"Link Mingle"

Project By:

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ABSTRACT

Innovative Blogging Application for Engaging Content Creation and Community Interaction.In the digital age, blogging has become a prominent means of communication and self-expression, enabling individuals and businesses to ideas, stories, and expertise with alobal audience. The project "Innovative Blogging Application for Engaging Content Creation and Community Interaction" aims to develop cutting-edge blogging platform that revolutionizes the way users create, share, and engage with content. Our application will offer a interface with intuitive user-friendly the content creation designed to streamline simple text-based process. From blogs multimedia-rich content, users will have the flexibility to express themselves diverse in formats. The application will prioritize interactive engaging user experience, and promoting meaningful discussions and fostering a sense of community among bloggers.

ACKNOWLEDGEMENT

We express our heartfelt gratitude to all individuals and organizations who contributed to the successful completion of the "Innovative Blogging Application for Engaging Content Creation and Community Interaction" project. Their invaluable support, expertise, and dedication were instrumental in turning this concept into a functional and user-friendly application.

DECLARATION

we here by declaring that the project entitled,"Link Mingle"has not been any case duplicated to submit to any other university for the award of any degree. To the best of my knowledge other than me, no one has submitted to any other university.

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INTRODUCTION

In the dynamic realm of the digital era, blogging stands as a powerful medium for self-expression, knowledge sharing, and community engagement. As the popularity of blogging continues to soar, the need for an innovative, user-centric platform has never been more apparent. Our project, the "Innovative Blogging Application for Engaging Content Creation and Community Interaction," strives to fulfill this need by reimagining the blogging experience for both creators and readers.

In this age of information overload, where attention spans are fleeting, our application is designed to captivate and empower users in the world of blogging. We have embarked on a journey to create a platform that seamlessly blends intuitive design with cutting-edge features, ensuring a vibrant and enriching environment for content creators and consumers alike. Our blogging application aims to provide an unparalleled user experience by focusing on several key aspects:

Simplified Content Creation: We understand the importance of an intuitive and user-friendly interface for content creation. Our application offers diverse creation tools, allowing users to express themselves through text, images, videos, and interactive media effortlessly.

Community Engagement: We believe that blogging should be a collaborative and interactive experience. Our platform encourages meaningful discussions, facilitates collaboration, and fosters a sense of community among bloggers, amplifying the impact of their ideas and stories.

Personalized Discovery: Recognizing that every user is unique, we

prioritize personalization in content discovery. Our advanced algorithms recommend tailored content to each user, ensuring they discover blogs that resonate with their interests and preferences.

Features & functionality of the Link Mingle.

- User Registration and Profiles:
- Feature: Users can create accounts to access the application, customize profiles, and manage their personal information.
- . Functionality: Allows users to personalize their profiles, display expertise, interests, and past blog posts, fostering a sense of identity within the community.
 - Content Creation and Editing:
- Feature: Users can create, edit, and publish various types of content, including text, images, videos, and interactive media.
- Functionality: Provides an intuitive editor with formatting tools, media embedding, and real-time previews, making content creation a seamless and enjoyable process.

Interactive Comments and Discussions:

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- Feature: Readers can comment on blog posts, facilitating engagement and interaction.
- . Functionality: Allows threaded comments, likes, and replies to encourage meaningful discussions and connections between bloggers and readers.

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Content Discovery and Recommendations:

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- Feature: Users receive personalized content recommendations based on their preferences, reading history, and interactions.
- Functionality: Utilizes algorithms to analyze user behavior and suggest related content, enhancing the user's browsing experience and exposure to new blogs.

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Search and Filtering:

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- Feature: Users can search for specific blogs, topics, or authors within the application.
- Functionality: Provides a robust search engine with filters (e.g., date, popularity, category) to help users quickly find the content they're interested in.

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Collaborative Blogging:

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- Feature: Allows multiple users to collaborate on a single blog post.
- . Functionality: Enables real-time editing, version control, and attribution to different contributors, promoting teamwork and diverse perspectives.

Used Tools and Technologies

Technology/Domain: Java

Front-End: Html, CSS, Database SQl,Angular.

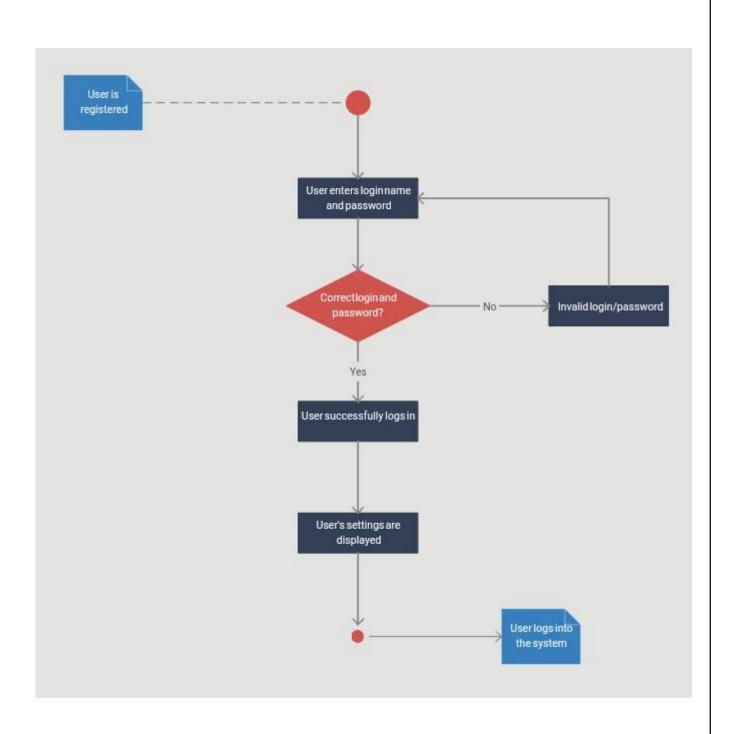
Back-end: Java, Spring Boot

DATABASE DESIGN

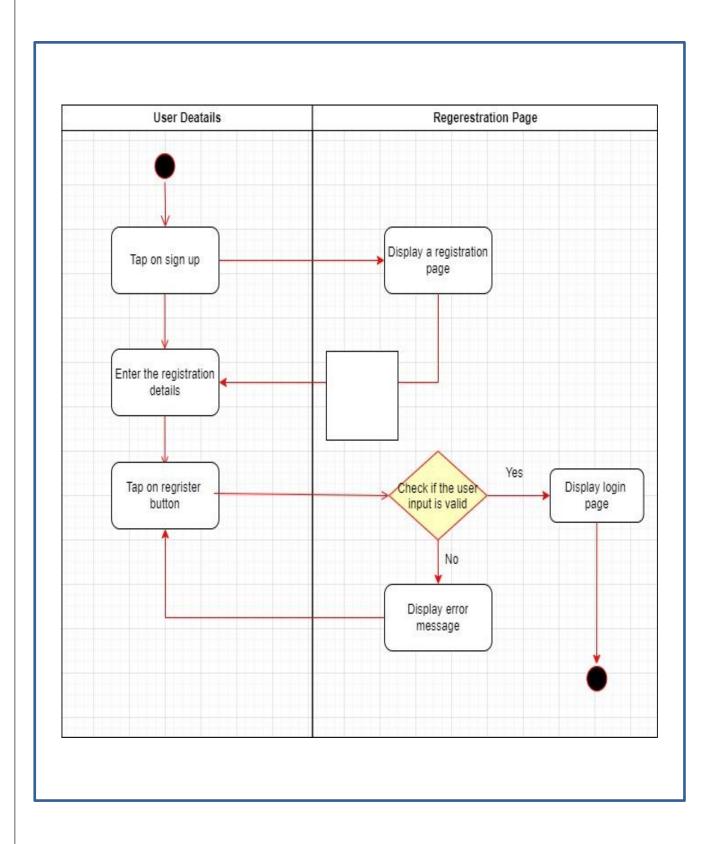
We use MYSQL database for this project total table.we describe the function of each table belo:

DIAGRAMS FOR Link Mingle PROJECT

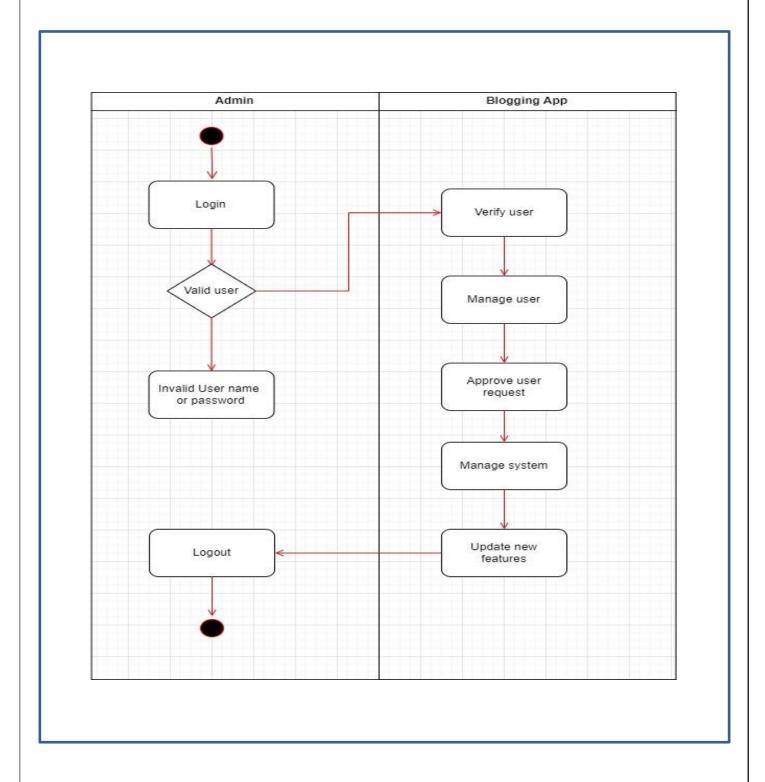
LOGIN ACTIVITY DIAGRAM:



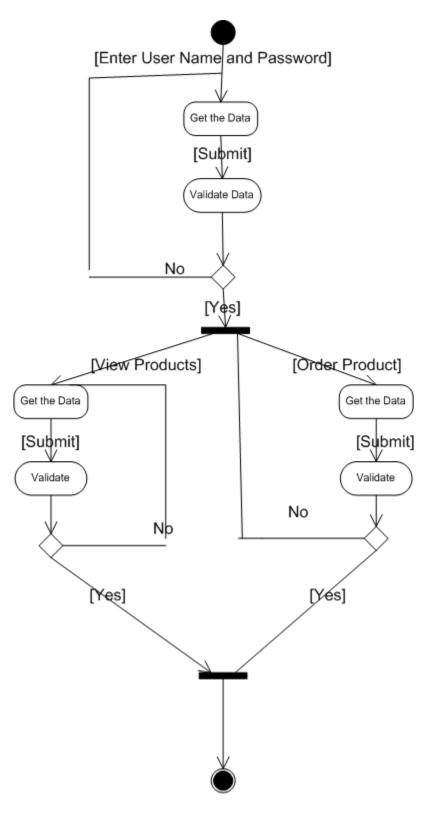
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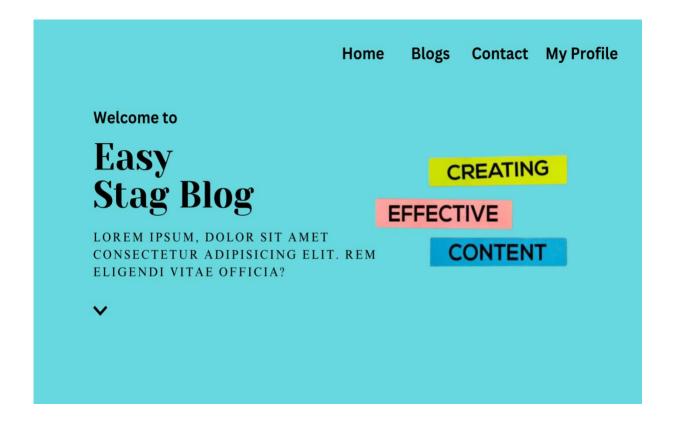
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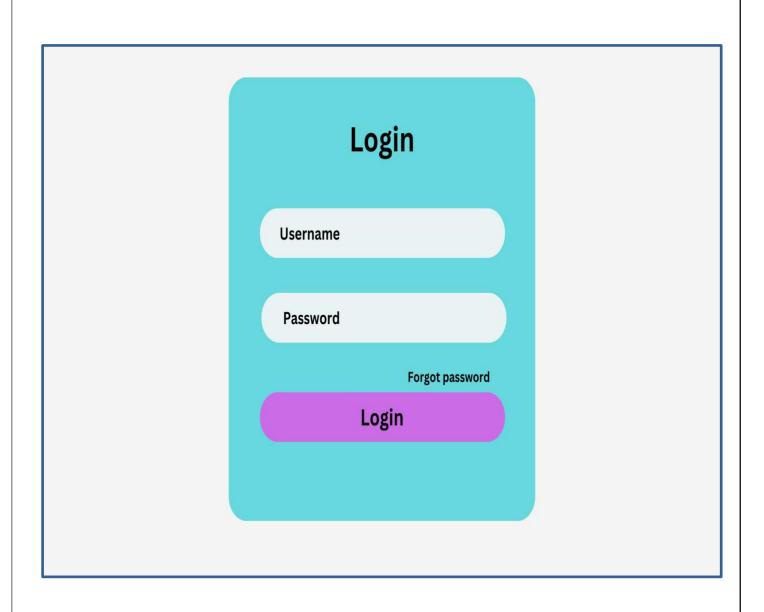


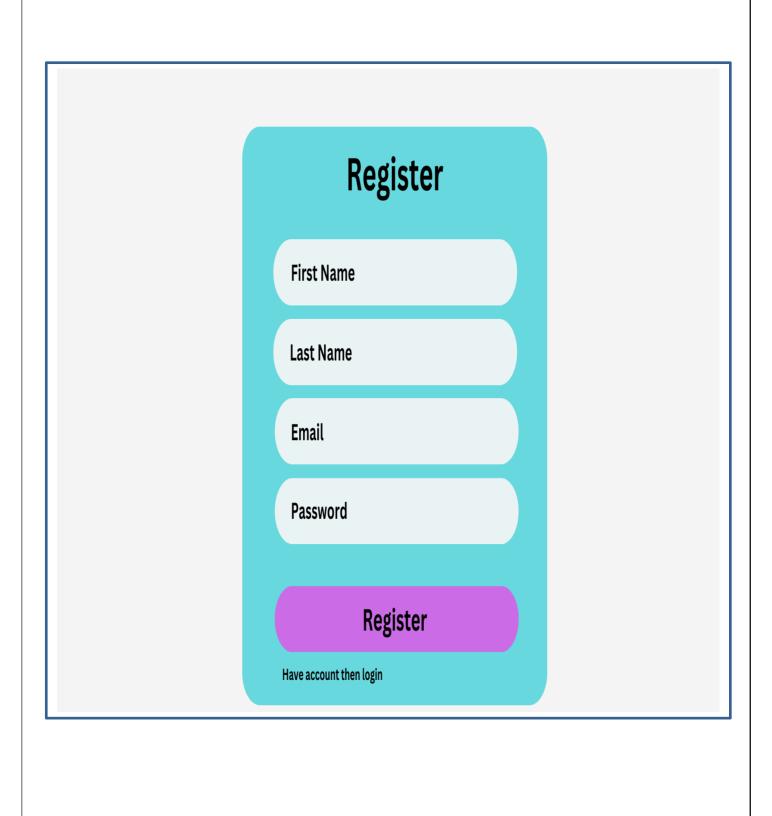
USER ACTIVITY DIAGRAM:

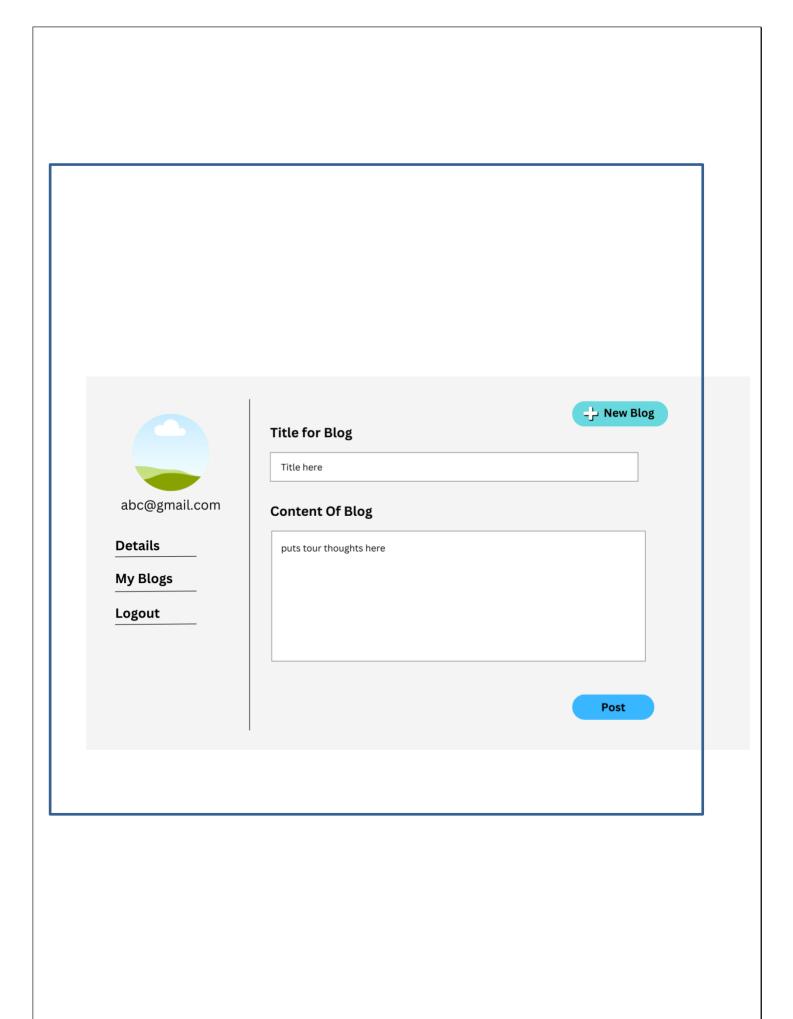


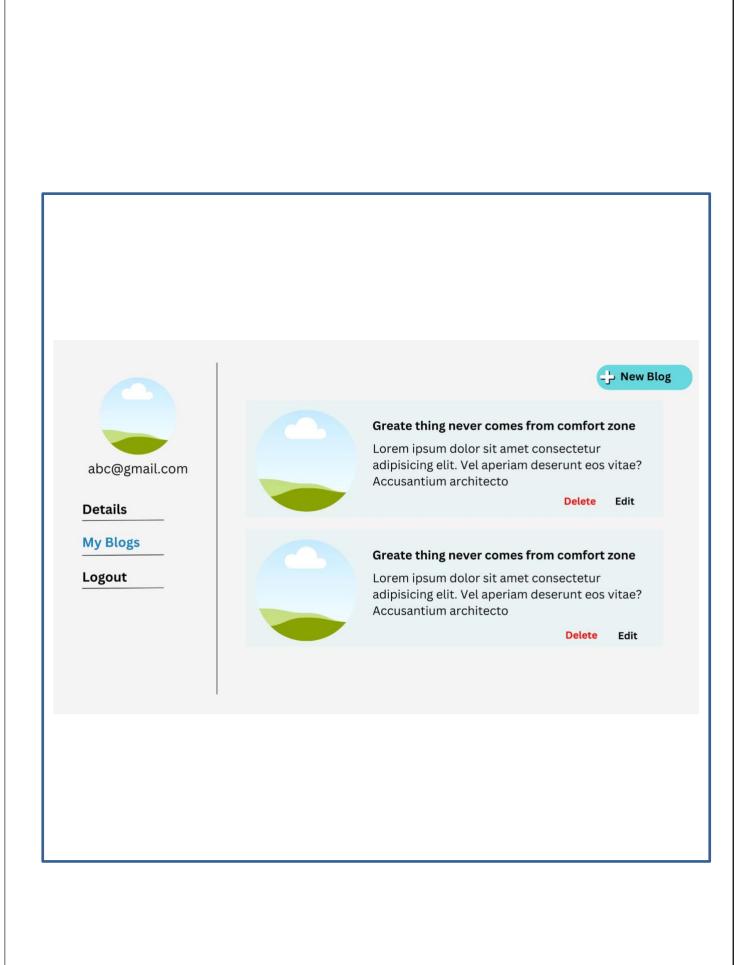
DESIGN AND IMPLEMENTATION Of Link Mingle:

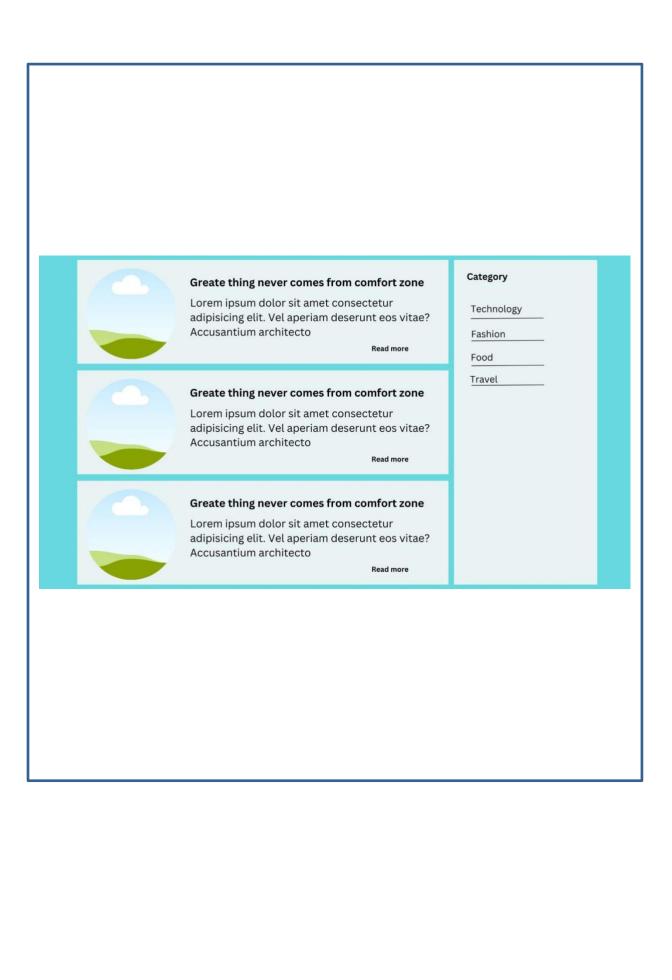












```
Source code:
Backend:
package com.example.Blog;
import org.modelmapper.ModelMapper;
import org.springframework.boot.SpringApplication;
import org.springframework.boot.autoconfigure.SpringBootApplication;
import org.springframework.context.annotation.Bean;
@SpringBootApplication
public class BlogBackendApplication {
     public static void main(String[] args) {
            SpringApplication.run(BlogBackendApplication.class, args);
      @Bean
      public ModelMapper modelMapper() {
           return new ModelMapper();
Controller:
package com.example.Blog.controller;
import java.util.List;
import javax.validation.Valid;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.http.HttpStatus;
import org.springframework.http.ResponseEntity;
import org.springframework.web.bind.annotation.DeleteMapping;
import org.springframework.web.bind.annotation.GetMapping;
import org.springframework.web.bind.annotation.PathVariable;
import org.springframework.web.bind.annotation.PostMapping;
import org.springframework.web.bind.annotation.PutMapping;
import org.springframework.web.bind.annotation.RequestBody;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RestController;
```

import com.example.Blog.playloads.ApiResponse;

```
import com.example.Blog.playloads.CategoryDto;
import com.example.Blog.service.CategoryService;
@RestController
@RequestMapping("/api/category")
public class CategoryController {
      @Autowired
      private CategoryService categoryService;
      @PostMapping("/")
     public ResponseEntity<CategoryDto> createCategory(@Valid @RequestBody
CategoryDto categoryDto){
           CategoryDto createCategoryDto
=this.categoryService.createcategory(categoryDto);
            return new ResponseEntity<CategoryDto>(
createCategoryDto,HttpStatus.CREATED);
      @GetMapping("/")
      public ResponseEntity<List<CategoryDto>> getAllCategories(){
           return ResponseEntity.ok(this.categoryService.getAllCategories());
      @GetMapping("/{categoryId}")
      public ResponseEntity<CategoryDto> getCategoryById(@PathVariable Long
categoryId){
ResponseEntity.ok(this.categoryService.getCategoryById(categoryId));
      @PutMapping("/{categoryId}")
      public ResponseEntity<CategoryDto> updateCategory(@Valid @RequestBody
CategoryDto categoryDto,@PathVariable Long categoryId){
ResponseEntity.ok(this.categoryService.updateCategory(categoryDto, categoryId));
      @DeleteMapping("/{categoryId}")
     public ResponseEntity<ApiResponse> deleteCategory(@PathVariable Long
categoryId){
```

```
this.categoryService.deleteCategory(categoryId);
           return new ResponseEntity<ApiResponse>(new ApiResponse("Category
Deleted successfully",true),HttpStatus.OK);
//Comment:
package com.example.Blog.controller;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.http.HttpStatus;
import org.springframework.http.ResponseEntity;
import org.springframework.web.bind.annotation.DeleteMapping;
import org.springframework.web.bind.annotation.PathVariable;
import org.springframework.web.bind.annotation.PostMapping;
import org.springframework.web.bind.annotation.RequestBody;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RestController;
import com.example.Blog.model.Comment;
import com.example.Blog.playloads.ApiResponse;
import com.example.Blog.playloads.CommentDto;
import com.example.Blog.service.CommentService;
@RestController
@RequestMapping("/api")
public class CommentController {
      @Autowired
     private CommentService commentService;
      @PostMapping("/post/{postId}/comment/user/{userId}")
     public ResponseEntity<CommentDto>createComment(@RequestBody
CommentDto,@PathVariable Long postId,@PathVariable Long userId ){
           CommentDto
commentDto2=this.commentService.createComment(commentDto, postId,userId);
           return new ResponseEntity<CommentDto>(commentDto2,HttpStatus.OK);
      }
      @DeleteMapping("/comment/{commentId}")
     public ResponseEntity<ApiResponse> deleteComment(@PathVariable Long
commentId){
```

```
this.commentService.deleteComment(commentId);
            return new ResponseEntity<ApiResponse>(new ApiResponse("Comment
Deleted successfully",true),HttpStatus.OK);
//PostContrroler:
package com.example.Blog.controller;
import java.io.IOException;
import java.io.InputStream;
import java.util.List;
import javax.servlet.http.HttpServletResponse;
import javax.validation.Valid;
import org.hibernate.engine.jdbc.StreamUtils;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.beans.factory.annotation.Value;
import org.springframework.http.HttpStatus;
import org.springframework.http.MediaType;
import org.springframework.http.ResponseEntity;
import org.springframework.web.bind.annotation.DeleteMapping;
import org.springframework.web.bind.annotation.GetMapping;
import org.springframework.web.bind.annotation.PathVariable;
import org.springframework.web.bind.annotation.PostMapping;
import org.springframework.web.bind.annotation.PutMapping;
import org.springframework.web.bind.annotation.RequestBody;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RequestParam;
import org.springframework.web.bind.annotation.RestController;
import org.springframework.web.multipart.MultipartFile;
import com.example.Blog.model.Post;
import com.example.Blog.playloads.ApiResponse;
import com.example.Blog.playloads.CategoryDto;
import com.example.Blog.playloads.FileResponse;
import com.example.Blog.playloads.PostDto;
import com.example.Blog.playloads.PostResponse;
import com.example.Blog.service.FileService;
import com.example.Blog.service.PostService;
import com.example.Blog.utils.Constants;
```

@RestController

```
@RequestMapping("/api/post")
public class PostController {
      @Autowired
      private PostService postService;
      @Autowired
      private FileService fileService;
      @Value("${project.image}")
      private String path;
      @PostMapping("/category/{categoryId}/user/{userId}")
      public ResponseEntity<PostDto> createPost(@RequestBody PostDto postDto,
@PathVariable Long categoryId,
                  @PathVariable Long userId) {
            PostDto createPost = this.postService.createPost(postDto, categoryId,
userId);
            return new ResponseEntity<PostDto>(createPost, HttpStatus.CREATED);
      }
      @GetMapping("/")
      public ResponseEntity<PostResponse> getAllPosts(
                  @RequestParam(value = "pageNumber", defaultValue =
Constants.PAGE_NUMBER, required = false) Integer pageNumber,
                  @RequestParam(value = "pageSize", defaultValue =
Constants.PAGE_SIZE, required = false) Integer pageSize,
                  @RequestParam(value = "sortBy", defaultValue =
Constants.SORT_BY, required = false) String sortBy,
                  @RequestParam(value = "sortDir", defaultValue =
Constants.SORT_DIR, required = false) String sortDir) {
            PostResponse postResponse = this.postService.getAllPosts(pageNumber,
pageSize, sortBy, sortDir);
            return new ResponseEntity<PostResponse>(postResponse, HttpStatus.OK);
      }
      @GetMapping("/{postId}")
      public ResponseEntity<PostDto> getByPostId(@PathVariable Long postId) {
            PostDto postDto = this.postService.getPostById(postId);
            return new ResponseEntity<PostDto>(postDto, HttpStatus.OK);
      }
```

```
// getPostsByCategory
      @GetMapping("/category/{categoryId}")
      public ResponseEntity<List<PostDto>> getPostByCategory(@PathVariable Long
categoryId) {
            List<PostDto> postDtos = this.postService.getPostByCategory(categoryId);
            return new ResponseEntity<List<PostDto>>(postDtos, HttpStatus.OK);
      }
      // getPostsByUser
      @GetMapping("/user/{userId}")
      public ResponseEntity<List<PostDto>> getPostByUser(@PathVariable Long
userId) {
            List<PostDto> postDtos = this.postService.getPostByUser(userId);
            return new ResponseEntity<List<PostDto>>(postDtos, HttpStatus.OK);
      }
      @DeleteMapping("{postId}")
      public ApiResponse deletePost(@PathVariable Long postId) {
            this.postService.deletePost(postId);
            return new ApiResponse("Post is deleted successfully", true);
      }
      @PutMapping("{postId}")
      public ResponseEntity<PostDto> updatePost(@RequestBody PostDto postDto,
@PathVariable Long postId) {
            PostDto updatedPost = this.postService.updatepost(postDto, postId);
            return new ResponseEntity<PostDto>(updatedPost, HttpStatus.OK);
      }
      @GetMapping("/search/{title}")
      public ResponseEntity<List<PostDto>> searchByTitle(@PathVariable("title")
String title) {
            List<PostDto> postDto = this.postService.searchPost(title);
            return new ResponseEntity<List<PostDto>>(postDto, HttpStatus.OK);
      }
      // image upload
      @PostMapping("/file/upload/{postId}")
```

```
public ResponseEntity<PostDto> uploadFile(@RequestParam("file")
MultipartFile file, @PathVariable Long postId)
                  throws IOException {
            PostDto postDto = this.postService.getPostById(postId);
            String fileName = this.fileService.uploadFile(path, file);
            postDto.setImageName(fileName);
            PostDto updatePost = this.postService.updatepost(postDto, postId);
            return new ResponseEntity<PostDto>(updatePost, HttpStatus.OK);
      }
      @GetMapping(value = "/file/{fileName}",produces =
MediaType.IMAGE_JPEG_VALUE)
  public void downloadFile(@PathVariable("fileName") String fileName,
HttpServletResponse response) throws IOException {
    InputStream resource = this.fileService.getResource(path, fileName);
    response.setContentType(MediaType.IMAGE_JPEG_VALUE);
    StreamUtils.copy(resource,response.getOutputStream());
  }
//UserController
package com.example.Blog.controller;
import java.util.List;
import javax.validation.Valid;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.http.HttpStatus;
import org.springframework.http.ResponseEntity;
import org.springframework.web.bind.annotation.DeleteMapping;
import org.springframework.web.bind.annotation.GetMapping;
import org.springframework.web.bind.annotation.PathVariable;
import org.springframework.web.bind.annotation.PostMapping;
import org.springframework.web.bind.annotation.PutMapping;
import org.springframework.web.bind.annotation.RequestBody;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RestController;
import com.example.Blog.playloads.ApiResponse;
```

```
import com.example.Blog.playloads.UserDto;
import com.example.Blog.service.UserService;
@RestController
@RequestMapping("/api/users")
public class UserController {
      @Autowired
      private UserService userService;
      @PostMapping("/")
     public ResponseEntity<UserDto> createUser(@Valid @RequestBody UserDto
userDto){
            UserDto createUserDto=this.userService.createUser(userDto);
           return new ResponseEntity<>(createUserDto,HttpStatus.CREATED);
      }
      @GetMapping("/")
      public ResponseEntity<List<UserDto>> getAllUsers(){
            return ResponseEntity.ok(this.userService.getAllUsers());
      @GetMapping("/{userId}")
      public ResponseEntity<UserDto> getUserbyId(@PathVariable Long userId){
            return ResponseEntity.ok(this.userService.getUserById(userId));
      @PutMapping("/{userId}")
      public ResponseEntity<UserDto> updateUser(@Valid @RequestBody UserDto
userDto,@PathVariable("userId") Long userId){
            UserDto updatUserDto=this.userService.updateUser(userDto, userId);
            return ResponseEntity.ok(updatUserDto);
      }
      @DeleteMapping("/{userId}")
      public ResponseEntity<ApiResponse> deleteUserbyId(@PathVariable Long
userId){
            this.userService.deleteUser(userId);
            return new ResponseEntity<ApiResponse>(new ApiResponse("user
deleted successfully",true),HttpStatus.OK);
```

```
}
}
//CategoryRepository:
package com.example.Blog.controller;
import java.util.List;
import javax.validation.Valid;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.http.HttpStatus;
import org.springframework.http.ResponseEntity;
import org.springframework.web.bind.annotation.DeleteMapping;
import org.springframework.web.bind.annotation.GetMapping;
import org.springframework.web.bind.annotation.PathVariable;
import org.springframework.web.bind.annotation.PostMapping;
import org.springframework.web.bind.annotation.PutMapping;
import org.springframework.web.bind.annotation.RequestBody;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RestController;
import com.example.Blog.playloads.ApiResponse;
import com.example.Blog.playloads.UserDto;
import com.example.Blog.service.UserService;
@RestController
@RequestMapping("/api/users")
public class UserController {
      @Autowired
      private UserService userService;
      @PostMapping("/")
      public ResponseEntity<UserDto> createUser(@Valid @RequestBody UserDto
userDto){
            UserDto createUserDto=this.userService.createUser(userDto);
           return new ResponseEntity<>(createUserDto,HttpStatus.CREATED);
      }
      @GetMapping("/")
      public ResponseEntity<List<UserDto>> getAllUsers(){
```

```
return ResponseEntity.ok(this.userService.getAllUsers());
      }
      @GetMapping("/{userId}")
      public ResponseEntity<UserDto> getUserbyId(@PathVariable Long userId){
            return ResponseEntity.ok(this.userService.getUserById(userId));
      @PutMapping("/{userId}")
      public ResponseEntity<UserDto> updateUser(@Valid @RequestBody UserDto
userDto,@PathVariable("userId") Long userId){
            UserDto updatUserDto=this.userService.updateUser(userDto, userId);
            return ResponseEntity.ok(updatUserDto);
      @DeleteMapping("/{userId}")
      public ResponseEntity<ApiResponse> deleteUserbyId(@PathVariable Long
userId){
            this.userService.deleteUser(userId);
            return new ResponseEntity<ApiResponse>(new ApiResponse("user
deleted successfully",true),HttpStatus.OK);
}
//CommenntryRepository:
package com.example.Blog.repository;
import org.springframework.data.jpa.repository.JpaRepository;
import org.springframework.stereotype.Repository;
import com.example.Blog.model.Comment;
@Repository
public interface CommentRepository extends JpaRepository Comment, Long> {
}
//PostRepository:
package com.example.Blog.repository;
import java.util.List;
import org.springframework.data.jpa.repository.JpaRepository;
import org.springframework.data.jpa.repository.Query;
```

```
import org.springframework.data.repository.query.Param;
import org.springframework.stereotype.Repository;
import com.example.Blog.model.Category;
import com.example.Blog.model.Post;
import com.example.Blog.model.User;
@Repository
public interface PostRepository extends JpaRepository<Post, Long> {
     List<Post> findAllByUser(User user);
      List<Post> findAllByCategory(Category category);
      @Query("select p from Post p where p.title like :key")
      List<Post> searchByTitle(@Param("key") String title);
//UserRepository:
package com.example.Blog.repository;
import org.springframework.data.jpa.repository.JpaRepository;
import org.springframework.stereotype.Repository;
import com.example.Blog.model.User;
@Repository
public interface UserRepository extends JpaRepository<User, Long> {
}
//CategoryService:
package com.example.Blog.service;
import java.util.List;
import com.example.Blog.playloads.CategoryDto;
public interface CategoryService {
      public CategoryDto createcategory(CategoryDto categoryDto);
      public List<CategoryDto> getAllCategories();
      public CategoryDto getCategoryById(Long categoryId);
```

```
public CategoryDto updateCategory(CategoryDto categoryDto, Long categoryId);
     public void deleteCategory(Long categoryId);
//CommentService:
package com.example.Blog.service;
import com.example.Blog.playloads.CommentDto;
public interface CommentService {
     CommentDto createComment(CommentDto commentDto,Long postId,Long
userId);
      void deleteComment(Long commentId);
//FileService:
package com.example.Blog.service;
import java.io.FileNotFoundException;
import java.io.IOException;
import java.io.InputStream;
import org.springframework.web.multipart.MultipartFile;
public interface FileService {
      String uploadFile(String path, MultipartFile multipartFile) throws IOException;
     InputStream getResource(String path, String filename)throws
FileNotFoundException;
//PostService
package com.example.Blog.service;
import java.util.List;
import com.example.Blog.model.Post;
import com.example.Blog.playloads.CategoryDto;
import com.example.Blog.playloads.PostDto;
import com.example.Blog.playloads.PostResponse;
```

```
public interface PostService {
      PostDto createPost(PostDto postDto, Long categoryId, Long userId);
      PostResponse getAllPosts(Integer pageNumber, Integer pageSize,String
sortBy, String sortDir);
      PostDto getPostById(Long postId);
      PostDto updatepost(PostDto postDto, Long postId);
      void deletePost(Long postId);
      List<PostDto> getPostByCategory(Long categoryId);
      List<PostDto> getPostByUser(Long userid);
      List<PostDto> searchPost(String title);
}
//UserService:
package com.example.Blog.service;
import java.util.List;
import com.example.Blog.playloads.UserDto;
public interface UserService {
      UserDto createUser(UserDto user);
      UserDto getUserById(Long id);
      List<UserDto> getAllUsers();
      UserDto updateUser(UserDto user,Long id);
      void deleteUser(Long id);
}
```

CONCLUSION

In conclusion, the development of our Innovative Blogging Application marks a significant leap forward in the world of digital content creation and engagement. Through this project, we have strived to create a platform that not only simplifies the process of sharing thoughts and ideas but also fosters a vibrant and interactive community of bloggers and readers.

Our application's key features, such as effortless content creation, interactive comments, personalized user profiles, and collaborative blogging, have been meticulously designed to provide an enriching experience for both content creators and consumers. The inclusion of features like content recommendations, social media integration, and real-time notifications further enhances user engagement and extends the reach

FUTURE WORK

Advancements and Expansion to Enrich the Blogging Experience As we look ahead to the future of our blogging application, our focus remains on enhancing the user experience, expanding features, and embracing emerging technologies to keep pace with the evolving needs and preferences of the blogging community. Here's a glimpse of the future work and potential advancements we envision:

Improved Content Creation Tools:

Develop an AI-powered content creation assistant that suggests topics, optimizes content structure, and provides real-time feedback to enhance the quality and appeal of blog posts.

Advanced Media Integration:

Enable seamless integration of 3D models, animations, and virtual reality elements into blog posts, providing an immersive and interactive storytelling experience for both creators and readers.

Monetization Features:

Implement a diversified monetization ecosystem, allowing bloggers to earn revenue through advertisements, sponsorships, affiliate marketing, subscription models, and paid content offerings.

Community-driven Content Curation:

Introduce community-curated content sections, where users can collaboratively curate and highlight exceptional blog posts, fostering a sense of community and recognition among bloggers.

Enhanced User Engagement:

Integrate live streaming features, enabling bloggers to host real-time Q&A sessions, interviews, or interactive discussions with their audience, fostering engagement and fostering a closer connection with readers.

Smart Notifications and Personalized Alerts:

Implement a smart notification system that leverages machine

learning to personalize notifications based on user behavior, ensuring users receive alerts about the content most relevant to their interests.