

PROJECT REPORT ON BLOGGING APPLICATION

First of all, I would like to thank my lecturer Mr. Cittaranjan Ghosh for helping me to acquire knowledge of "Java Programming Language". At the same time, he gave me the opportunity to learn something new related to our module like spring MVC, spring Boot ,MySQL Database, Rest API, Hibernate etc.

This assignment is based on developing an Blogging application using "Spring Boot" so that it will become more users friendly to interact.

Besides, I also added all the modules and records in this documentation. Let's see the Modules

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Abstract

Web application development has played an important role in software Engineering. Model- View-Controller (MVC) pattern lays a foundation for developing web applications. The MVC architecture separates an application into different business logic (data presentation, data management and request handling). The Spring Framework is an application framework used by Java application and there are extensions for building web applications

[1]. Spring Boot is a framework tool designed to simplify the initialization of Spring, which makes it easy to create stand-alone, production-grade Spring based applications

[2]. Hibernate is an Object-Relational Mapping tool which maps the database tables to the Object classes. The goal of this project is to develop a personal blog that can be used to write and post articles, pictures and codes by the administrator. The blog also allows general users to read and comment on the blogs. The architecture of the proposed system will be based on Spring Boot and Hibernate

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Detailed explanation of steps involved in my project

- Setup Spring boot Project
- Project Structure
- Set up MySQL Database
- Configure Database, Hibernate & JPA in our project
- Create Domain Entities in our project
- Create Repositories for our Post and User classes
- Revisiting the Project Structure
- Running the Application

Chapter 2: Technology Overview

This chapter presents information about the Spring, Spring Boot and Hibernate frameworks – their brief introduction, features and architectures. The first section is about Spring and Spring Boot and the second section explains the Hibernate framework.

2.1 Spring and Spring Boot

Spring Framework is a Java platform that provides comprehensive infrastructure support for developing Java applications.

2.1.1 Spring Architecture

The architecture of Spring is shown in Figure 1. This figure is adapted from ‘Introduction to Spring Framework’ [3].

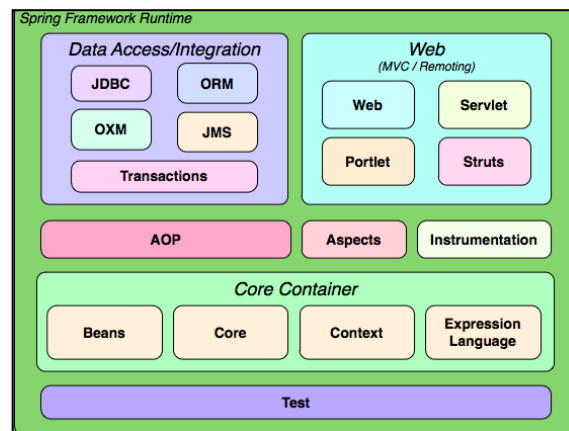


Figure 1: Overview of the Spring Framework

Spring framework consists of the following components [3]:

- **Core Container:** The Core container consists of the Core, Beans, Context and Expression Language modules. The Core and Beans modules provide the fundamental parts of the framework. The Context module builds on the solid base

provided by the Core and Beans modules. The Expression Language module provides a powerful expression language for querying and manipulating an object graph at runtime.

- **Data Access/Integration:** The Data Access/Integration layer consists of the JDBC, ORM, OXM, JMS and Transaction modules. The JDBC module provides a JDBC-abstraction layer that removes the need to do tedious JDBC coding and parsing of database-vendor specific error codes. The ORM module provides integration layers for popular object-relational mapping APIs.
- **Web:** Spring's Web module provides basic web-oriented integration features such as multipart file-upload functionality and the initialization of the Inverse of Control (IoC) container using servlet listeners and a web-oriented application context. It also contains the web-related parts of Spring's remoting support.
- **AOP and Instrumentation:** Spring's AOP module provides an AOP Alliance-compliant aspect-oriented programming implementation allowing you to define, for example, method-interceptors and pointcuts to cleanly decouple code that implements functionality that should be separated.

. The Administrator subsystem provides the following functionalities:

Admin Login: An administrator can login with username and password to manage the content.

Manage Blog: An administrator can publish a new blog, modify the existing blogs, delete a blog and search for a blog.

Manage Types: An administrator can create a new archive, modify the existing archives, delete archives and search for an archive.

Manage Tags: An administrator can create a new tag, modify the existing tagged blogs, delete tags and search for a tag.

Brief Description

The Manage Blog use case enables the Blog System Administrator to manage the blog content.

Step-by-Step Description

1. Allow the following modifications to the current blog system:
 - Publish a new blog
 - Modify a current blog
 - Delete a current blog
 - Search for a blog

Figure 5. Login use Case for the Blog System

Table 1: *Login* use Case Description for the Blog System

Brief Description
The Login use case enables the Blog System Administrator to login into the system.
Step-by-Step Description
<ol style="list-style-type: none"> 1. Enter the Username and Password at the login screen. 2. Validate the Username and Password entered by the user to display the administrator screen. Wrong Username or Password will stay on the login screen with error message.

Figure 7: *Manage Type* use Case for the Blog System

Table 2: Manage Archive use Case Description for the Blog System

Brief Description
The Manage Types use case enables the Blog System Administrator to manage the types for the blog.
Step-by-Step Description
<ol style="list-style-type: none"> 1. Allow the following modifications to the current blog system: <ul style="list-style-type: none"> • Create a new type • Change a current blog article to a different type • Delete a current type

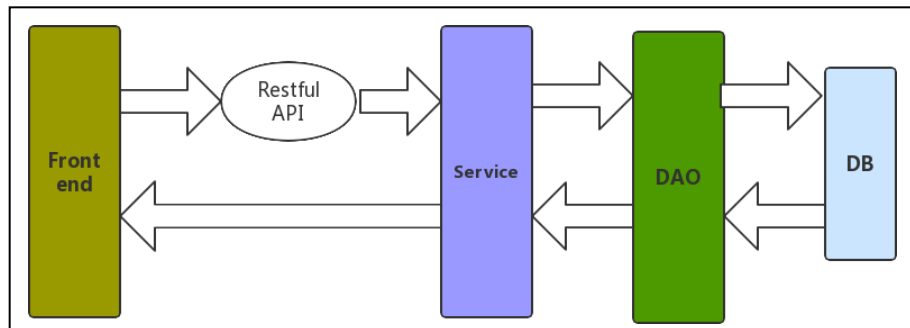


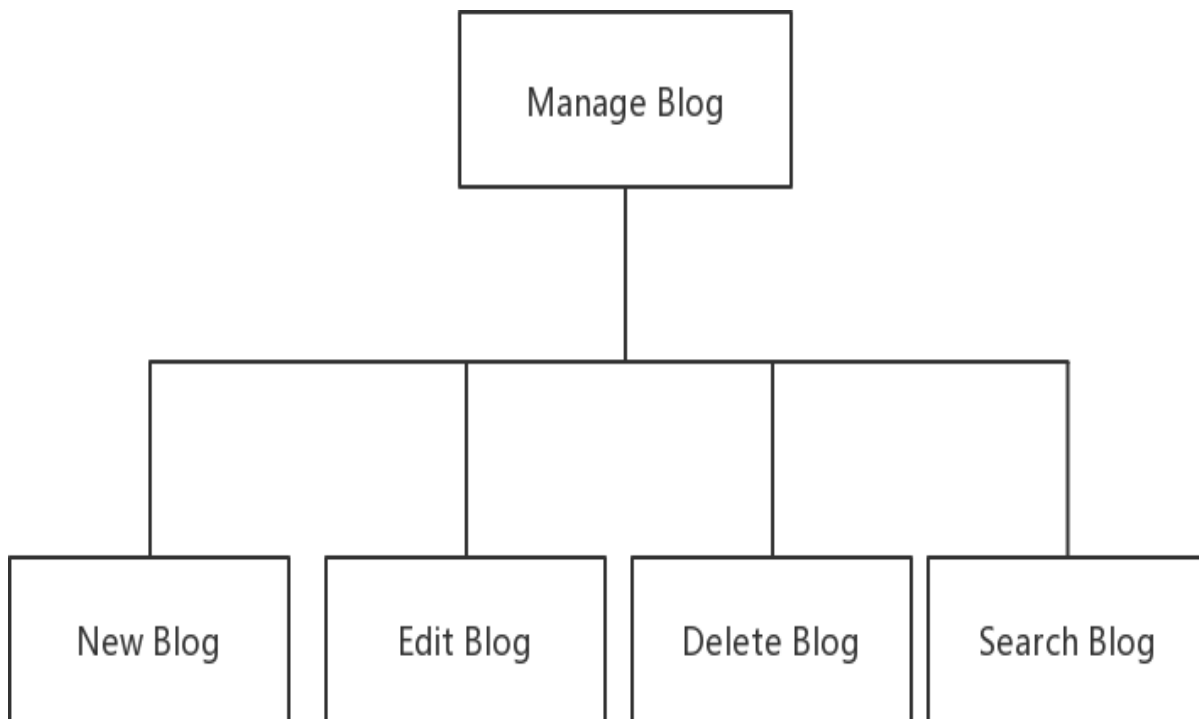
Figure 10: System Architecture

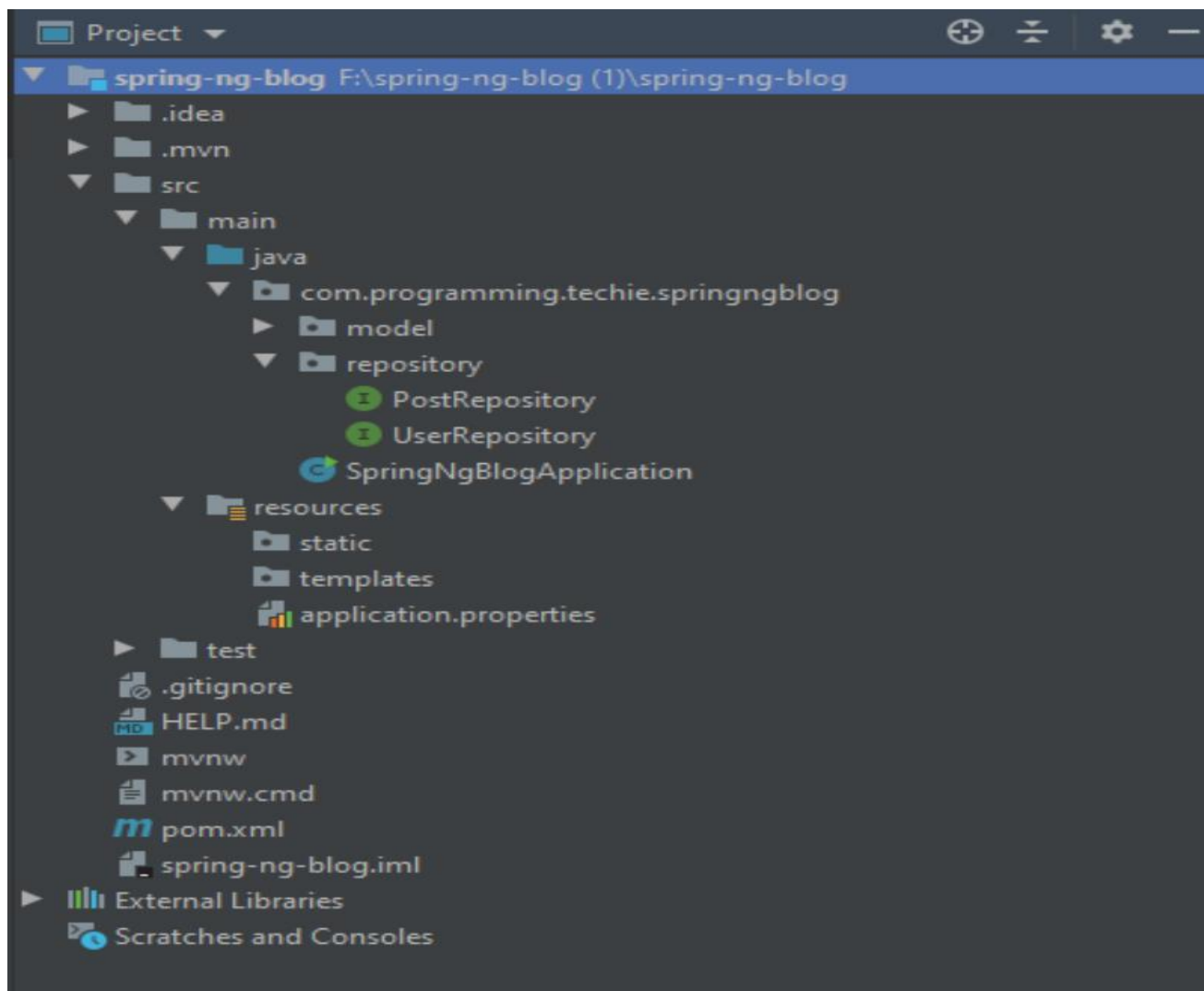
Design of the frontend. This layer will be the user interface. It is responsible for displaying information to user.

RESTful API. REST is the underlying architectural principle of the web. The amazing thing about the web is the fact that clients (browsers) and servers can interact in complex ways without the client knowing anything beforehand about the server and the resources it hosts. The key constraint is that the server and client must both agree on the *media* used, which in the case of the web is HTML. An API that adheres to the principles of *REST* does not require the client to know anything about the structure of the API. Rather, the server needs to provide whatever information the client needs to interact with the service [4].

Design of the service. This would be the service layer for the application. The application logic will be presented in this layer and it will be responsible for answering the call from the RESTful API and interacting with the DAO layer to receive data. This layer would be implemented by the Spring Boot framework.

Design of the DAO. This layer is responsible for adding and inserting entity objects into database, updating entity objects in database, and selecting entity objects from database.

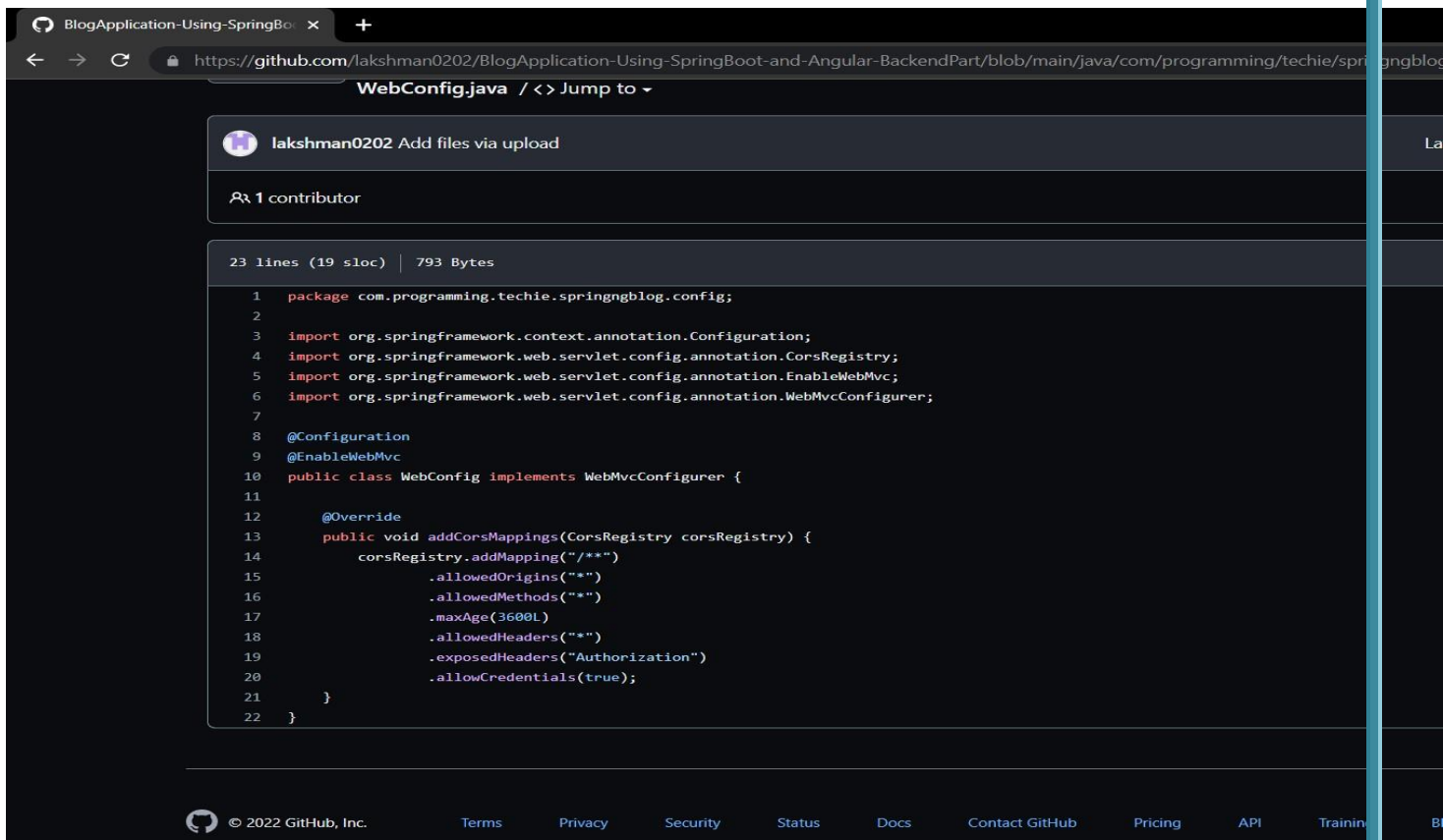




Security configuration.

```
18
19 @SuppressWarnings("deprecation")
20 @EnableWebSecurity
21 public class SecurityConfig extends WebSecurityConfigurerAdapter {
22
23     @Autowired
24     private UserDetailsService userDetailsService;
25
26     @Bean
27     public JwtAuthenticationFilter jwtAuthenticationFilter() {
28         return new JwtAuthenticationFilter();
29     }
30
31
32     @Bean(Beans.AUTHENTICATION_MANAGER)
33     @Override
34     public AuthenticationManager authenticationManagerBean() throws Exception {
35         return super.authenticationManagerBean();
36     }
37
38     @Override
39     public void configure(HttpSecurity httpSecurity) throws Exception {
40         httpSecurity.csrf().disable()
41             .authorizeRequests()
42                 .antMatchers("/api/auth/**")
43                     .permitAll()
44                 .antMatchers("/api/posts/all")
45                     .permitAll()
46                 .anyRequest()
47                     .authenticated();
48
49         httpSecurity.addFilterBefore(jwtAuthenticationFilter(), UsernamePasswordAuthenticationFilter.class);
50     }
51
52     @Autowired
53     public void configureGlobal(AuthenticationManagerBuilder authenticationManagerBuilder) throws Exception {
54         authenticationManagerBuilder.userDetailsService(userDetailsService).passwordEncoder(passwordEncoder());
55     }
56 }
```

Web configuration

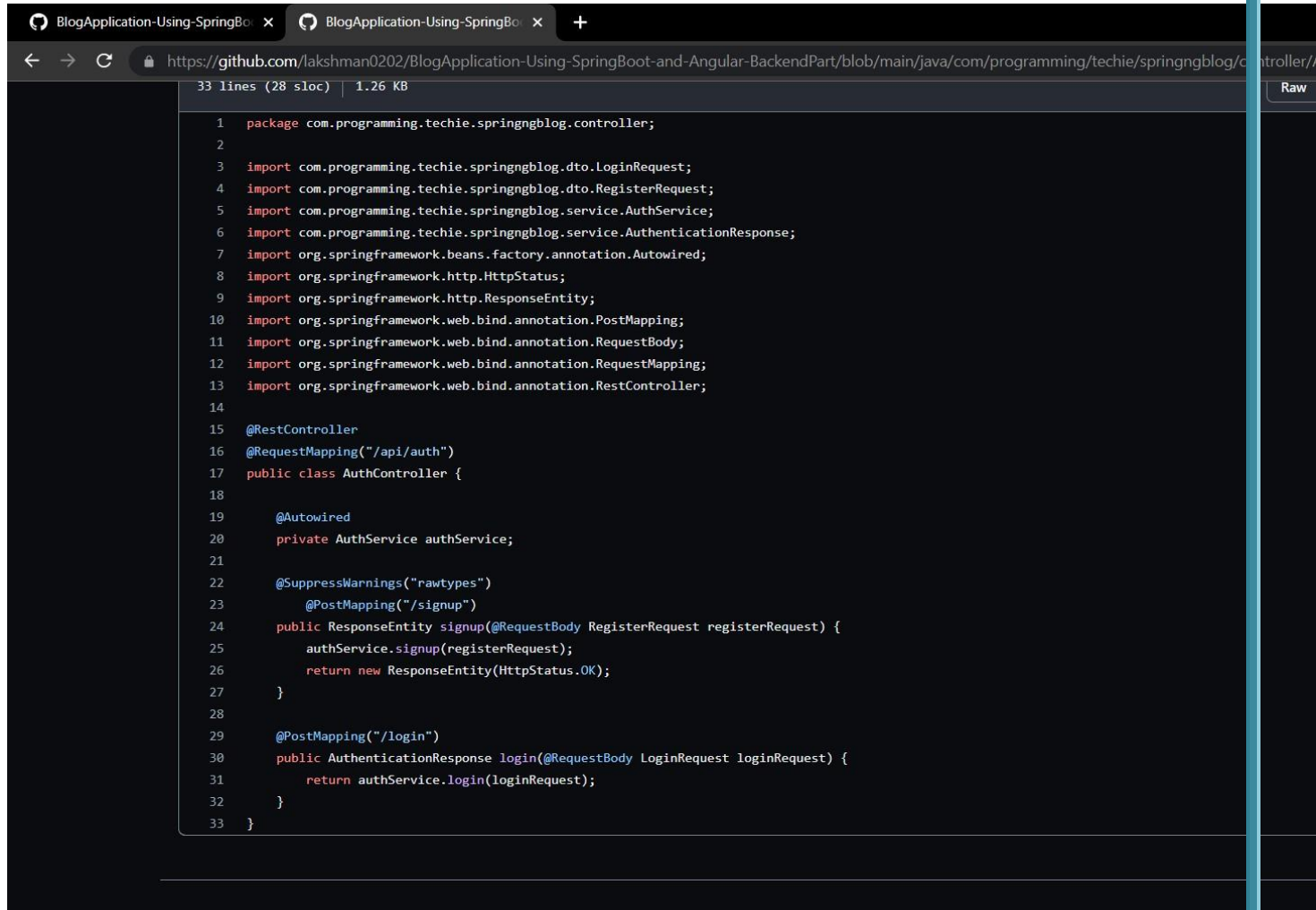


The screenshot shows a web browser displaying a GitHub repository page for a file named `WebConfig.java`. The browser's address bar shows the URL `https://github.com/lakshman0202/BlogApplication-Using-SpringBoot-and-Angular-BackendPart/blob/main/java/com/programming/techie/springngblog/...`. The repository owner is `lakshman0202`, and there is 1 contributor. The file is 23 lines long (19 SLOC) and 793 Bytes. The code is a Java class `WebConfig` that implements `WebMvcConfigurer` and overrides the `addCorsMappings` method to configure CORS for all endpoints.

```
1 package com.programming.techie.springngblog.config;
2
3 import org.springframework.context.annotation.Configuration;
4 import org.springframework.web.servlet.config.annotation.CorsRegistry;
5 import org.springframework.web.servlet.config.annotation.EnableWebMvc;
6 import org.springframework.web.servlet.config.annotation.WebMvcConfigurer;
7
8 @Configuration
9 @EnableWebMvc
10 public class WebConfig implements WebMvcConfigurer {
11
12     @Override
13     public void addCorsMappings(CorsRegistry corsRegistry) {
14         corsRegistry.addMapping("/**")
15             .allowedOrigins("*")
16             .allowedMethods("*")
17             .maxAge(3600L)
18             .allowedHeaders("*")
19             .exposedHeaders("Authorization")
20             .allowCredentials(true);
21     }
22 }
```

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Authuntication controller



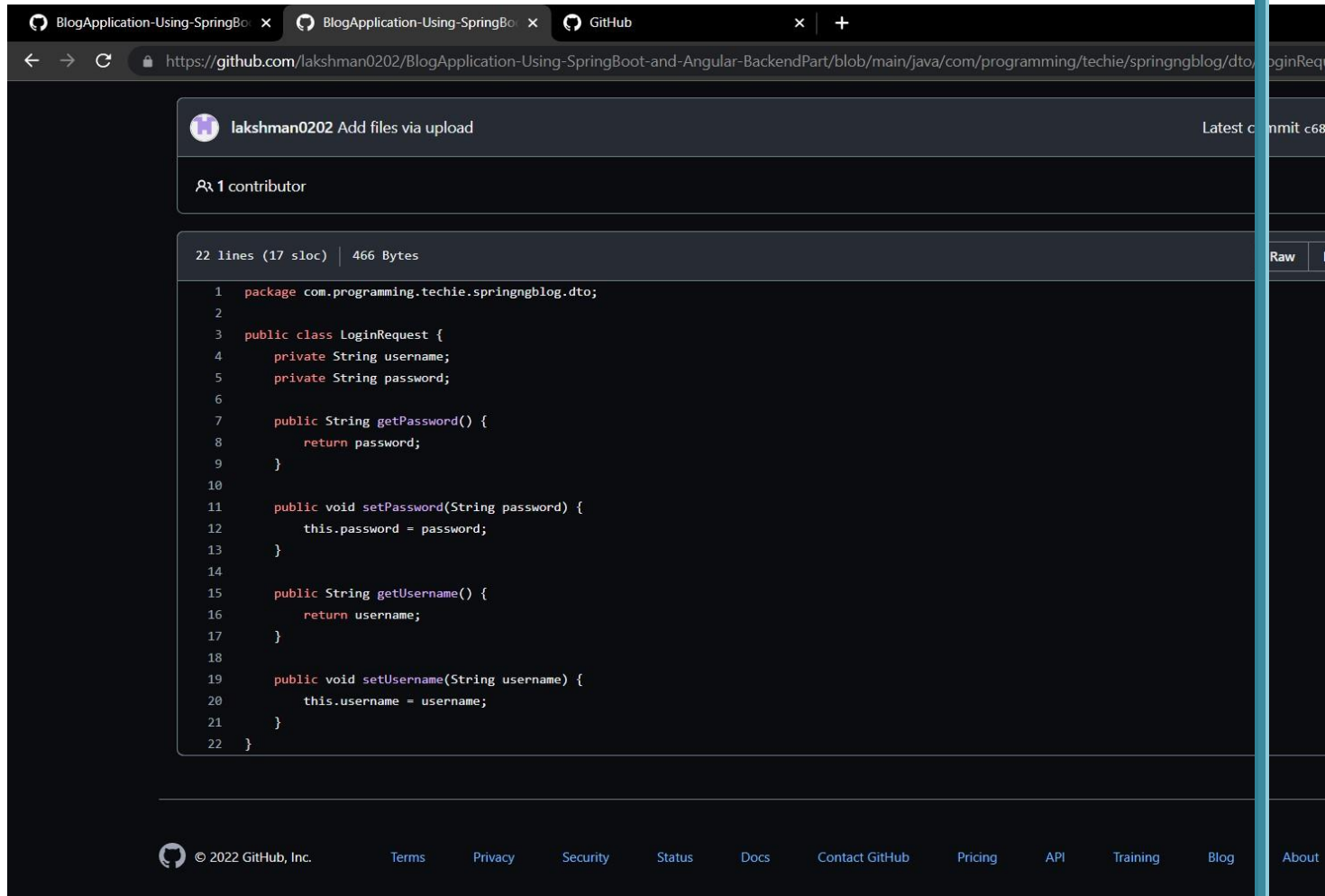
The screenshot shows a web browser displaying a GitHub repository. The address bar shows the URL: <https://github.com/lakshman0202/BlogApplication-Using-SpringBoot-and-Angular-BackendPart/blob/main/java/com/programming/techie/springngblog/controller/AuthController.java>. The file is named `AuthController.java` and is 33 lines long (28 sloc) and 1.26 KB in size. The code is a Java Spring Boot REST controller for authentication.

```
1 package com.programming.techie.springngblog.controller;
2
3 import com.programming.techie.springngblog.dto.LoginRequest;
4 import com.programming.techie.springngblog.dto.RegisterRequest;
5 import com.programming.techie.springngblog.service.AuthService;
6 import com.programming.techie.springngblog.service.AuthenticationResponse;
7 import org.springframework.beans.factory.annotation.Autowired;
8 import org.springframework.http.HttpStatus;
9 import org.springframework.http.ResponseEntity;
10 import org.springframework.web.bind.annotation.PostMapping;
11 import org.springframework.web.bind.annotation.RequestBody;
12 import org.springframework.web.bind.annotation.RequestMapping;
13 import org.springframework.web.bind.annotation.RestController;
14
15 @RestController
16 @RequestMapping("/api/auth")
17 public class AuthController {
18
19     @Autowired
20     private AuthService authService;
21
22     @SuppressWarnings("rawtypes")
23     @PostMapping("/signup")
24     public ResponseEntity signup(@RequestBody RegisterRequest registerRequest) {
25         authService.signup(registerRequest);
26         return new ResponseEntity(HttpStatus.OK);
27     }
28
29     @PostMapping("/login")
30     public AuthenticationResponse login(@RequestBody LoginRequest loginRequest) {
31         return authService.login(loginRequest);
32     }
33 }
```

Post controller

```
1 package com.programming.techie.springngblog.controller;
2
3 import com.programming.techie.springngblog.dto.PostDto;
4 import com.programming.techie.springngblog.security.PostService;
5 import org.springframework.beans.factory.annotation.Autowired;
6 import org.springframework.http.HttpStatus;
7 import org.springframework.http.ResponseEntity;
8 import org.springframework.web.bind.annotation.*;
9
10 import java.util.List;
11
12 @RestController
13 @RequestMapping("/api/posts/")
14 public class PostController {
15
16     @Autowired
17     private PostService postService;
18
19     @SuppressWarnings("rawtypes")
20     @PostMapping
21     public ResponseEntity createPost(@RequestBody PostDto postDto) {
22         postService.createPost(postDto);
23         return new ResponseEntity(HttpStatus.OK);
24     }
25
26     @GetMapping("/all")
27     public ResponseEntity<List<PostDto>> showAllPosts() {
28         return new ResponseEntity<>(postService.showAllPosts(), HttpStatus.OK);
29     }
30
31     @GetMapping("/get/{id}")
32     public ResponseEntity<PostDto> getSinglePost(@PathVariable @RequestBody Long id) {
33         return new ResponseEntity<>(postService.readSinglePost(id), HttpStatus.OK);
34     }
35 }
```

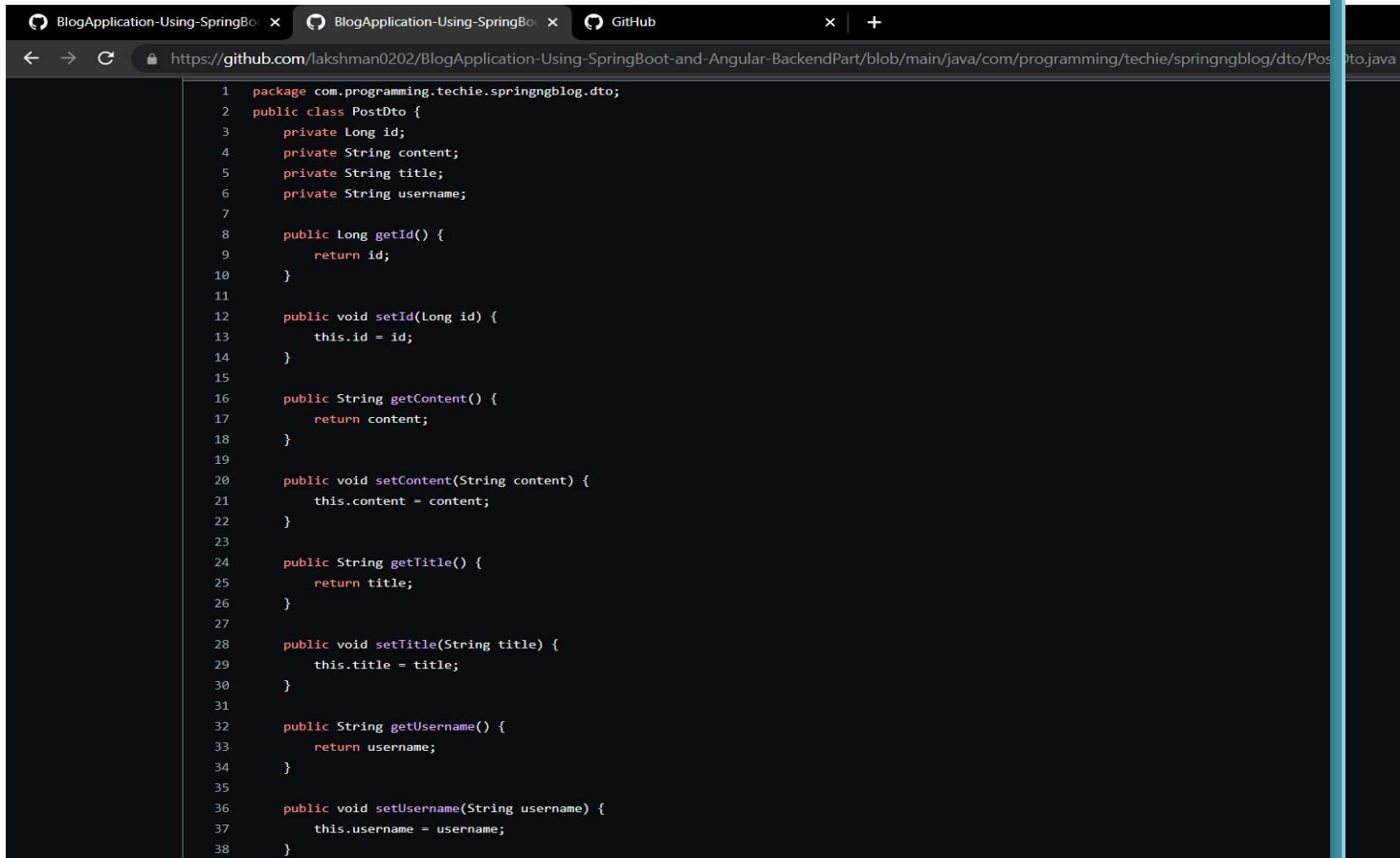
login request



The screenshot shows a web browser with three tabs: 'BlogApplication-Using-SpringBo...', 'BlogApplication-Using-SpringBo...', and 'GitHub'. The address bar displays the URL: <https://github.com/lakshman0202/BlogApplication-Using-SpringBoot-and-Angular-BackendPart/blob/main/java/com/programming/techie/springngblog/dto/LoginRequest.java>. The main content area shows the GitHub interface for the file 'LoginRequest.java' by user 'lakshman0202'. It indicates 'Add files via upload' and 'Latest commit c68...'. Below this, it shows '1 contributor' and file statistics: '22 lines (17 sloc) | 466 Bytes'. The code is a Java class named 'LoginRequest' with two private attributes, 'username' and 'password', and four public methods: 'getPassword()', 'setPassword()', 'getUsername()', and 'setUsername()'. The footer of the page shows the GitHub logo, copyright notice '© 2022 GitHub, Inc.', and various links: 'Terms', 'Privacy', 'Security', 'Status', 'Docs', 'Contact GitHub', 'Pricing', 'API', 'Training', 'Blog', and 'About'.

```
1 package com.programming.techie.springngblog.dto;
2
3 public class LoginRequest {
4     private String username;
5     private String password;
6
7     public String getPassword() {
8         return password;
9     }
10
11    public void setPassword(String password) {
12        this.password = password;
13    }
14
15    public String getUsername() {
16        return username;
17    }
18
19    public void setUsername(String username) {
20        this.username = username;
21    }
22 }
```

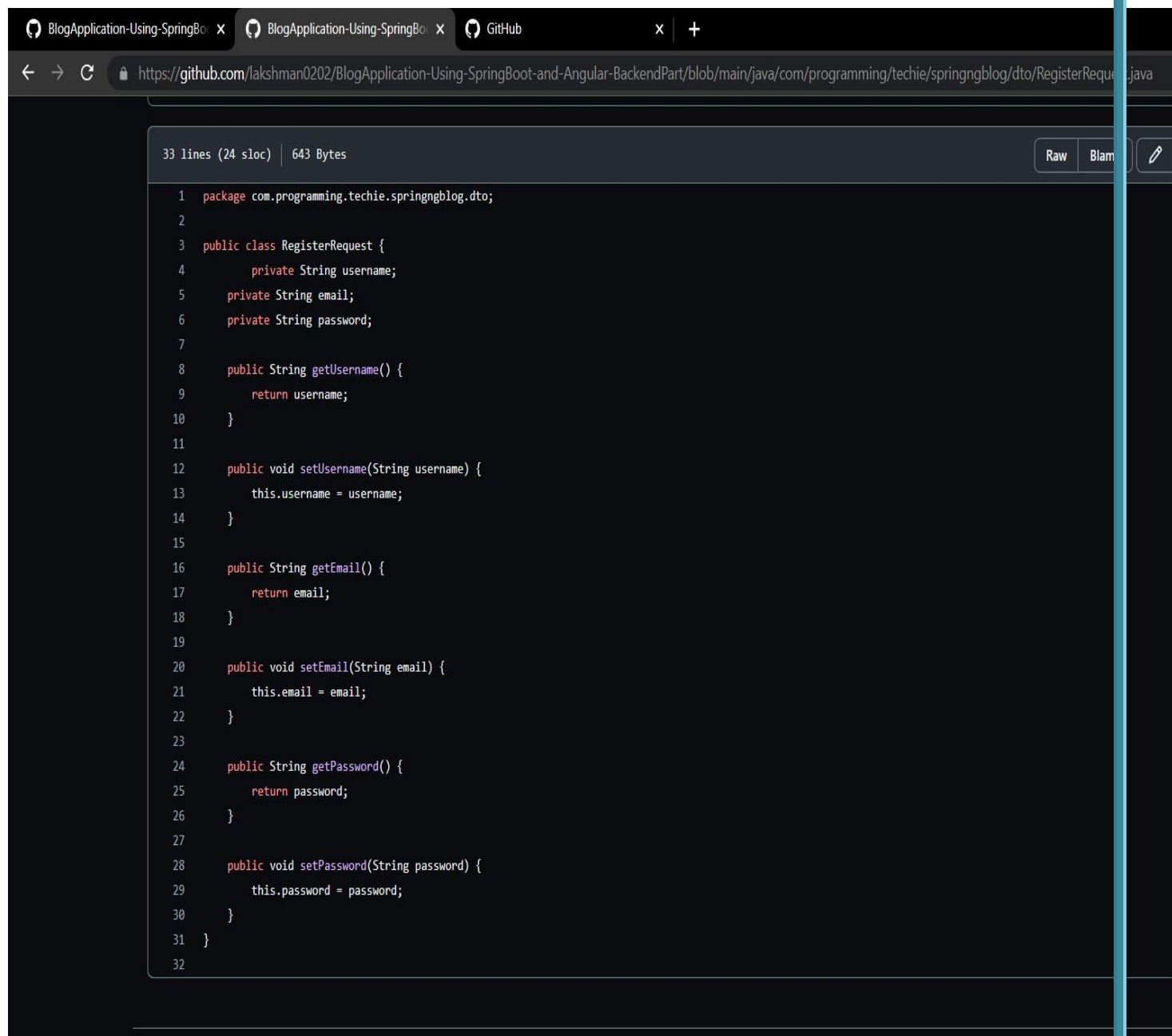

Post DTO



The screenshot shows a web browser with three tabs: 'BlogApplication-Using-SpringBo...', 'BlogApplication-Using-SpringBo...', and 'GitHub'. The address bar displays the URL: <https://github.com/lakshman0202/BlogApplication-Using-SpringBoot-and-Angular-BackendPart/blob/main/java/com/programming/techie/springngblog/dto/PostDto.java>. The main content area shows the source code for the `PostDto` class in Java, with line numbers 1 through 38 on the left. The code defines a `PostDto` class with private fields for `id`, `content`, `title`, and `username`, and corresponding getter and setter methods.

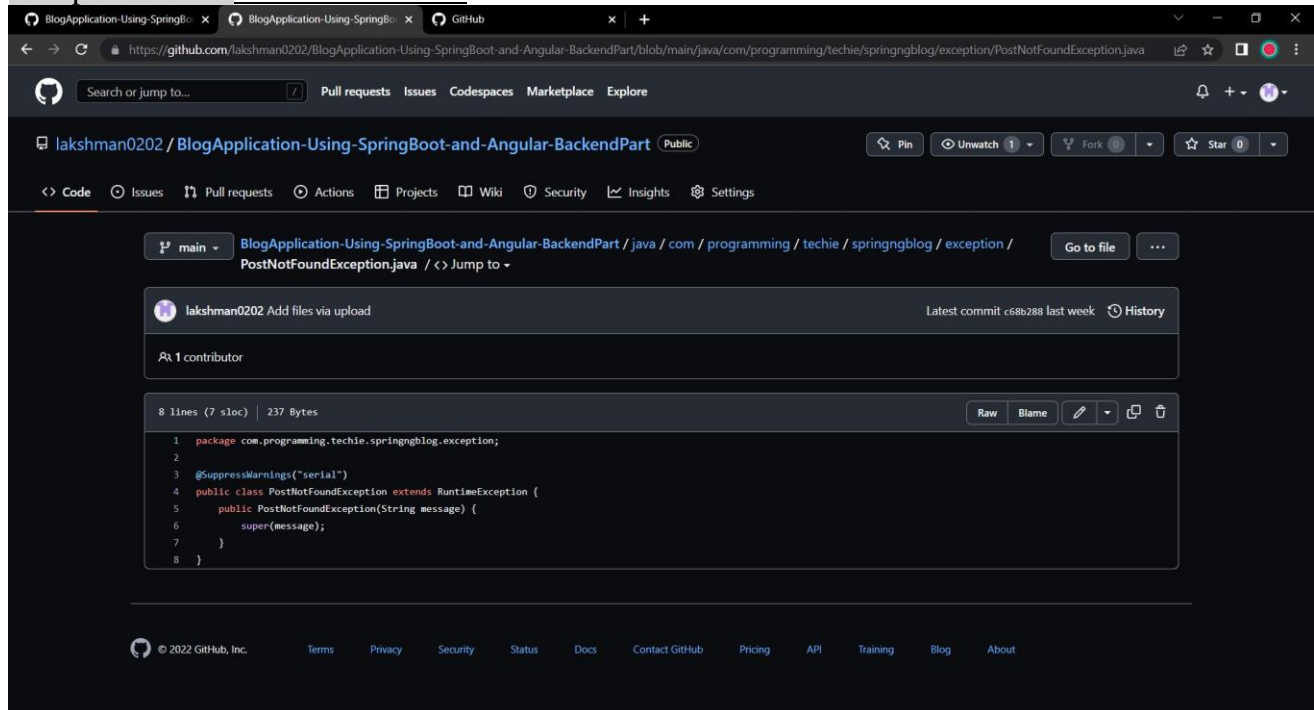
```
1 package com.programming.techie.springngblog.dto;
2 public class PostDto {
3     private Long id;
4     private String content;
5     private String title;
6     private String username;
7
8     public Long getId() {
9         return id;
10    }
11
12    public void setId(Long id) {
13        this.id = id;
14    }
15
16    public String getContent() {
17        return content;
18    }
19
20    public void setContent(String content) {
21        this.content = content;
22    }
23
24    public String getTitle() {
25        return title;
26    }
27
28    public void setTitle(String title) {
29        this.title = title;
30    }
31
32    public String getUsername() {
33        return username;
34    }
35
36    public void setUsername(String username) {
37        this.username = username;
38    }
}
```

Register request



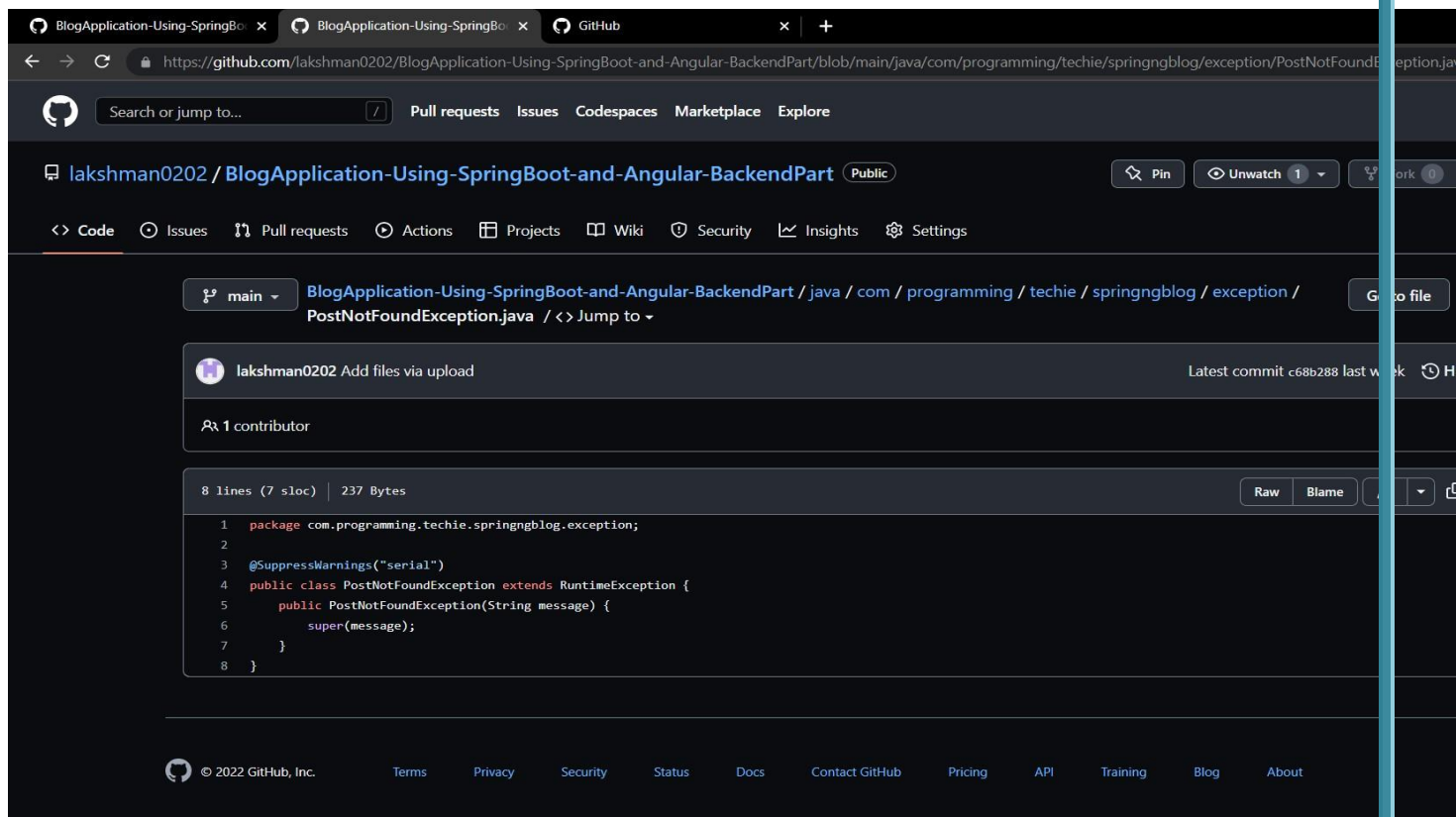
```
33 lines (24 sloc) | 643 Bytes
1 package com.programming.techie.springngblog.dto;
2
3 public class RegisterRequest {
4     private String username;
5     private String email;
6     private String password;
7
8     public String getUsername() {
9         return username;
10    }
11
12    public void setUsername(String username) {
13        this.username = username;
14    }
15
16    public String getEmail() {
17        return email;
18    }
19
20    public void setEmail(String email) {
21        this.email = email;
22    }
23
24    public String getPassword() {
25        return password;
26    }
27
28    public void setPassword(String password) {
29        this.password = password;
30    }
31 }
32
```

Exception classes



The screenshot shows a GitHub repository page for the project "BlogApplication-Using-SpringBoot-and-Angular-BackendPart" by user "lakshman0202". The file being viewed is "PostNotFoundException.java" located at "java / com / programming / techie / springngblog / exception /". The file is 8 lines (7 sloc) and 237 Bytes. The code is as follows:

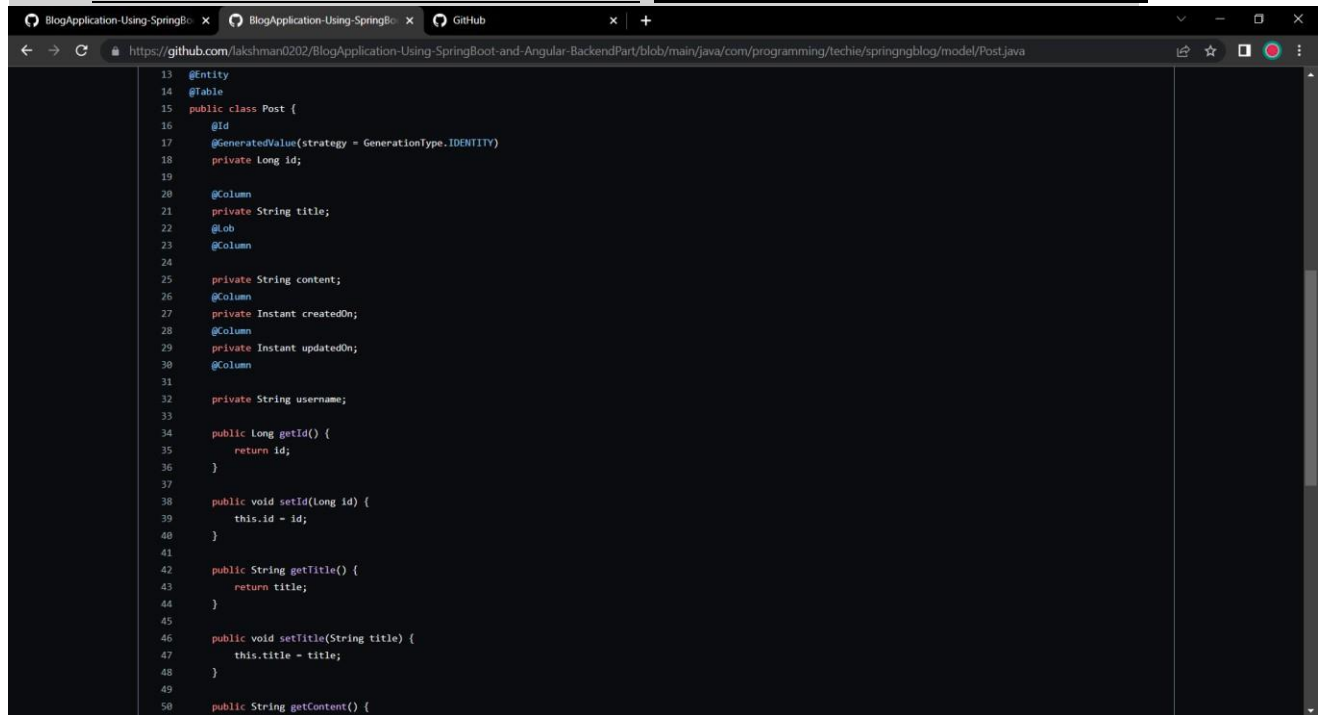
```
1 package com.programming.techie.springngblog.exception;
2
3 @SuppressWarnings("serial")
4 public class PostNotFoundException extends RuntimeException {
5     public PostNotFoundException(String message) {
6         super(message);
7     }
8 }
```



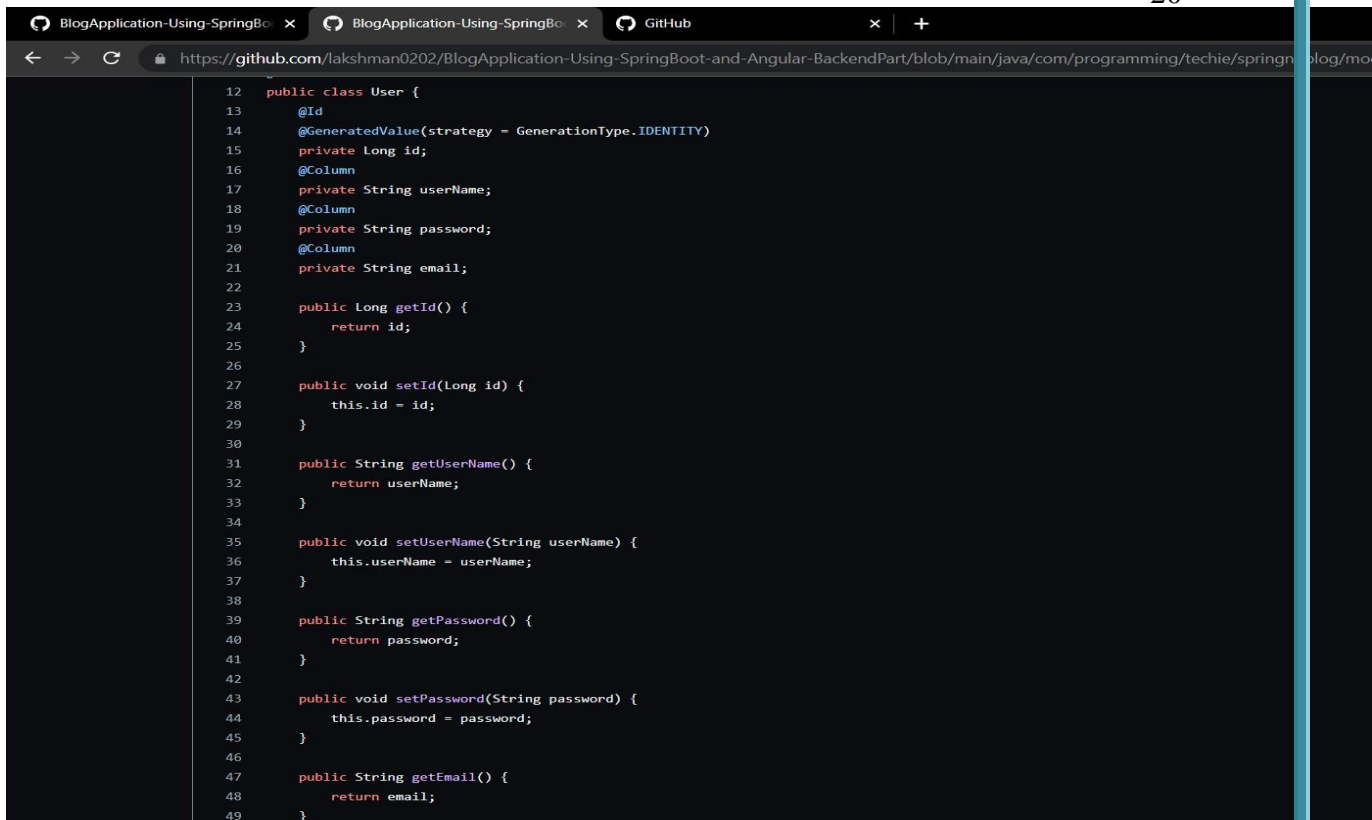
This is another screenshot of the same GitHub repository page, showing the code for "PostNotFoundException.java". The file is 8 lines (7 sloc) and 237 Bytes. The code is as follows:

```
1 package com.programming.techie.springngblog.exception;
2
3 @SuppressWarnings("serial")
4 public class PostNotFoundException extends RuntimeException {
5     public PostNotFoundException(String message) {
6         super(message);
7     }
8 }
```

Post

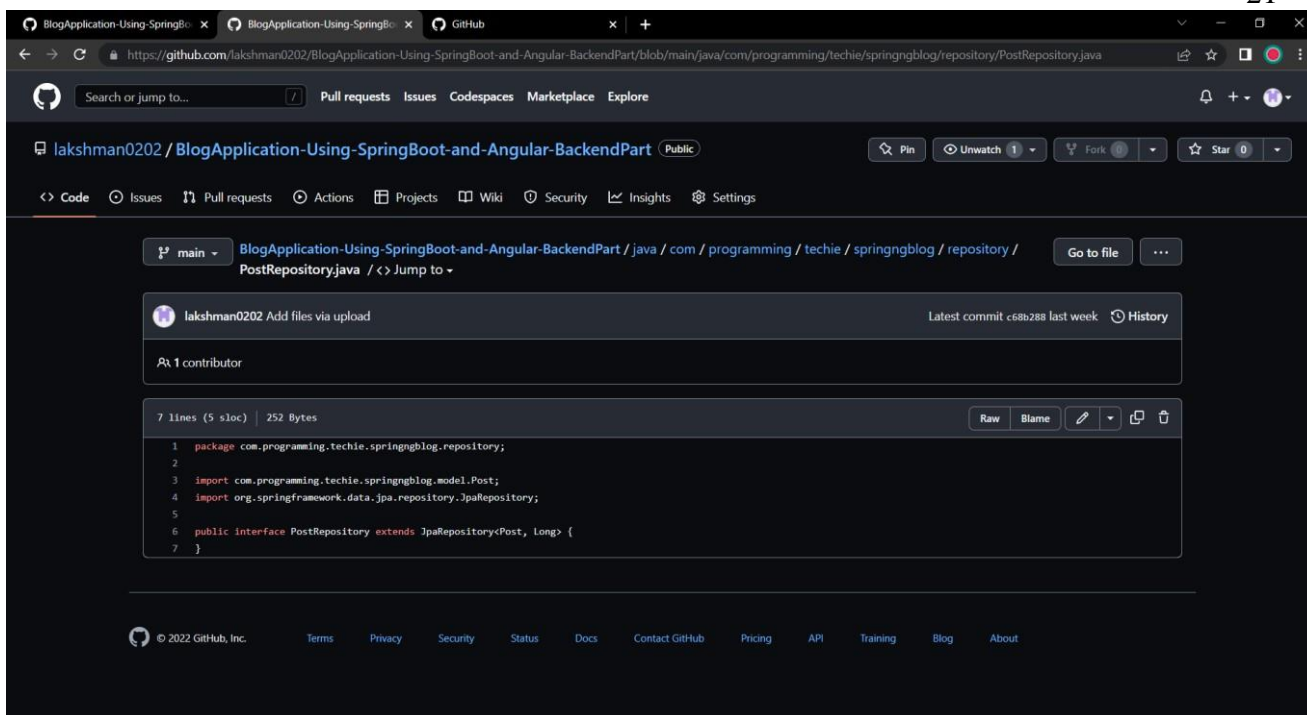


```
13 @Entity
14 @Table
15 public class Post {
16     @Id
17     @GeneratedValue(strategy = GenerationType.IDENTITY)
18     private Long id;
19
20     @Column
21     private String title;
22     @Column
23     private String content;
24
25     @Column
26     private Instant createdOn;
27     @Column
28     private Instant updatedOn;
29
30     private String username;
31
32     public Long getId() {
33         return id;
34     }
35
36     public void setId(Long id) {
37         this.id = id;
38     }
39
40     public String getTitle() {
41         return title;
42     }
43
44     public void setTitle(String title) {
45         this.title = title;
46     }
47
48     public String getContent() {
```

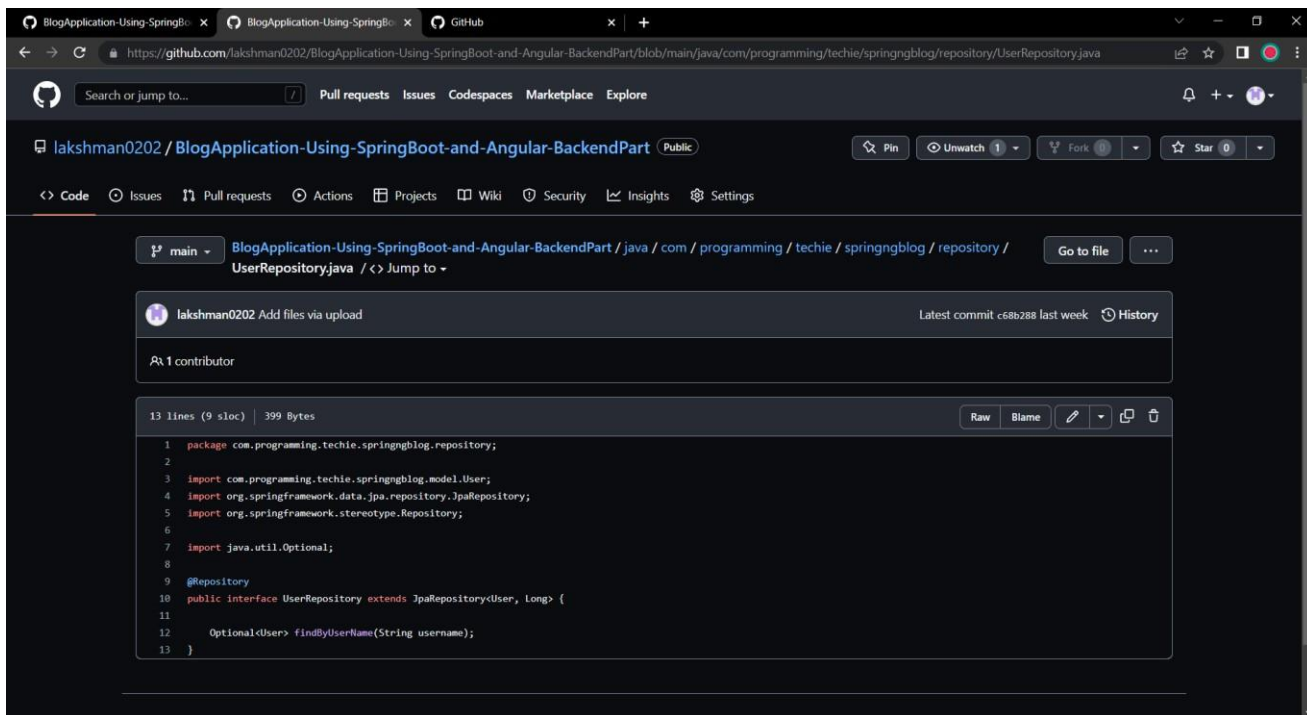


The screenshot shows a web browser with three tabs: 'BlogApplication-Using-SpringBo...', 'BlogApplication-Using-SpringBo...', and 'GitHub'. The address bar displays the URL: <https://github.com/lakshman0202/BlogApplication-Using-SpringBoot-and-Angular-BackendPart/blob/main/java/com/programming/techie/springn...>. The main content area shows a Java code file for a `User` class. The code is as follows:

```
12 public class User {
13     @Id
14     @GeneratedValue(strategy = GenerationType.IDENTITY)
15     private Long id;
16     @Column
17     private String userName;
18     @Column
19     private String password;
20     @Column
21     private String email;
22
23     public Long getId() {
24         return id;
25     }
26
27     public void setId(Long id) {
28         this.id = id;
29     }
30
31     public String getUserName() {
32         return userName;
33     }
34
35     public void setUserName(String userName) {
36         this.userName = userName;
37     }
38
39     public String getPassword() {
40         return password;
41     }
42
43     public void setPassword(String password) {
44         this.password = password;
45     }
46
47     public String getEmail() {
48         return email;
49     }
50 }
```



Repository classes



JWT

```

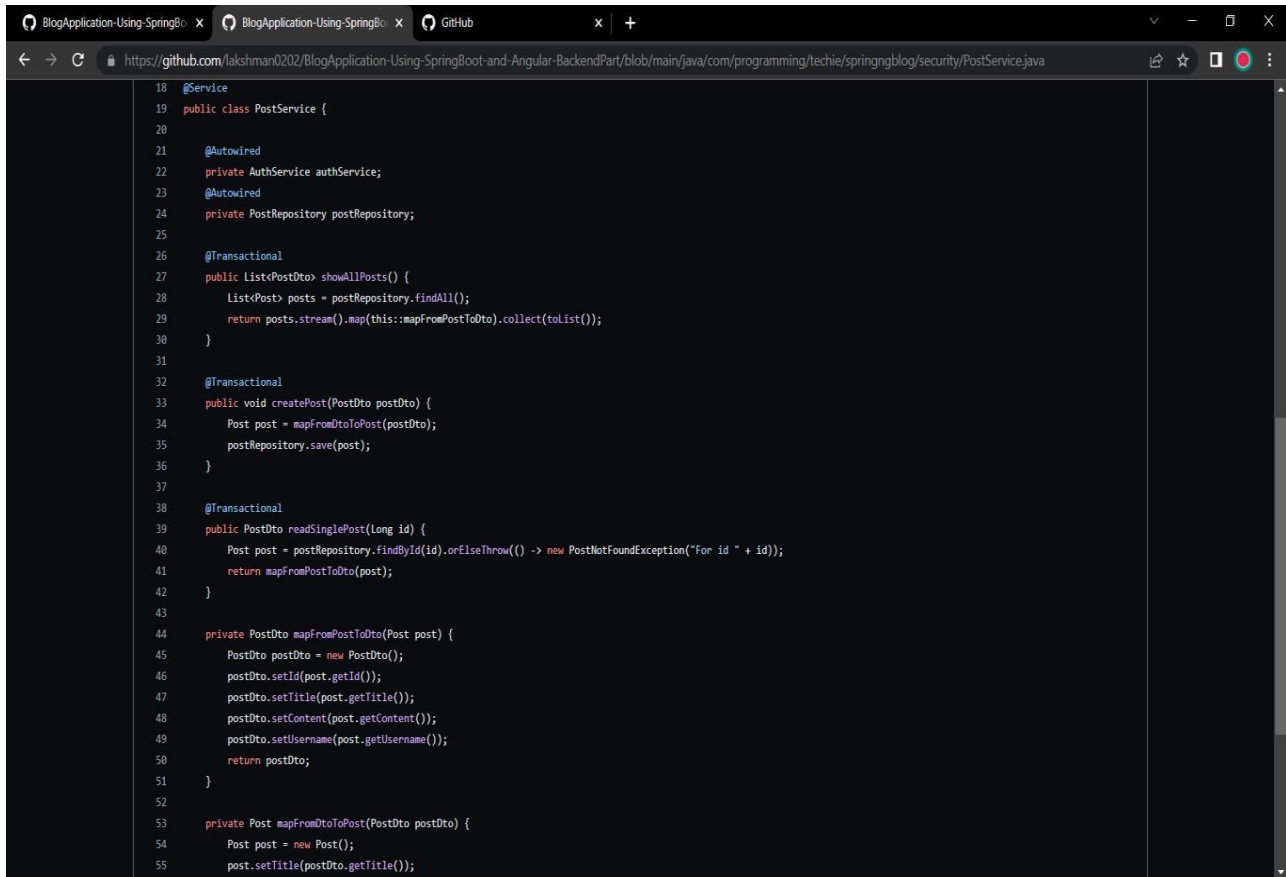
17
18 public class JwtAuthenticationFilter extends OncePerRequestFilter {
19
20     @Autowired
21     private JwtProvider jwtProvider;
22     @Autowired
23     private UserDetailsService userDetailsService;
24
25     @Override
26     protected void doFilterInternal(HttpServletRequest request, HttpServletResponse response,
27                                     FilterChain filterChain) throws ServletException, IOException {
28         String jwt = getJwtFromRequest(request);
29
30         if(StringUtils.hasText(jwt) && jwtProvider.validateToken(jwt)){
31             String username = jwtProvider.getUsernameFromJwt(jwt);
32
33             UserDetails userDetails = userDetailsService.loadUserByUsername(username);
34             UsernamePasswordAuthenticationToken authentication = new UsernamePasswordAuthenticationToken(userDetails,
35                                                         null, userDetails.getAuthorities());
36             authentication.setDetails(new WebAuthenticationDetailsSource().buildDetails(request));
37
38             SecurityContextHolder.getContext().setAuthentication(authentication);
39         }
40         filterChain.doFilter(request, response);
41     }
42
43     private String getJwtFromRequest(HttpServletRequest request) {
44         String bearerToken = request.getHeader("Authorization");
45
46         if(StringUtils.hasText(bearerToken) && bearerToken.startsWith("Bearer ")){
47             return bearerToken.substring(7);
48         }
49         return bearerToken;
50     }
51 }

```

```

16 @Service
17 public class JwtProvider {
18
19     private KeyStore keyStore;
20
21     @PostConstruct
22     public void init() {
23         try {
24             keyStore = KeyStore.getInstance("JKS");
25             InputStream resourceAsStream = getClass().getResourceAsStream("/springblog.jks");
26             keyStore.load(resourceAsStream, "secret".toCharArray());
27         } catch (KeyStoreException | CertificateException | NoSuchAlgorithmException | IOException e) {
28             throw new SpringBlogException("Exception occurred while loading keystore");
29         }
30     }
31
32     public String generateToken(Authentication authentication) {
33         User principal = (User) authentication.getPrincipal();
34         return Jwts.builder()
35             .setSubject(principal.getUsername())
36             .signWith(getPrivateKey())
37             .compact();
38     }
39
40     private PrivateKey getPrivateKey() {
41         try {
42             return (PrivateKey) keyStore.getKey("springblog", "secret".toCharArray());
43         } catch (KeyStoreException | NoSuchAlgorithmException | UnrecoverableKeyException e) {
44             throw new SpringBlogException("Exception occurred while retrieving public key from keystore");
45         }
46     }
47
48     public boolean validateToken(String jwt) {
49         Jwts.parser().setSigningKey(getPublicKey()).parseClaimsJws(jwt);
50         return true;
51     }
52 }
53

```



```
18 @Service
19 public class PostService {
20
21     @Autowired
22     private AuthService authService;
23     @Autowired
24     private PostRepository postRepository;
25
26     @Transactional
27     public List<PostDto> showAllPosts() {
28         List<Post> posts = postRepository.findAll();
29         return posts.stream().map(this::mapFromPostToDto).collect(toList());
30     }
31
32     @Transactional
33     public void createPost(PostDto postDto) {
34         Post post = mapFromDtoToPost(postDto);
35         postRepository.save(post);
36     }
37
38     @Transactional
39     public PostDto readSinglePost(Long id) {
40         Post post = postRepository.findById(id).orElseThrow(() -> new PostNotFoundException("For id " + id));
41         return mapFromPostToDto(post);
42     }
43
44     private PostDto mapFromPostToDto(Post post) {
45         PostDto postDto = new PostDto();
46         postDto.setId(post.getId());
47         postDto.setTitle(post.getTitle());
48         postDto.setContent(post.getContent());
49         postDto.setUsername(post.getUsername());
50         return postDto;
51     }
52
53     private Post mapFromDtoToPost(PostDto postDto) {
54         Post post = new Post();
55         post.setTitle(postDto.getTitle());
```


Auth service

```

19 public class AuthService {
20
21     @Autowired
22     private UserRepository userRepository;
23     @Autowired
24     private PasswordEncoder passwordEncoder;
25     @Autowired
26     private AuthenticationManager authenticationManager;
27     @Autowired
28     private JwtProvider jwtProvider;
29
30     public void signup(RegisterRequest registerRequest) {
31         User user = new User();
32         user.setUsername(registerRequest.getUsername());
33         user.setEmail(registerRequest.getEmail());
34         user.setPassword(encodePassword(registerRequest.getPassword()));
35
36         userRepository.save(user);
37     }
38
39     private String encodePassword(String password) {
40         return passwordEncoder.encode(password);
41     }
42
43     public AuthenticationResponse login(LoginRequest loginRequest) {
44         Authentication authenticate = authenticationManager.authenticate(new UsernamePasswordAuthenticationToken(loginRequest.getUsername(),
45             loginRequest.getPassword()));
46         SecurityContextHolder.getContext().setAuthentication(authenticate);
47         String authenticationToken = jwtProvider.generateToken(authenticate);
48         return new AuthenticationResponse(authenticationToken, loginRequest.getUsername());
49     }
50
51     public Optional<org.springframework.security.core.userdetails.User> getCurrentUser() {
52         org.springframework.security.core.userdetails.User principal = (org.springframework.security.core.userdetails.User) SecurityContextHolder.
53             getContext().getAuthentication().getPrincipal();
54         return Optional.of(principal);
55     }
56 }

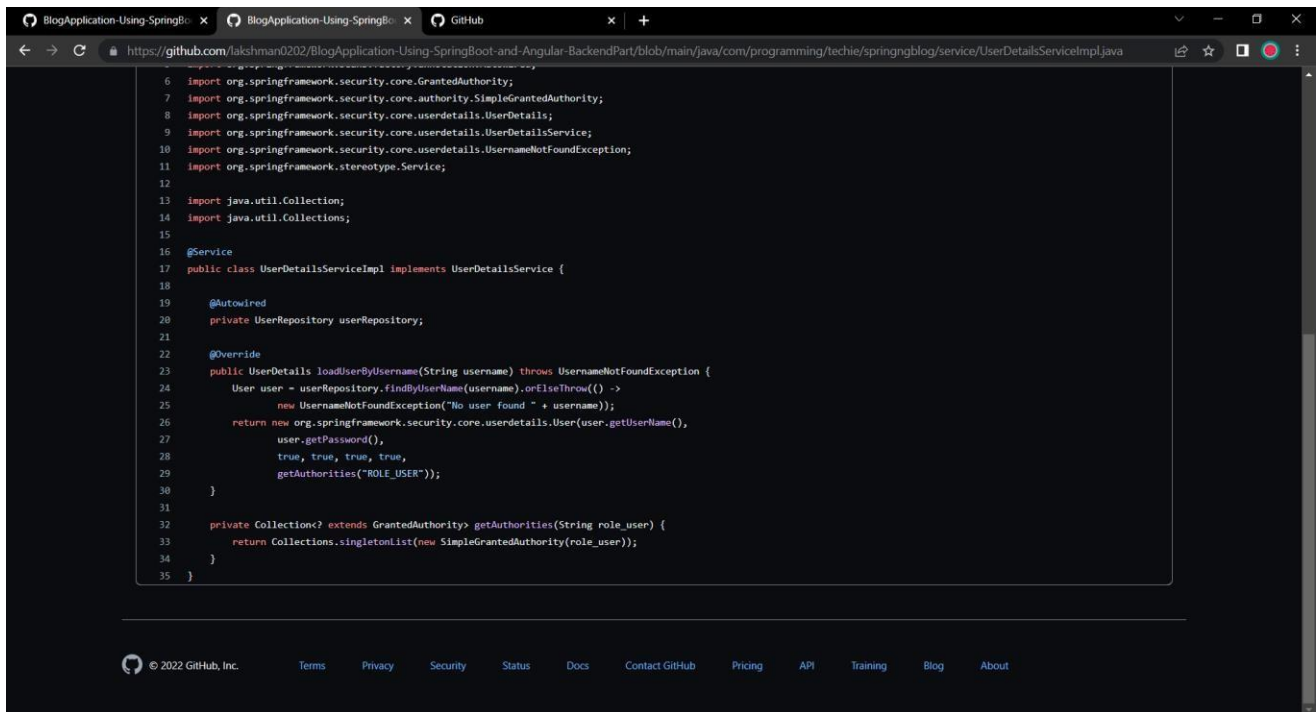
```

Authentication response

```

1 package com.programming.techie.springngblog.service;
2
3 import lombok.AllArgsConstructor;
4 import lombok.Data;
5
6 @Data
7 @AllArgsConstructor
8 public class AuthenticationResponse {
9     public AuthenticationResponse(String authenticationToken2, String username2) {
10         // TODO Auto-generated constructor stub
11     }
12     @SuppressWarnings("unused")
13     private String authenticationToken;
14     @SuppressWarnings("unused")
15     private String username;
16 }

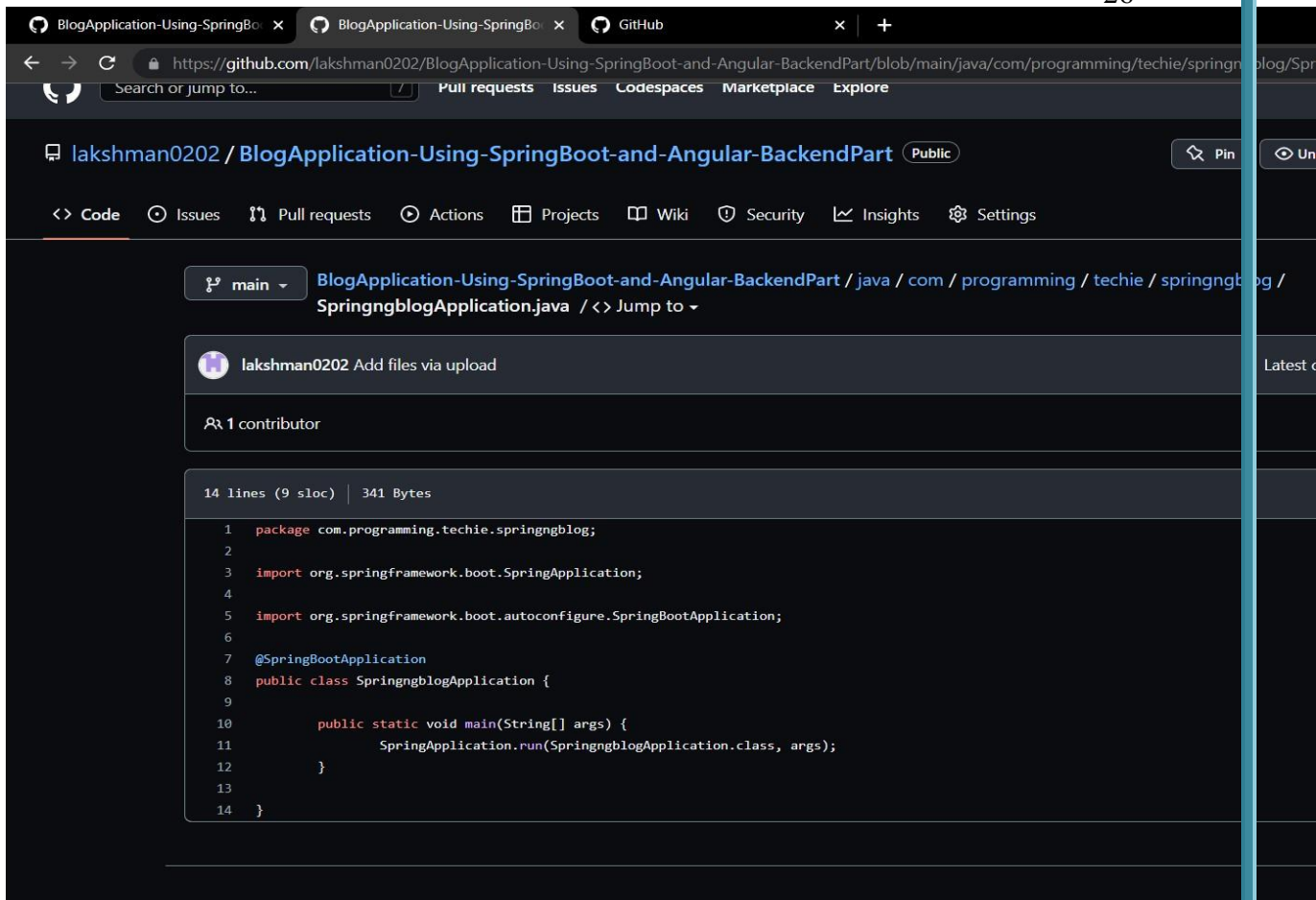
```



The screenshot shows a web browser window with three tabs: 'BlogApplication-Using-SpringBo...', 'BlogApplication-Using-SpringBo...', and 'GitHub'. The address bar displays the URL: <https://github.com/lakshman0202/BlogApplication-Using-SpringBoot-and-Angular-BackendPart/blob/main/java/com/programming/techie/springngblog/service/UserDetailsServiceImpl.java>. The main content area displays the source code for the `UserDetailsServiceImpl` class, which implements the `UserDetailsService` interface. The code includes imports for Spring Security and Java utility classes, and defines two methods: `loadUserByUsername` and `getAuthorities`.

```
6 import org.springframework.security.core.GrantedAuthority;
7 import org.springframework.security.core.authority.SimpleGrantedAuthority;
8 import org.springframework.security.core.userdetails.UserDetails;
9 import org.springframework.security.core.userdetails.UserDetailsService;
10 import org.springframework.security.core.userdetails.UsernameNotFoundException;
11 import org.springframework.stereotype.Service;
12
13 import java.util.Collection;
14 import java.util.Collections;
15
16 @Service
17 public class UserDetailsServiceImpl implements UserDetailsService {
18
19     @Autowired
20     private UserRepository userRepository;
21
22     @Override
23     public UserDetails loadUserByUsername(String username) throws UsernameNotFoundException {
24         User user = userRepository.findByUsername(username).orElseThrow(() ->
25             new UsernameNotFoundException("No user found " + username));
26         return new org.springframework.security.core.userdetails.User(user.getUsername(),
27             user.getPassword(),
28             true, true, true, true,
29             getAuthorities("ROLE_USER"));
30     }
31
32     private Collection<? extends GrantedAuthority> getAuthorities(String role_user) {
33         return Collections.singletonList(new SimpleGrantedAuthority(role_user));
34     }
35 }
```

At the bottom of the page, there is a footer with the GitHub logo, copyright notice '© 2022 GitHub, Inc.', and a series of links: Terms, Privacy, Security, Status, Docs, Contact GitHub, Pricing, API, Training, Blog, and About.



BlogApplication-Using-SpringBo x BlogApplication-Using-SpringBo x GitHub x +

https://github.com/lakshman0202/BlogApplication-Using-SpringBoot-and-Angular-BackendPart/blob/main/java/com/programming/techie/springngblog/SpringngblogApplication.java / Pull requests Issues Codespaces Marketplace Explore

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1 contributor

14 lines (9 sloc) | 341 Bytes

```
1 package com.programming.techie.springngblog;
2
3 import org.springframework.boot.SpringApplication;
4
5 import org.springframework.boot.autoconfigure.SpringBootApplication;
6
7 @SpringBootApplication
8 public class SpringngblogApplication {
9
10     public static void main(String[] args) {
11         SpringApplication.run(SpringngblogApplication.class, args);
12     }
13
14 }
```

FRONTEND PART USING ANGULAR

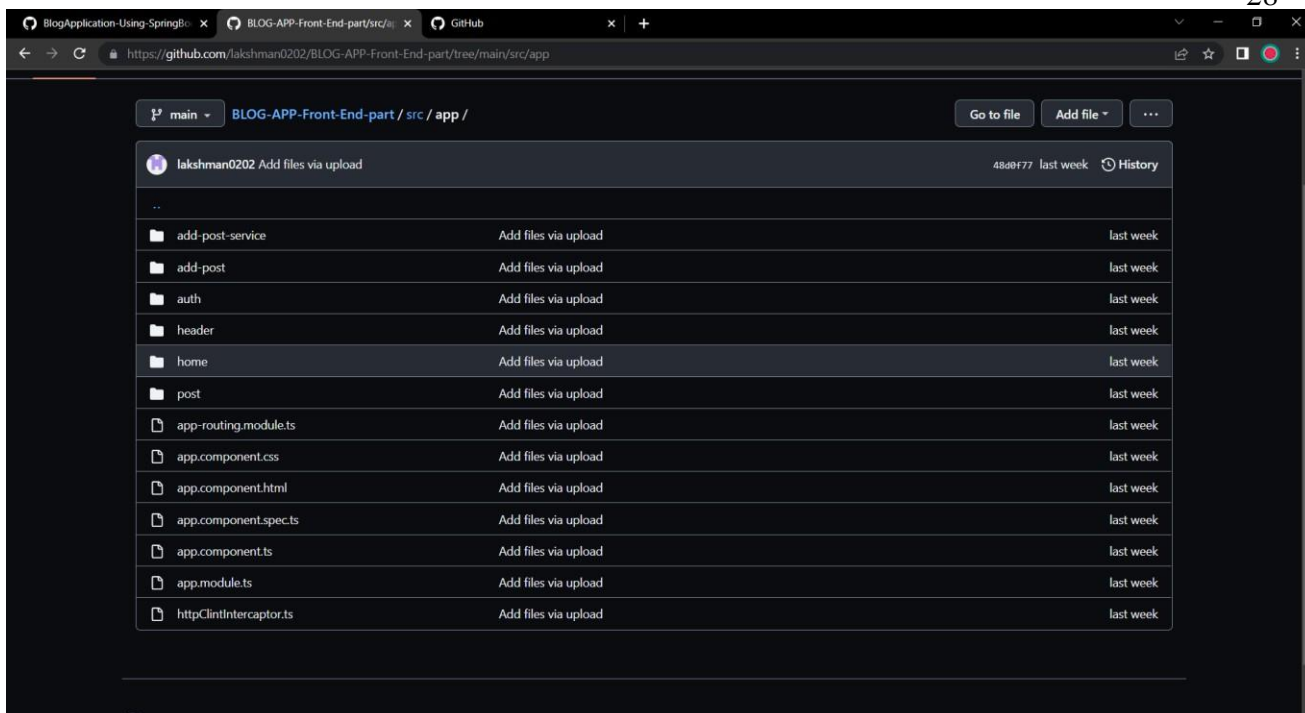
This is the project structure for my front end part. I have implemented the technologies using HTML, CSS, Angular in this part.

Let's see the details Screenshots one by one..I have attached in the pages below



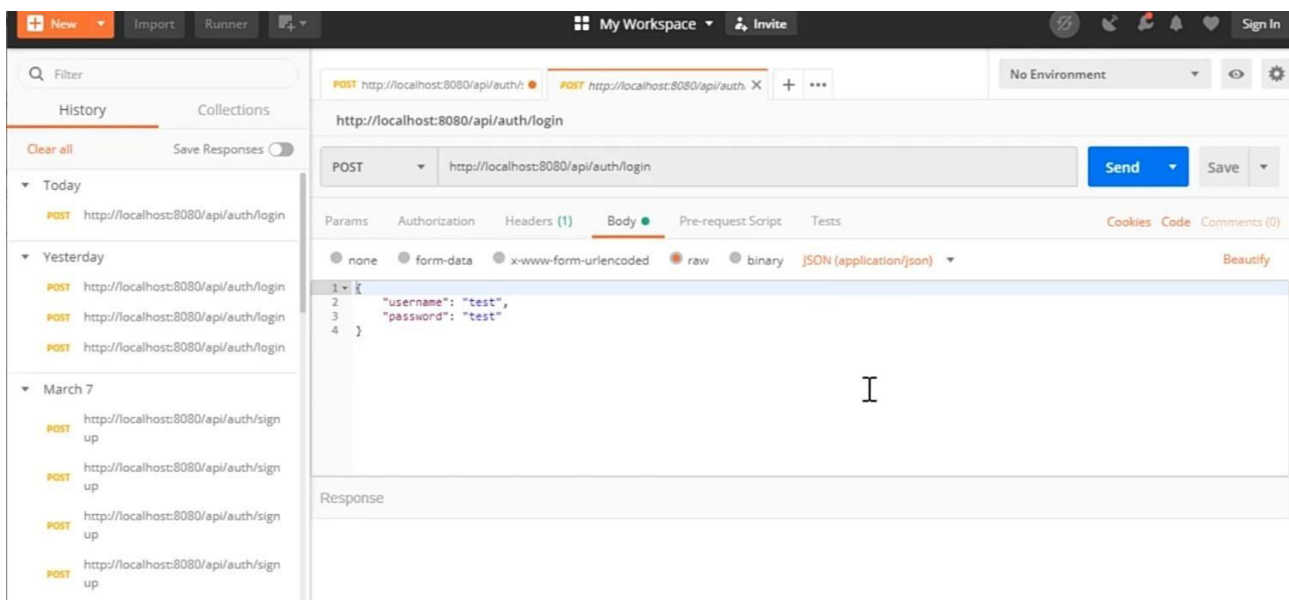
Package structure

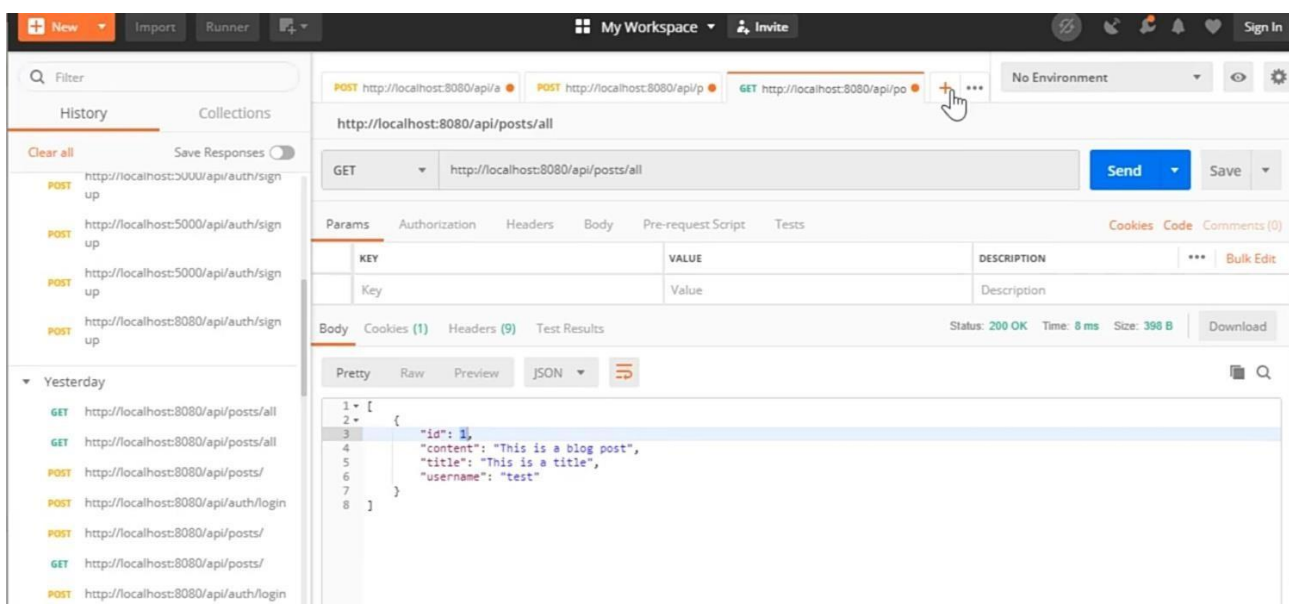
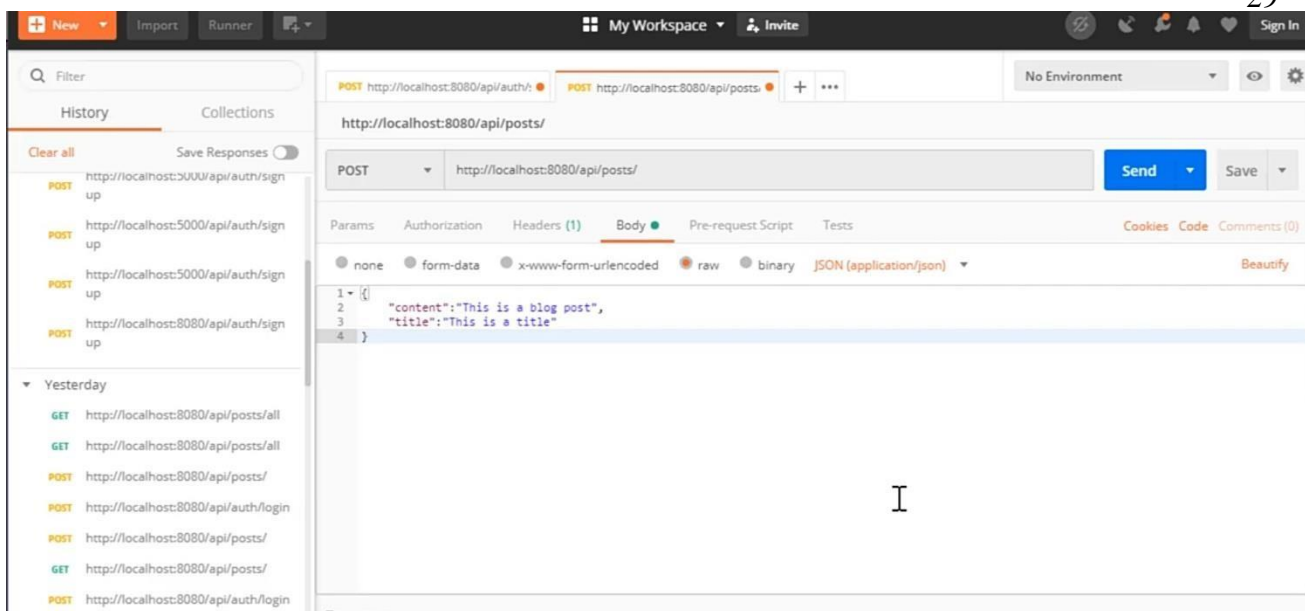
Let's see my structure of the project in the screenshot below

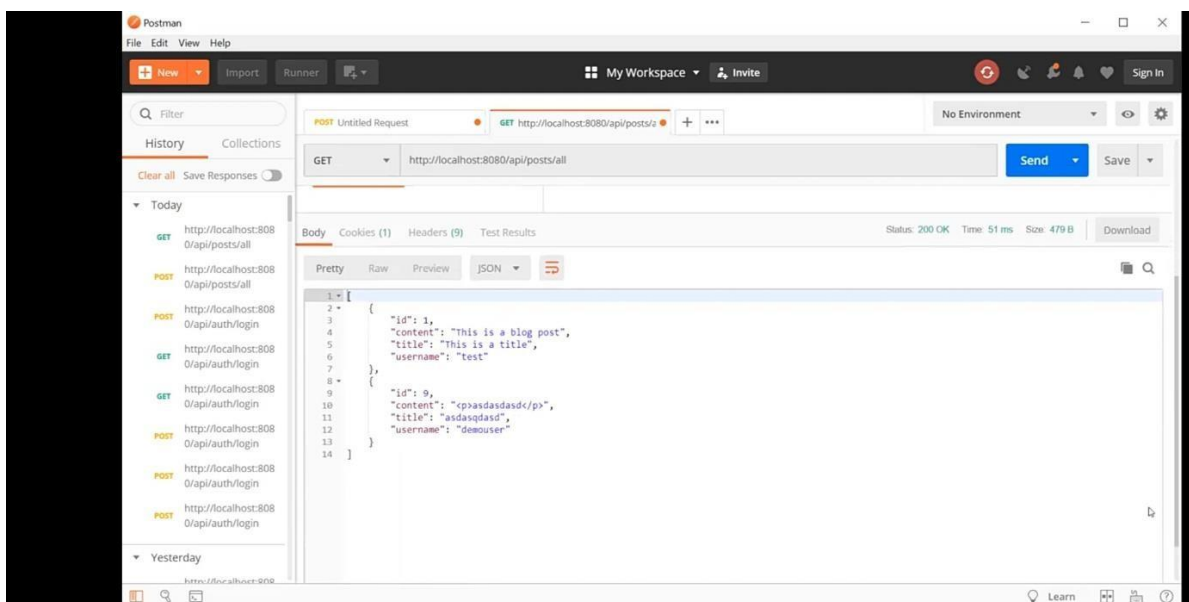
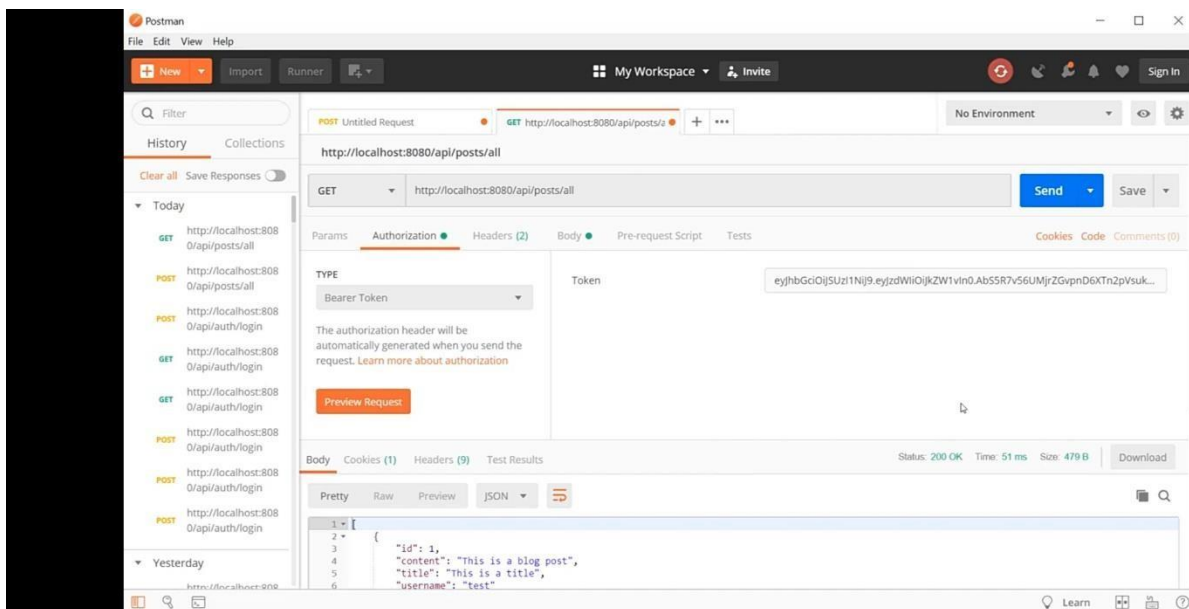


Blog system screenshots

API Testing using postman







Spring Blog

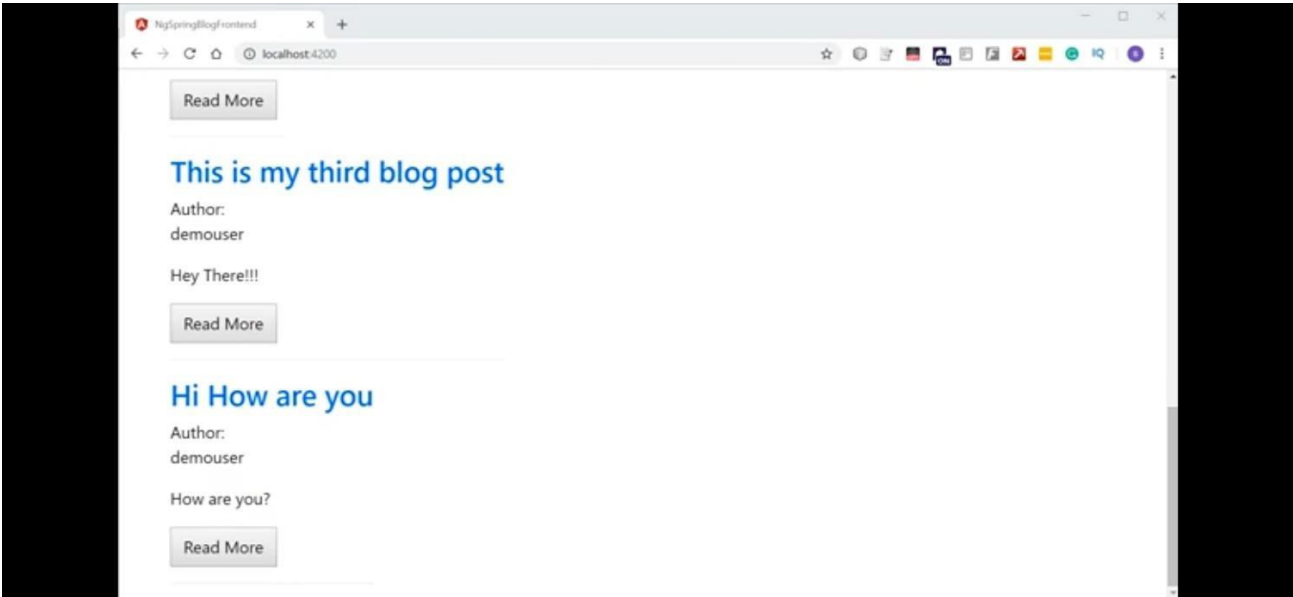
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Please Register

Spring Blog

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Register successful, click [here](#) to Login



Conclusion

Spring and Spring Boot are powerful tools in developing web applications. With the integrated Object Relational Mapping tools such as Hibernate web applications are developed not only faster but easier. Applications developed with Spring Boot and Hibernate are robust, loosely coupled and easy to use.

The objective of this project is to learn, understand the working of Spring Boot and Hibernate and implement a 'Personal Blog' integrating these two frameworks. The blog can be used to write and post articles, pictures and codes by the administrator. The blog also allows general users to read and comment on the passages.

