: null,
  in_reply_to_user_id_str: null,
  in_reply_to_screen_name: null,
  user: {
    id: 1436454038241833000,
    id_str: '1436454038241832963',
    name: 'Shruthi Srinivasan',
    screen_name: 'Shruthi13652852',
```

      location: '',
      description: '',
      url: null,
      entities: [Object],
      protected: false,
      followers_count: 0,
      friends_count: 0,
      listed_count: 0,
      created_at: 'Fri Sep 10 22:18:34 +0000 2021',
      favourites_count: 0,
      utc_offset: null,
      time_zone: null,
      geo_enabled: false,
      verified: false,
      statuses_count: 13,
      lang: null,
      contributors_enabled: false,
      is_translator: false,
      is_translation_enabled: false,
      profile_background_color: 'F5F8FA',
      profile_background_image_url: null,
      profile_background_image_url_https: null,
      profile_background_tile: false,
      profile_image_url:
'http://abs.twimg.com/sticky/default_profile_images/default_profile_normal.png',
      profile_image_url_https:
'https://abs.twimg.com/sticky/default_profile_images/default_profile_normal.png',
      profile_link_color: '1DA1F2',
      profile_sidebar_border_color: 'C0DEED',
      profile_sidebar_fill_color: 'DDEEF6',
      profile_text_color: '333333',
      profile_use_background_image: true,
      has_extended_profile: true,
      default_profile: true,
      default_profile_image: true,
      following: false,
      follow_request_sent: false,
      notifications: false,
      translator_type: 'none',
      withheld_in_countries: []
    },
    geo: null,
    coordinates: null,
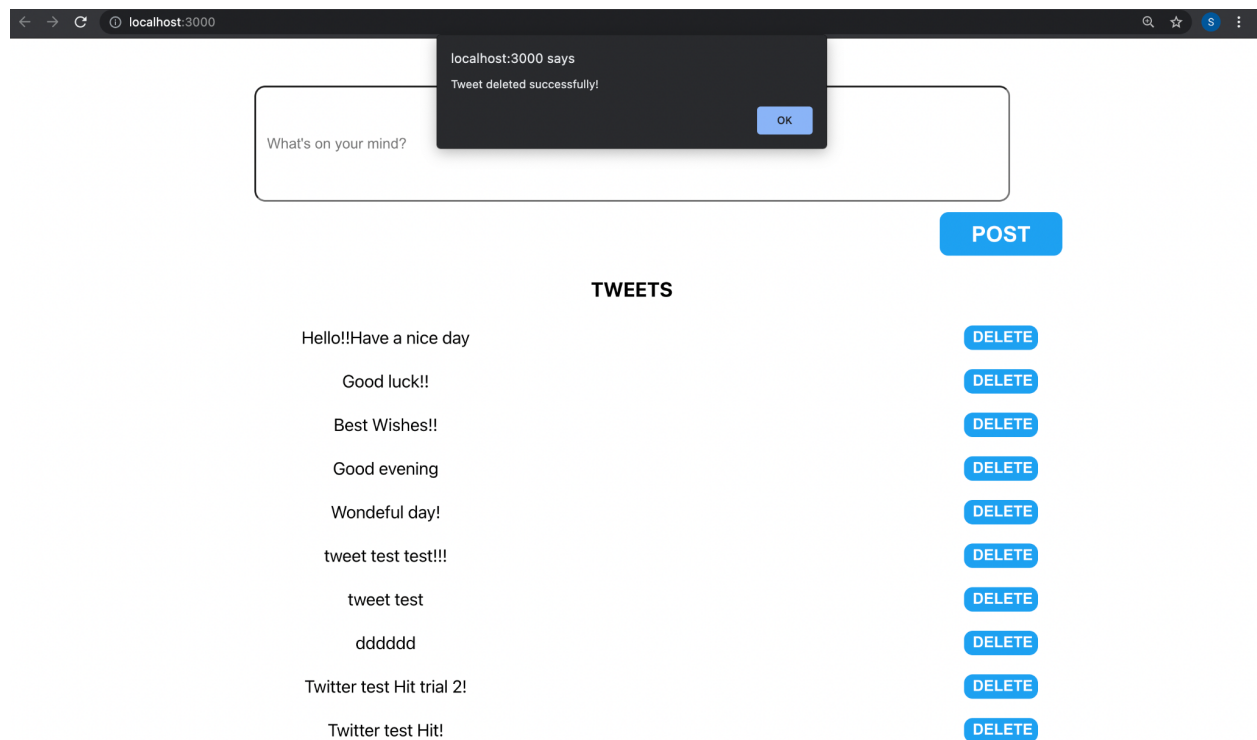   place: null,
    contributors: null,

```
  is_quote_status: false,
  retweet_count: 0,
  favorite_count: 0,
  favorited: false,
  retweeted: false,
  lang: 'en'
},
```

DELETE:

The user will be able to delete the tweets by using an endpoint /statuses/destroy/:id.
The api returns the details of the deleted tweet.

Screenshot:

Sample Output:
```
{
  "coordinates": null,
  "favorited": false,
```

"created_at": "Sun Sep 12 18:33:06 +0000 2021&#39",
"truncated": false,
"id_str": "1437122112863424512&#39",
"entities": {
 "urls": [
   {
 "hashtags": [

 ],
  "user_mentions": [

 ]
},
"in_reply_to_user_id_str": null,
"text": "Tweet Test",
"contributors": null,
"retweet_count": 0,
"id": 1437122112863424500,
"in_reply_to_status_id_str": null,
"geo": null,
"retweeted": false,
"in_reply_to_user_id": null,
"possibly_sensitive": false,
"place": null,
"user": {
  "name": "Shruthi Srinivasan",
  "profile_sidebar_border_color": "86A4A6",
  "profile_sidebar_fill_color": "A0C5C7",
  "profile_background_tile": false,
  "profile_image_url": "",
  "created_at": "Fri Sep 10 22:18:34 +0000 2021",
  "location": "",
  "is_translator": false,
  "follow_request_sent": false,
  "profile_link_color": "FF3300",
  "default_profile": false,
  "contributors_enabled": false,
  "url": "http://t.co/YCA3ZKY",
  "favourites_count": 883,
  "utc_offset": -28800,
  "id": 14927800,
  "profile_image_url_https": "",
  "profile_use_background_image": true,
  "listed_count": 0,
  "profile_text_color": "333333",

    "protected": false,
    "lang": "en",
    "followers_count": 8760,
    "time_zone": "Pacific Time (US & Canada)",
    "profile_background_image_url_https": "",
    "verified": false,
    "profile_background_color": "709397",
    "notifications": false,
    "description": "",
    "geo_enabled": true,
    "statuses_count": 5531,
    "default_profile_image": false,
    "friends_count": 166,
    "profile_background_image_url": "",
    "show_all_inline_media": true,
    "screen_name": "jasoncosta",
    "following": false
  },
  "possibly_sensitive_editable": true,
  "source": "Tweet Button",
  "in_reply_to_screen_name": null,
  "in_reply_to_status_id": null
}

Unit tests (Using Mocha and Chai):

```javascript
1   let chai = require('chai');
2   let chaiHttp = require('chai-http');
3   //let app = require('../app');
4   var express = require('express');
5   var app = express();
6   let should = chai.should();
7
8   chai.use(chaiHttp);
9
10      describe('/GET status', ()=>{
11          it('it should GET all the statuses', (done) =>{
12              chai.request(app).get('statuses/home_timeline')
13                  .end((err, res) => {
14                      res.should.have.status(200);
15                      res.body.should.be.a('array');
16                      done();
17                  });
18          });
19      });
20
21      describe('/POST status', () => {
22          it('it should not POST a tweet without text', (done) => {
23              let status = {
24                  id: "1436460330700263488",
25                  text: "Good Morning",
26                  name: "AISHWARYA RAVI"
27              }
28              chai.request(app)
29                  .post('statuses/update')
30                  .send(status)
31                  .end((err, res) => {
32                      res.should.have.status(200);
33                      res.body.should.be.a('object');
```
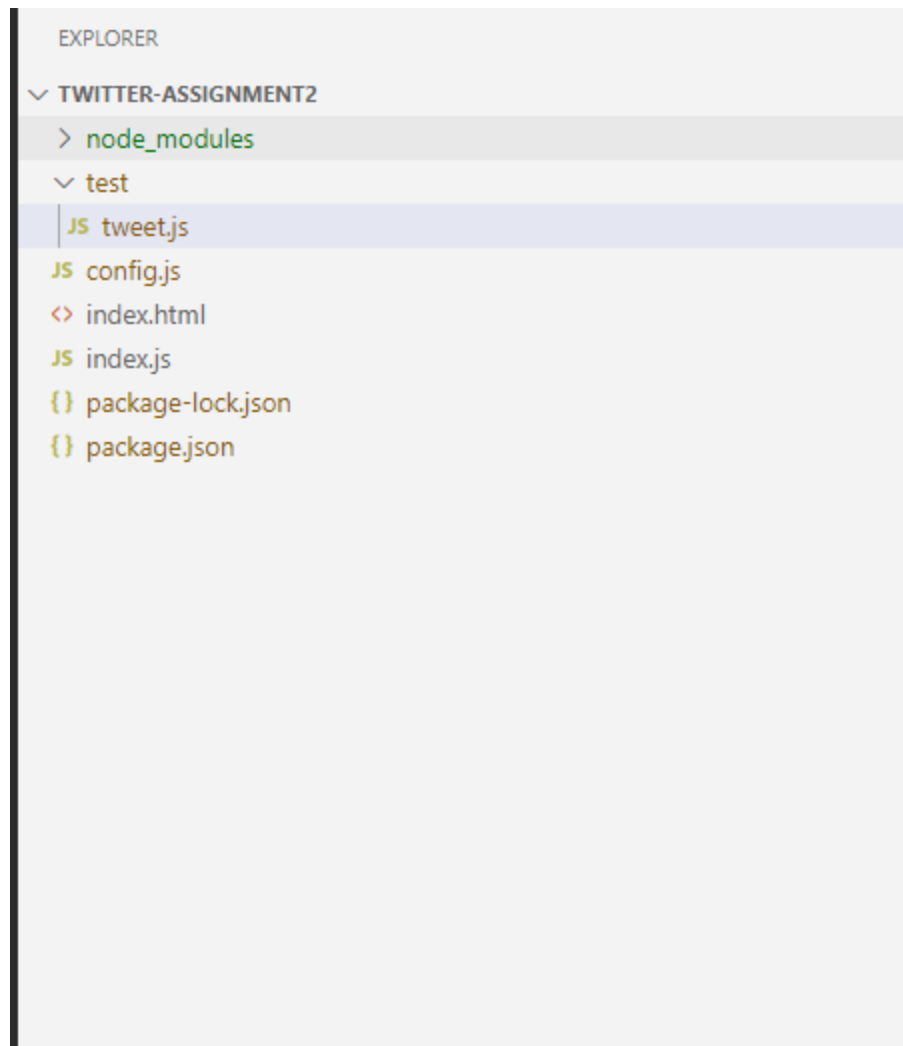
```javascript
describe('/POST status', () => {
    it('it should not POST a tweet without text', (done) => {
        let status = {
            id: "1436460330700263488",
            text: "Good Morning",
            name: "AISHWARYA RAVI"
        }
      chai.request(app)
          .post('statuses/update')
          .send(status)
          .end((err, res) => {
              res.should.have.status(200);
              res.body.should.be.a('object');
              res.body.should.have.property('errors');
              res.body.errors.should.have.property('text');
              res.body.errors.pages.should.have.property('name').eql('AISHWARYA RAVI');
          done();
        });
    });
});

describe('/DELETE/:id status', () => {
    it('it should DELETE a status given the id', (done) => {
      let status = new Status({id: "1436460330700263488", text: "Good Morning!", name: "AISHWARYA RAVI"})
      status.save((err, status) => {
            chai.request(app)
            .delete('statuses/destroy/' + status.id)
            .end((err, res) => {
                res.should.have.status(200);
                res.body.should.be.a('object');
                res.body.should.have.property('message').eql('Status successfully deleted!');
                res.body.result.should.have.property('ok').eql(1);
              done();
            });
        });
    });
});
```

Project Structure :

Github :
https://github.com/satishkkk/CMPE-272-optimus/tree/main/Twitter-Assignment2