Model Design: (Attached original pdf at the very end for better readability)

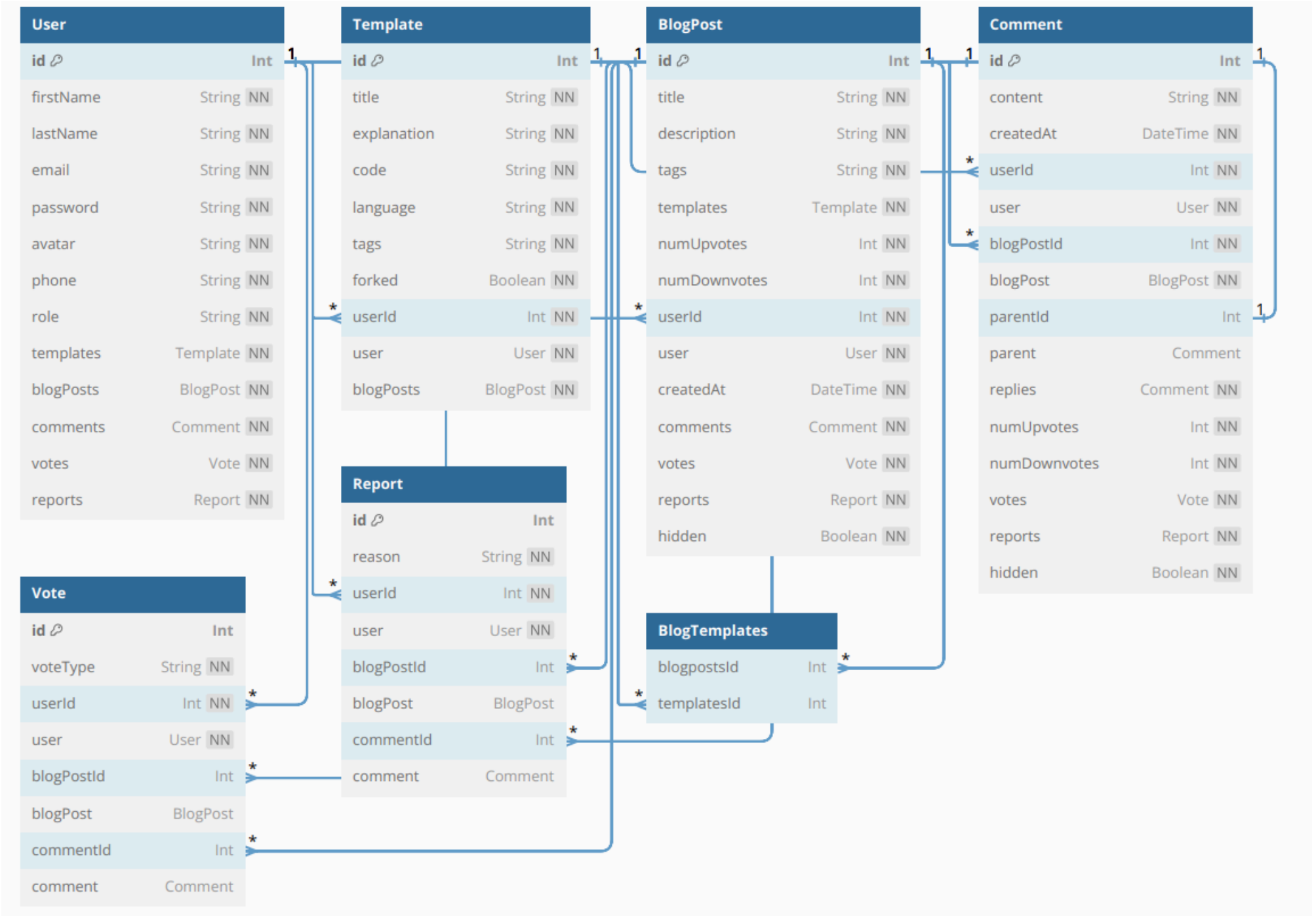


Diagram Explanations:

- **NN**: Not Nullable, meaning they cannot be empty and are required.
- Lines connecting tables represent a relationship
    - 1-1 - one-to-one relationship
    - 1:* - one-to-many (and vice versa, *:1 means many-to-one)
        - For example, 1 next to User and * next to Template means a User can have many Templates
            - A User can also have many BlogPosts, Comments, Votes, and Reports
        - A BlogPost can have many Comments, Votes, and Reports
        - A Comment can have many replies
            - parentId being not null means this Comment is a reply. The value of the parentId is the id of the comment it's replying to.
    - Many-to-Many:
        - For example, BlogPost and Template have a many-to-many relationship, represented by the BlogTemplates join table. In Prisma Schema, it looks like this:

```
model Template {
  id          Int        @id @default(autoincrement())
  title       String
  explanation String
  code        String
  language    String
  tags        String     // Comma separated
  forked      Boolean    @default(false)
  userId      Int
  user        User       @relation(fields: [userId], references: [id])
  blogPosts   BlogPost[] @relation("BlogTemplates")
}

model BlogPost {
  id           Int        @id @default(autoincrement())
  title        String
  description  String
  tags         String
  templates    Template[] @relation("BlogTemplates")
  numUpvotes   Int        @default(0)
```

        - A BlogPost can be linked to many templates, and a Template can be linked to many blog posts.

Model Explanations

User:

The User model represents a unique user in the database. This model is the primary source of user information and links to other models like templates, blog posts, comments, votes, and reports.

Fields and Types:

1. **id** - Int
    - Primary identifier for each user.
    - Uses the **@id** attribute to mark it as a primary key.
    - The **@default(autoincrement())** makes it auto-incrementing.
2. **firstName** - String
    - Stores the user's first name.
    - Required field.
3. **lastName** - String
    - Stores the user's last name.
    - Required field.
4. **email** - String
    - Stores the user's email address.
    - Marked as **@unique**, ensuring each email is distinct across all users.
5. **password** - String
    - Holds the user's password.
    - Required field and is encrypted when stored.
6. **avatar** - String
    - Stores the path of the user’s profile image.
    - Required field.
7. **phone** - String
    - Holds the user's phone number.
    - Required field.
8. **role** - String
    - Defines the user's role within the application (ADMIN or USER).
    - Required field.

Relations to Other Models:

1. **templates** - Template[]
    - Represents a one-to-many relation where a user can create multiple Template entities.
    - Each Template will reference a User as its creator.
2. **blogPosts** - BlogPost[]
    - Represents a one-to-many relation, indicating that a user can create multiple BlogPost entities.
    - Each BlogPost will be associated with a single User as the author.
3. **comments** - Comment[]
    - Represents a one-to-many relation where a user can author multiple Comment entities.
    - Each Comment will reference the User who posted it.
4. **votes** - Vote[]
    - Represents a one-to-many relation where a user can cast multiple Vote entities.

    - Each Vote will associate a User with a particular post or comment they are voting on.
5. **reports** - Report[]
    - Represents a one-to-many relation, indicating a user can submit multiple Report entities to flag inappropriate content.
    - Each Report will identify the User who submitted it.

Template:

The Template model represents code templates that users create and share on the website. Each template includes data such as the title, explanation, programming language, tags, and code. Additionally, it keeps track of whether it was forked from another template.

Fields and Types:

1. **id** - Int
    - Primary identifier for each template.
    - Uses the @id attribute to mark it as the primary key.
    - The **@default(autoincrement())** attribute auto-increments the ID.
2. **title** - String
    - The name or title of the template.
    - Required field.
3. **explanation** - String
    - Describes the template's purpose or functionality.
    - Required field.
4. **code** - String
    - Contains the actual code snippet or block.
    - Required field.
5. **language** - String
    - Defines the programming language used in the code (e.g., JavaScript, Python).
    - Required.
6. **tags** - String
    - Stores a comma-separated list of tags associated with the template.
    - A string which is separated by commas so that it can later be separated and used as an array, which is then used to search for templates based on tags.
7. **forked** - Boolean
    - Indicates whether the template was forked from another template.
    - Uses **@default(false)**, meaning templates are not considered forked by default.
8. **userId** - Int
    - Foreign key that references the id field in the User model.
    - Required field that establishes the association between a template and its creator.

Relations to Other Models:

1. **user** - User
    - Represents a many-to-one relation, linking each template to a single user who created it.
    - The **@relation(fields: [userId], references: [id])** attribute specifies that userId in this model points to the id field in the User model.

2. **blogPosts** - BlogPost[]
    - Represents a many-to-many relation with BlogPost through the BlogTemplates relation.
    - This allows each template to be referenced in multiple blog posts, enabling blog posts to highlight or explain templates.

BlogPost:

The BlogPost model represents a blog post created by a user, which can include descriptions, tags, and code templates. Other users can leave comments on blog posts, as well as rating blog posts by leaving ‘upvotes’ or ‘downvotes’, and reporting a blog post which they think is inappropriate for whatever reason.

Fields and Types:

1. **id** - Int
    - Primary identifier/key for each blog post.
    - Automatically increments.
2. **title** - String
    - Title of the blog post.
3. **description** - String
    - Allows users to provide a more detailed description of the blog post.
4. **tags** - String
    - Stores a comma-separated list of tags associated with the blog post.
5. **templates** - Template[]
    - A many-to-many relation with Template, allowing a blog post to reference multiple templates.
    - Uses the **@relation("BlogTemplates")** attribute, which defines the relationship with the Template model (described in more detail under ‘Explanations’ below the screenshot above).
6. **numUpvotes** - Int
    - Stores the number of upvotes the blog post has received.
    - The **@default(0)** initializes it with zero upvotes.
7. **numDownvotes** - Int
    - Stores the number of downvotes the blog post has received.
    - The **@default(0)** initializes it with zero upvotes.
8. **userId** - Int
    - References the id field in the User model (id of user who created the blog post).
    - Links the blog post to its creator.
9. **createdAt** - DateTime
    - When the blog post was created.
    - Uses **@default(now())** to set to the current timestamp when created.
10. **hidden** - Boolean
    - Indicates whether the blog post is hidden from the public after being reported and removed by an admin.
    - Uses **@default(false)**, making posts visible by default.

Relations to Other Models:

1. **user** - User
    - Represents a many-to-one relation, linking each blog post to the user who created it.
        i. Many-to-one since there can be several blog posts created by one user.
2. **comments** - Comment[]
    - Represents a one-to-many relation with Comment, allowing multiple comments to be associated with a single blog post.
3. **votes** - Vote[]
    - Represents a one-to-many relation with Vote, allowing users to rate a blog post by either upvoting or downvoting it.
4. **reports** - Report[]
    - Represents a one-to-many relation with Report, allowing users to report the blog post if they think it's inappropriate for whatever reason (one blog post can have many reports).

Comment:

The Comment model represents a user's comment on a blog post, with the ability to reply to existing comments, rate comments, or report comments. . Each comment is associated with a user and blog post.

Fields and Types:

1. **id** - Int
    - Primary identifier/key for each comment.
    - Automatically increments.
2. **content** - String
    - Holds the actual content of the comment.
3. **createdAt** - DateTime
    - Stores the timestamp when the comment was created.
    - Uses **@default(now())** to automatically set the current timestamp at creation.
4. **userId** - Int
    - References the id field in the User model (id of user who created the comment)
5. **blogPostId** - Int
    - References the id field in the BlogPost model, linking the comment with the blog post under which the comment is made.
6. **parentId** - Int?
    - Optional key referencing the id field in another Comment.
    - Used to establish a reply relationship, allowing comments to have a parent comment to which they're replying. If this is null, it means this comment is a 'main' comment and not a reply.
7. **numUpvotes** - Int
    - The number of upvotes the comment has received.
    - Uses **@default(0)** to initialize with zero upvotes.
8. **numDownvotes** - Int
    - The number of downvotes the comment has received.
    - Uses **@default(0)** to initialize with zero downvotes.
9. **hidden** - Boolean
    - Indicates whether the comment is hidden from public view after it has been reported and removed.

- Uses **@default(false)**, making comments visible by default.

Relations to Other Models:

1. **user** - User
   - Represents a many-to-one relation, linking each comment to the user who created it.
2. **blogPost** - BlogPost
   - Represents a many-to-one relation with BlogPost, linking the comment with a specific blog post.
3. **parent** - Comment?
   - Represents a self-referential optional one-to-one relation that allows comments to be a reply to other comments.
   - The **@relation("ReplyRelation", fields: [parentId], references: [id])** attribute sets up this relationship with an alias (ReplyRelation) to differentiate between parent and reply.
4. **replies** - Comment[]
   - Represents a self-referential one-to-many relation, allowing one comment to have many replies.
   - Uses the same alias, **@relation("ReplyRelation")**, to indicate it's the inverse of the parent relation.
5. **votes** - Vote[]
   - Represents a one-to-many relation with Vote, enabling users to upvote or downvote the comment.
6. **reports** - Report[]
   - Represents a one-to-many relation with Report, allowing users to report a comment for potential issues.

Vote:

The Vote model stores users' ratings on blog posts or comments, allowing users to either upvote or downvote blog posts and comments. This model helps manage user feedback on content and enforces constraints to ensure that users can vote only once on each blog post or comment (for ex., a user can't upvote a comment/post several times, and if a user changes their vote from upvote to downvote, the comment's/post's number of upvotes goes down by 1 accordingly).

Fields and Types:

1. **id** - Int
   - Primary key/identifier for each vote.
   - Automatically increments.
2. **voteType** - String
   - Indicates the type of vote, either an upvote or downvote.
3. **userId** - `Int**
   - References the id field in the User model, linking the vote to the User who rated the blog/comment.
4. **blogPostId** - Int?
   - The blog post being rated.
   - Optional key referencing the id field in the BlogPost model.
   - This field is null if the vote is for a comment instead of a blog post.
5. **commentId** - Int?
   - The comment being rated.
   - Optional key referencing the id field in the Comment model.

- This field is null if the vote is for a blog post instead of a comment.

Relations to Other Models:

1. **user** - User
   - Represents a many-to-one relation, linking each vote to the user who left it.
   - **@relation(fields: [userId], references: [id])**: userId in the Vote model points to the id field in the User model.
2. **blogPost** - BlogPost?
   - Represents a many-to-one relation with BlogPost, indicating that the vote applies to a specific blog post (if blogPostId is not null).
3. **comment** - Comment?
   - Represents a many-to-one relation with Comment, indicating that the vote applies to a specific comment (if commentId is not null).

Unique Constraints

1. **@@unique([userId, blogPostId], name: "user_blogpost_unique")**
   - This constraint ensures that each user can only vote once per blog post.
   - Enforces uniqueness for the combination of userId and blogPostId.
2. **@@unique([userId, commentId], name: "user_comment_unique")**
   - Ensures that each user can only vote once per comment.
   - Enforces uniqueness for the combination of userId and commentId.

Report:

The Report model represents a report submitted by a user to flag inappropriate. A report can be associated with either a blog post or a comment, allowing users to identify specific issues with either type of content.

Fields and Types:

1. **id** - Int
   - Primary identifier for each report.
   - Uses the **@id** attribute to mark it as the primary key.
   - The **@default(autoincrement())** attribute makes the ID auto-incrementing.
2. **reason** - String
   - Describes the reason for the report, providing context for the issue being flagged.
   - Required field, which captures the details of why the content was reported.
3. **userId** - Int
   - Foreign key that references the id field in the User model.
   - Required field that establishes a connection between the report and the user who submitted it.
4. **blogPostId** - Int?
   - Optional foreign key that references the id field in the BlogPost model.
   - Can be null, indicating that the report may not be related to a blog post. If present, it signifies that the report is specifically for a blog post.
5. **commentId** - Int?
   - Optional foreign key that references the id field in the Comment model.
   - Can be null, indicating that the report may not be related to a comment. If present, it signifies that the report is specifically for a comment.

Relations to Other Models

1. **user** - User
    - Represents a many-to-one relation, linking each report to the specific user who submitted it.
    - The **@relation(fields: [userId], references: [id])** attribute specifies that userId in the Report model points to the id field in the User model.
2. **blogPost** - BlogPost?
    - Represents a many-to-one relation with BlogPost, allowing the report to be associated with a blog post.
    - The relation is optional (BlogPost?), as not all reports are related to blog posts.
3. **comment** - Comment?
    - Represents a many-to-one relation with Comment, allowing the report to be associated with a comment.
    - This relation is also optional (Comment?), as not all reports are related to comments.

2. API Endpoints list (shown in a table grouped by folders for readability and to save space):

blogs	code	comments	reporting	templates	users
/api/blogs/create	/api/code/execute	/api/comments/create	/api/reporting/create	/api/templates/[id]	/api/users/login
/api/blogs/delete		/api/comments/sort	/api/reporting/hideContent	/api/templates/delete	/api/users/logout
/api/blogs/edit		/api/comments/vote	/api/reporting/sortBlogReports	/api/templates/edit	/api/users/profile
/api/blogs/sort			/api/reporting/sortCommentReports	/api/templates/fork	/api/users/refresh
/api/blogs/viewAll				/api/templates/save	/api/users/register
/api/blogs/vote				/api/templates/viewAll	
				/api/templates/viewOwn	

Admin Account

When you run the startup.sh file, an admin account will automatically be created for you with the following information:

```
firstName: "Test"
lastName: "Admin"
email: "adminUser@gmail.com"
password: "123"
avatar: "Test Avatar"
phone: "1234567890"
role: "ADMIN"
```

NOTE: (BEFORE STARTING THE PROGRAM)

1. You will need to import BOTH the postman collection called “Scriptorium.postman_collection” AND the postman environment called “New Environment.postman_environment”.
2. You will also need to run `chmod +x startup.sh` to give the needed permission to the file (mentioned in the README as per a Piazza post).

Endpoint Details

/api/users/register

- Short description:
  - This API endpoint allows the creation of a new user account with fields for personal information, a hashed password, and a default avatar.
- Allowed methods:
  - POST
- Payload:
  - Request Body:

Parameter	Type	Required	Description
firstName	String	Y	The user's first name.
lastName	String	Y	The user's last name.
email	String	Y	The user's email address. Must be unique.
password	String	Y	The user's password. It will be hashed before storage.
phone	String	Y	The user's phone number.
role	String	Y	The user's role in the system.

- An example request
  - http://localhost:3000/api/users/register

```
{
    "firstName": "John",
    "lastName": "Doe",
    "email": "JohnDoe@gmail.com",
    "password": "123",
    "phone": "123",
    "role": "USER"
}
```

- An example response

```
{
```

```
    "message": "User created successfully",
    "newUser": {
        "id": 1,
        "firstName": "John",
        "lastName": "Doe",
        "email": "JohnDoe@gmail.com",
        "password": "$2b$10$KpxU1XdCiVgVQxNSyQPF9.9/EWL2PZwgBu0MtZ5AFfFkwtU47r/1W",
        "avatar": "/images/default-avatar.png",
        "phone": "123",
        "role": "USER"
    }
}
```


/api/users/login

- Short description:
  - This API endpoint allows users to log in by verifying their email and password. On successful authentication, it returns an access token and a refresh token.
- Allowed methods:
  - POST
- Payload:
  - Request Body:

Parameter	Type	Required	Description
email	String	Y	The user's email address. Must be unique.
password	String	Y	The user's password.

- An example request
  - http://localhost:3000/api/users/login


```
{
    "email": "JohnDoe@gmail.com",
    "password": "123"
}
```


- An example response


```
{
    "accessToken":
"eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJlbWFpbCI6IkpvaG5Eb2VAZ21haWwuY29tIiwicm9sZSI6IlVTRVIiLCJpYXQiOjE3MzA0Mjg5MDYsImV4cCI6MTczMDQzMDEwNn0.kQ_tIjG4tkBuuhNiaDiMqqpnpM-13no-ZZl4wygvdOw",
```

```
    "refreshToken":
"eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJlbWFpbCI6IkpvaG5Eb2VAZ21haWwuY29tIiwicm9sZSI6IlVTRVIiLCJpYXQiOjE3MzA0Mjg5MDYsImV4cCI6MTczMDUxNTMwNn0.cQ_6UkV84MNUBIBhwIAGui8zBAWp_PGHVrdmAA_aBiM"
}
```


/api/users/profile

- Short description:
  - This API endpoint allows an authenticated user to update their profile information, including their password, phone number, and avatar image.
- Allowed methods:
  - PUT
- Payload:
  - Request Body:

Parameter	Type	Required	Description
phone	String	N (then password or avatar)	The user's email address. Must be unique.
password	String	N (then phone or avatar)	The user's password.
avatar	File	N (then phone or password)	Any avatar in the public/avatars

- An example request
  - http://localhost:3000/api/users/profile

form-data

phone	999-999-9999
password	123
avatar	

- An example response


```
{
    "message": "Profile updated",
    "updatedUser": {
        "id": 1,
        "firstName": "John",
        "lastName": "Doe",
```

```
        "email": "JohnDoe@gmail.com",
        "password": "$2b$10$VOFenNwPqXm9uDdLvpV/Vu.AdxsN/Y2psYg9pL99g54IYlzLnOSue",
        "avatar": "/images/default-avatar.png",
        "phone": "999-999-9999",
        "role": "USER"
    }
}
```


/api/users/refresh

- Short description:
  - This API endpoint generates a new access token using a valid refresh token.
- Allowed methods:
  - POST
- Payload:
  - Request Body:

Parameter	Type	Required	Description
refreshToken	String	Y	The user's refresh token.

- An example request
  - http://localhost:3000/api/users/refresh


```
{
    "refreshToken": "{{refreshToken}}"
}
```


- An example response


```
{
    "accessToken":
"eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJyb2xlIjoiVVNFUiIsImlhdCI6MTczMDUwMjE2MywiZXhwIjoxNzMwNTAzMzYzfQ.9mVv-u8bVZLtYqMp3q88kD62OOED7penj
PmwbAhz_KI"
}
```


/api/users/logout

- Short description:
  - This API endpoint logs out the user by clearing the refresh token cookie.
- Allowed methods:
  - POST
- Payload:

    - None
- An example request
    - http://localhost:3000/api/users/logout
- An example response

```
{
    "message": "Logged out successfully"
}
```

/api/blogs/create:

- Short description:
    - Allows authenticated users to create a new blog post with a title, description, tag(s), and (optional) links to code templates.
- Allowed methods:
    - POST
- Payload:
    - Expects a JSON object in the request body
    - Request Body:

Parameter	Type	Required (Y/N)
title	string	Y
description	string	Y
tags	string	Y
templateIds	array	N
userEmail	string	Y

- An example request:

```
POST /api/blogs/create
http://localhost:3000/api/blogs/create
Content-Type: application/json
```

```
{
    "title": "Introduction to JavaScript",
    "description": "A blog post about JavaScript basics and applications.",
    "tags": "javascript,programming",
    "templateIds": [],
    "userEmail": "JohnDoe@gmail.com"
```

```
}
```

- An example response:

```
{
    "id": 3,
    "title": "Introduction to JavaScript",
    "description": "A comprehensive blog post about JavaScript basics and applications.",
    "tags": "javascript,web development,programming",
    "numUpvotes": 0,
    "numDownvotes": 0,
    "userId": 1,
    "createdAt": "2024-11-01T01:02:06.921Z",
    "hidden": false
}
```

/api/blogs/delete

- Short description:
  - Allows an authenticated user to delete a blog post they created.
- Allowed methods:
  - DELETE
- Payload:
  - Request Query:

Parameter	Type	Required	Description
blogID	int	Y	The ID of the blog user wants to delete.

  - Request Body:

Parameter	Type	Required	Description
userEmail	string	Y	Email of the user who wants to delete their blog post.

- An example request: `DELETE` http://localhost:3000/api/blogs/delete?blogID=1

```
{
    "userEmail": "JohnDoe@gmail.com"
```

```
}
```

- An example response:

```
{
    "message": "Blog post deleted successfully"
}
```

/api/blogs/edit

- Short description:
  - Allows an authenticated user to edit the details of a blog post they created (title, description, tags, and template IDs). Hidden blog posts cannot be edited.
- Allowed methods:
  - PUT
- Payloads:
  - Request Query:

Parameter	Type	Required	Description
blogID	int	Y	The ID of the blog user wants to edit.

  - Request Body:

Parameter	Type	Required
title	string	Y
description	string	Y
tags	string	Y
templateIDs	array	N
userEmail	string	Y

- An example request: PUT http://localhost:3000/api/blogs/edit?blogID=3

```
{
    "title": "Updated Blog Title",
    "description": "Updated description of the blog post.",
    "tags": "updated,blog,post",
    "templateIds": [1],
    "userEmail": "JohnDoe@gmail.com"
```

```
}
```

- An example response

```
{
    "id": 3,
    "title": "Updated Blog Title",
    "description": "Updated description of the blog post.",
    "tags": "updated,blog,post",
    "numUpvotes": 0,
    "numDownvotes": 0,
    "userId": 1,
    "createdAt": "2024-11-01T01:02:06.921Z",
    "hidden": false
}
```

/api/blogs/sort

- Short description:
  - Allows visitors (and users) to view and sort a list of blog posts by either most liked (number of upvotes), most disliked (number of downvotes), or most recent.
- Allowed methods:
  - GET
- Payload:
  - Request Query:

Parameter	Type	Required	Description
sortBy	string	Y	Sorting criteria; can be either "mostLiked", "mostDisliked", or "mostRecent".
page	int	N	For pagination, specify page number. Default = 1.
limit	int	N	For pagination, specify the number of blog posts per page. Default = 10.

- An example request: `GET` http://localhost:3000/api/blogs/sort?sortBy=mostLiked&page=1&limit=3

- An example response

```
[
    {
        "id": 3,
        "title": "Updated Blog Title",
        "description": "Updated description of the blog post.",
```

```
        "tags": "updated,blog,post",
        "numUpvotes": 1,
        "numDownvotes": 0,
        "userId": 1,
        "createdAt": "2024-11-01T01:02:06.921Z",
        "hidden": false,
        "user": {
            "firstName": "John",
            "lastName": "Doe"
        },
        "templates": [
            {
                "id": 1,
                "title": "Code Template 2",
                "explanation": "This is a test code template!",
                "code": "console.log('Hello World!')",
                "language": "javascript",
                "tags": "javascript,coding",
                "forked": false,
                "userId": 1
            }
        ],
        "comments": []
    },
    {
        "id": 2,
        "title": "Introduction to JavaScript",
        "description": "A blog post about JavaScript basics and applications.",
        "tags": "javascript,programming",
        "numUpvotes": 0,
        "numDownvotes": 0,
        "userId": 1,
        "createdAt": "2024-11-01T01:01:22.164Z",
        "hidden": false,
        "user": {
            "firstName": "John",
            "lastName": "Doe"
```

```
        },
        "templates": [],
        "comments": []
    },
    {
        "id": 4,
        "title": "Introduction to JavaScript",
        "description": "A blog post about JavaScript basics and applications.",
        "tags": "javascript,programming",
        "numUpvotes": 0,
        "numDownvotes": 1,
        "userId": 1,
        "createdAt": "2024-11-01T22:24:52.166Z",
        "hidden": false,
        "user": {
            "firstName": "John",
            "lastName": "Doe"
        },
        "templates": [],
        "comments": []
    }
]
```


/api/blogs/viewAll

- Short description:
  - Allows visitors (and other users) to view and search for blog posts.
- Allowed methods:
  - GET
- Payload:
  - Request Query:

Parameter	Type	Required	Description
page	int	N	For pagination, specify page number. Default = 1.
limit	int	N	For pagination, specify the number of blog posts per page. Default = 10.
search	string	N	Searches blog posts by title, description, tags, or templates.

- Request Body:

Parameter	Type	Required
userEmail	string	N

- An example request: `GET` http://localhost:3000/api/blogs/viewAll
  (empty body - to show what a visitor would see)
- An example response


```
[
    {
        "id": 4,
        "title": "Introduction to JavaScript",
        "description": "A blog post about JavaScript basics and applications.",
        "tags": "javascript,programming",
        "numUpvotes": 0,
        "numDownvotes": 1,
        "userId": 1,
        "createdAt": "2024-11-01T22:24:52.166Z",
        "hidden": false,
        "user": {
            "firstName": "John",
            "lastName": "Doe"
        },
        "templates": [],
        "comments": []
    },
    {
        "id": 3,
        "title": "Updated Blog Title",
        "description": "Updated description of the blog post.",
        "tags": "updated,blog,post",
        "numUpvotes": 1,
        "numDownvotes": 0,
        "userId": 1,
        "createdAt": "2024-11-01T01:02:06.921Z",
        "hidden": false,
        "user": {
            "firstName": "John",
```

```
            "lastName": "Doe"
        },
        "templates": [
            {
                "id": 1,
                "title": "Code Template 2",
                "explanation": "This is a test code template!",
                "code": "console.log('Hello World!')",
                "language": "javascript",
                "tags": "javascript,coding",
                "forked": false,
                "userId": 1
            }
        ],
        "comments": []
    },
    {
        "id": 2,
        "title": "Introduction to JavaScript",
        "description": "A blog post about JavaScript basics and applications.",
        "tags": "javascript,programming",
        "numUpvotes": 0,
        "numDownvotes": 0,
        "userId": 1,
        "createdAt": "2024-11-01T01:01:22.164Z",
        "hidden": false,
        "user": {
            "firstName": "John",
            "lastName": "Doe"
        },
        "templates": [],
        "comments": []
    }
]
```


/api/blogs/vote

- Short description:

    - Allows authenticated users to rate a blog post by giving it an upvote or downvote. Users can only vote once per post and have the option to change their vote type.
- Allowed methods:
    - POST
- Payload:
    - Request Body:

Parameter	Type	Required	Description
blogPostId	int	Y	The ID of the blog post to vote on.
voteType	string	Y	Type of vote ("upvote" or "downvote").
userEmail	string	Y	Email of the user who wants to delete their blog post.

- An example request: `POST` http://localhost:3000/api/blogs/vote

```
{
    "blogPostId": 3,
    "voteType": "upvote",
    "userEmail": "JohnDoe@gmail.com"
}
```

- An example response

```
{
    "id": 3,
    "title": "Updated Blog Title",
    "description": "Updated description of the blog post.",
    "tags": "updated,blog,post",
    "numUpvotes": 1,
    "numDownvotes": 0,
    "userId": 1,
    "createdAt": "2024-11-01T01:02:06.921Z",
    "hidden": false
}
```

If user tries to upvote again (ie, send the same request as above again):

```
}
 "message": "You already upvoted this post."
}
```

/api/code/execute

- Short description:
  - Allows visitors to write, execute, and test code in multiple programming languages (C, C++, Java, Python, JavaScript) with optional input through standard input (stdin). Supports syntax highlighting, error handling for runtime errors, compile errors, and various signals (e.g., seg faults).
- Allowed methods:
  - POST
- Payload:
  - Request Body:

Parameter	Type	Required	Description
code	string	Y	The code to execute.
language	string	Y	The programming language (c, cpp, java, python, or javascript).
input	string	N	Stdin for program execution.
templateId	int	N	Template ID. If provided, the code and language from the template will be used.

- An example request
  - (A bunch of other test cases + expected results are in the execute_test.txt in the __tests__ folder of the repo)

POST http://localhost:3000/api/code/execute

```
{
    "code": "public class Main { public static int add(int a, int b) { return a + b; } public static void main(String[] args) { int result = add(4, 5); System.out.println(\"Result: \" + result); } }",
    "language": "java",
    "input": ""
}
```

- An example response

```
{
   "output":"Result: 9\n"}
}
```

/api/comments/create

- Short description:

    - Allows authenticated users to write comments on a blog post or reply to an existing comment.
- Allowed methods:
    - POST
- Payload:
    - Request Body:

Parameter	Type	Required	Description
content	string	Y	The content of the comment/reply.
userEmail	string	Y	The email of the user making the comment.
blogPostId	int	Y	The blog post under which the comment is being made.
parentId	int	N	For replies, the ID of the parent comment. If not provided, the comment is not a reply.

- An example request: `POST` http://localhost:3000/api/comments/create

```
{
    "content": "This is a comment on a blog post.",
    "userEmail": "JohnDoe@gmail.com",
    "blogPostId": 2
}
```

- An example response

```
{
    "id": 1,
    "content": "This is a comment on a blog post.",
    "createdAt": "2024-11-01T23:24:35.811Z",
    "userId": 1,
    "blogPostId": 2,
    "parentId": null,
    "numUpvotes": 0,
    "numDownvotes": 0,
    "hidden": false
}
```

- Reply (request):

```
{
    "content": "This is a reply to the original comment on blog post 2.",
    "userEmail": "JohnDoe@gmail.com",
```

```
    "blogPostId": 2,
    "parentId": 1
}
```

- Reply (response):

```
{
    "id": 2,
    "content": "This is a reply to the original comment on blog post 2.",
    "createdAt": "2024-11-01T23:29:37.562Z",
    "userId": 1,
    "blogPostId": 2,
    "parentId": 1,
    "numUpvotes": 0,
    "numDownvotes": 0,
    "hidden": false
}
```

/api/comments/vote

- Short description:
  - Allows authenticated users to rate a comment by giving it an upvote or a downvote. If the user has already voted, they can only change their vote type, can't vote several times.
- Allowed methods:
  - POST
- Payload:
  - Request Body:

Parameter	Type	Required	Description
commentId	int	Y	The ID of the comment being voted on.
voteType	string	Y	The type of vote ("upvote" or "downvote").
userEmail	string	Y	Email of the authenticated user submitting the vote.

- An example request: `POST` http://localhost:3000/api/comments/vote

```
{
    "commentId": 1,
    "voteType": "upvote",
    "userEmail": "JohnDoe@gmail.com"
```

```
}
```

- An example response

```
{
    "id": 1,
    "content": "This is a comment on a blog post.",
    "createdAt": "2024-11-01T23:24:35.811Z",
    "userId": 1,
    "blogPostId": 2,
    "parentId": null,
    "numUpvotes": 1,
    "numDownvotes": 0,
    "hidden": false
}
```

/api/comments/sort

- Short description:
  - Allows visitors to sort comments on a blog post by either most liked, most disliked, or most recent. Sorting applies separately to main comments and their replies.
- Allowed methods:
  - GET
- Payload:
  - Request Query:

Parameter	Type	Required	Description
blogPostId	int	Y	The ID of the blog post for which to retrieve and sort comments.
sortByMain	string	N	Sorting method for main comments ("mostLiked," "mostDisliked," or "mostRecent"). Default = "mostLiked".
sortByReplies	string	N	Sorting method for replies within each main comment ("mostLiked," "mostDisliked," or "mostRecent"). Default = "mostRecent".
page	int	N	For pagination, specify page number. Default = 1.
limit	int	N	For pagination, specify the number of comments per page. Default = 10.

- An example request:
  `GET http://localhost:3000/api/comments/sort?blogPostId=2&sortByMain=mostLiked&sortByReplies=mostLiked`
- An example response:

```
[
    {
        "id": 1,
        "content": "This is a comment on a blog post.",
        "createdAt": "2024-11-01T23:24:35.811Z",
        "userId": 1,
        "blogPostId": 2,
        "parentId": null,
        "numUpvotes": 1,
        "numDownvotes": 0,
        "hidden": false,
        "user": {
            "firstName": "John",
            "lastName": "Doe"
        },
        "replies": [
            {
                "id": 2,
                "content": "This is a reply to the original comment on blog post 2.",
                "createdAt": "2024-11-01T23:29:37.562Z",
                "userId": 1,
                "blogPostId": 2,
                "parentId": 1,
                "numUpvotes": 1,
                "numDownvotes": 0,
                "hidden": false,
                "user": {
                    "firstName": "John",
                    "lastName": "Doe"
                }
            },
            {
                "id": 5,
                "content": "This is reply2 to the original comment on blog post 2.",
                "createdAt": "2024-11-01T23:39:57.128Z",
                "userId": 1,
                "blogPostId": 2,
```

```
            "parentId": 1,
            "numUpvotes": 0,
            "numDownvotes": 1,
            "hidden": false,
            "user": {
                "firstName": "John",
                "lastName": "Doe"
            }
        },
        {
            "id": 6,
            "content": "This is reply3 to the original comment on blog post 2.",
            "createdAt": "2024-11-01T23:40:24.415Z",
            "userId": 1,
            "blogPostId": 2,
            "parentId": 1,
            "numUpvotes": 0,
            "numDownvotes": 0,
            "hidden": false,
            "user": {
                "firstName": "John",
                "lastName": "Doe"
            }
        }
    ]
},
{
    "id": 3,
    "content": "This is comment2 on blog post 2.",
    "createdAt": "2024-11-01T23:33:26.951Z",
    "userId": 1,
    "blogPostId": 2,
    "parentId": null,
    "numUpvotes": 0,
    "numDownvotes": 1,
    "hidden": false,
    "user": {
```

```
            "firstName": "John",
            "lastName": "Doe"
        },
        "replies": []
    }
]
```

/api/reporting/create

- Short description:
  -
- Allowed methods:
  - POST
- Payload:
  - Request Body:

Parameter	Type	Required	Description
blogPostId	int	N (then commentID is required)	ID of the blog post being reported.
commentId	int	N (then blogPostId is required)	ID of the comment being reported.
reason	string	Y	The reason for the report, must be at least 3 characters.
userEmail	string	Y	Email of the authenticated user submitting the report.

- An example request: `POST` http://localhost:3000/api/reporting/create

```
{
    "blogPostId": 1,
    "reason": "Bad",
    "userEmail": "JohnDoe@gmail.com"
}
```

- An example response:

```
{
    "id": 1,
    "reason": "Bad",
    "userId": 1,
    "blogPostId": 1,
    "commentId": null
```

```
}
```

/api/reporting/hideContent

- Short description:
  - This API endpoint allows an admin to hide a blog post or comment by setting its `hidden` attribute to `true`.
- Allowed methods:
  - POST
- Payload:
  - Request Body:

Parameter	Type	Required	Description
blogPostId	int	N (then commentID is required)	ID of the blog post being reported.
commentId	int	N (then blogPostId is required)	ID of the comment being reported.

- An example request
  - http://localhost:3000/api/reporting/hideContent

```
{
    "blogPostId": 1
}
```

- An example response

```
{
    "message": "Blog post hidden successfully",
    "blogPost": {
        "id": 1,
        "title": "test",
        "description": "tester des",
        "tags": "tag1",
        "numUpvotes": 0,
        "numDownvotes": 0,
        "userId": 1,
        "createdAt": "2024-10-31T00:40:31.170Z",
        "hidden": true
    }
}
```

/api/reporting/sortBlogReports

- Short description:
  - This API endpoint allows an admin to fetch a paginated list of blog posts, ordered by the number of reports in descending order.
- Allowed methods:
  - GET
- Payload:
  - Request Query:

Parameter	Type	Required	Description
page	int	N	For pagination, specify page number. Default = 1.
limit	int	N	For pagination, specify the number of blog posts per page. Default = 10.

- An example request
  - http://localhost:3000/api/reporting/sortBlogReports?page=1&limit=10
- An example response


```
[
    {
        "id": 1,
        "title": "test",
        "description": "tester des",
        "tags": "tag1",
        "numUpvotes": 0,
        "numDownvotes": 0,
        "userId": 1,
        "createdAt": "2024-10-31T00:40:31.170Z",
        "hidden": true,
        "_count": {
            "reports": 11
        },
        "user": {
            "firstName": "John",
            "lastName": "Doe"
        },
        "templates": [
            {
                "id": 2,
                "title": "Code Template 2",
```

```
                "explanation": "This is a test code template!",
                "code": "console.log('Hello World!')",
                "language": "javascript",
                "tags": "javascript,coding",
                "forked": false,
                "userId": 1
            }
        ],
        "comments": []
    }
]
```


/api/reporting/sortCommentReports

- Short description:
  - This API endpoint allows an admin to fetch a paginated list of comments, ordered by the number of reports in descending order.
- Allowed methods:
  - GET
- Payload:
  - Request Query:

Parameter	Type	Required	Description
page	int	N	For pagination, specify page number. Default = 1.
limit	int	N	For pagination, specify the number of blog posts per page. Default = 10.

- An example request: `GET` http://localhost:3000/api/reporting/sortCommentReports
- An example response


```
[
    {
        "id": 5,
        "content": "This is comment2 on blog post 2.",
        "createdAt": "2024-11-02T01:20:23.235Z",
        "userId": 2,
        "blogPostId": 2,
        "parentId": null,
        "numUpvotes": 0,
        "numDownvotes": 0,
        "hidden": false,
```

```
        "_count": {
            "reports": 2
        },
        "user": {
            "firstName": "John",
            "lastName": "Doe"
        },
        "blogPost": {
            "id": 2,
            "title": "Introduction to JavaScript",
            "description": "A blog post about JavaScript basics and applications.",
            "tags": "javascript,programming",
            "numUpvotes": 0,
            "numDownvotes": 0,
            "userId": 2,
            "createdAt": "2024-11-02T01:20:21.830Z",
            "hidden": false
        },
        "replies": []
    },
    {
        "id": 1,
        "content": "This is a comment on a blog post.",
        "createdAt": "2024-11-02T01:20:22.893Z",
        "userId": 2,
        "blogPostId": 2,
        "parentId": null,
        "numUpvotes": 1,
        "numDownvotes": 0,
        "hidden": false,
        "_count": {
            "reports": 0
        },
        "user": {
            "firstName": "John",
            "lastName": "Doe"
        },
```

```
        "blogPost": {
            "id": 2,
            "title": "Introduction to JavaScript",
            "description": "A blog post about JavaScript basics and applications.",
            "tags": "javascript,programming",
            "numUpvotes": 0,
            "numDownvotes": 0,
            "userId": 2,
            "createdAt": "2024-11-02T01:20:21.830Z",
            "hidden": false
        },
        "replies": [
            {
                "id": 3,
                "content": "This is a reply to the original comment on blog post 2.",
                "createdAt": "2024-11-02T01:20:23.046Z",
                "userId": 2,
                "blogPostId": 2,
                "parentId": 1,
                "numUpvotes": 0,
                "numDownvotes": 1,
                "hidden": false
            },
            {
                "id": 4,
                "content": "This is reply2 to the original comment on blog post 2.",
                "createdAt": "2024-11-02T01:20:23.141Z",
                "userId": 2,
                "blogPostId": 2,
                "parentId": 1,
                "numUpvotes": 0,
                "numDownvotes": 1,
                "hidden": false
            }
        ]
    },
    {
```

```
        "id": 2,
        "content": "This is a bad comment and will get reported.",
        "createdAt": "2024-11-02T01:20:22.985Z",
        "userId": 2,
        "blogPostId": 3,
        "parentId": null,
        "numUpvotes": 1,
        "numDownvotes": 0,
        "hidden": false,
        "_count": {
            "reports": 0
        },
        "user": {
            "firstName": "John",
            "lastName": "Doe"
        },
        "blogPost": {
            "id": 3,
            "title": "Updated Blog Title",
            "description": "Updated description of the blog post.",
            "tags": "updated,blog,post",
            "numUpvotes": 1,
            "numDownvotes": 0,
            "userId": 2,
            "createdAt": "2024-11-02T01:20:21.909Z",
            "hidden": false
        },
        "replies": []
    },
    {
        "id": 3,
        "content": "This is a reply to the original comment on blog post 2.",
        "createdAt": "2024-11-02T01:20:23.046Z",
        "userId": 2,
        "blogPostId": 2,
        "parentId": 1,
        "numUpvotes": 0,
```

```
        "numDownvotes": 1,
        "hidden": false,
        "_count": {
            "reports": 0
        },
        "user": {
            "firstName": "John",
            "lastName": "Doe"
        },
        "blogPost": {
            "id": 2,
            "title": "Introduction to JavaScript",
            "description": "A blog post about JavaScript basics and applications.",
            "tags": "javascript,programming",
            "numUpvotes": 0,
            "numDownvotes": 0,
            "userId": 2,
            "createdAt": "2024-11-02T01:20:21.830Z",
            "hidden": false
        },
        "replies": []
    },
    {
        "id": 4,
        "content": "This is reply2 to the original comment on blog post 2.",
        "createdAt": "2024-11-02T01:20:23.141Z",
        "userId": 2,
        "blogPostId": 2,
        "parentId": 1,
        "numUpvotes": 0,
        "numDownvotes": 1,
        "hidden": false,
        "_count": {
            "reports": 0
        },
        "user": {
            "firstName": "John",
```

```
            "lastName": "Doe"
        },
        "blogPost": {
            "id": 2,
            "title": "Introduction to JavaScript",
            "description": "A blog post about JavaScript basics and applications.",
            "tags": "javascript,programming",
            "numUpvotes": 0,
            "numDownvotes": 0,
            "userId": 2,
            "createdAt": "2024-11-02T01:20:21.830Z",
            "hidden": false
        },
        "replies": []
    }
]
```


/api/templates/save

- Short description:
  - This API endpoint allows an authenticated user to create and save a new code template.
- Allowed methods:
  - POST
- Payload:
  - Request Body:

Parameter	Type	Required	Description
title	String	Y	The title of the template.
explanation	String	Y	A description or explanation for the template.
language	String	Y	The programming language of the template.
code	String	Y	The code content of the template.
tags	Array of strings	Y	An array of tags for categorizing the template.

- An example request
  - http://localhost:3000/api/templates/save

```
{
    "title": "Code Template",
    "explanation": "This is a test code template!",
    "language": "javascript",
    "code": "console.log('Hello World!')",
    "tags": ["javascript", "coding"]
}
```

- An example response

```
{
    "message": "Template saved",
    "newTemplate": {
        "id": 1,
        "title": "Code Template",
        "explanation": "This is a test code template!",
        "code": "console.log('Hello World!')",
        "language": "javascript",
        "tags": "javascript,coding",
        "forked": false,
        "userId": 1
    }
}
```

/api/templates/fork

- Short description:
  - This API endpoint allows an authenticated user to fork a specific template. The forked template will be created under the user's account with the option to modify the code.
- Allowed methods:
  - POST
- Payload:
  - Request Body:

Parameter	Type	Required	Description
templateId	int	Y	The ID of the template to fork.
modifiedCode	String	N	The modified code to be included in the forked template. If not provided, the original template's code is used.

- An example request

- http://localhost:3000/api/templates/fork

```
{
    "templateId": 1,
    "modifiedCode": "console.log('Modified Code')"
}
```

- An example response

```
{
    "message": "Template forked",
    "forkedTemplate": {
        "id": 2,
        "title": "Forked: Code Template",
        "explanation": "This is a test code template!",
        "code": "console.log('Modified Code')",
        "language": "javascript",
        "tags": "javascript,coding",
        "forked": true,
        "userId": 1
    }
}
```

/api/templates/edit

- Short description:
  - This API endpoint allows an authenticated user to update the details of their template, including title, explanation, code, and tags.
- Allowed methods:
  - PUT
- Payload:
  - Request Body:

Parameter	Type	Required	Description
templateId	int	Y	The ID of the template to retrieve.
title	String	N	The new title.
explanation	String	N	The new explanation.
code	String	N	The new code.
tags	Array of	N	The new tags.

	strings		

- An example request
  - http://localhost:3000/api/templates/edit

```
{
    "templateId": 1,
    "title": "Modified Template",
    "explanation": "This template was modified.",
    "code": "console.log('This was modified!')",
    "tags": ["Modified", "code", "javascript"]
}
```

- An example response

```
{
    "message": "Template updated",
    "updatedTemplate": {
        "id": 1,
        "title": "Modified Template",
        "explanation": "This template was modified.",
        "code": "console.log('This was modified!')",
        "language": "javascript",
        "tags": "Modified,code,javascript",
        "forked": false,
        "userId": 1
    }
}
```

/api/templates/viewOwn

- Short description:
  - This API endpoint allows an authenticated user to retrieve their templates in a paginated format.
- Allowed methods:
  - GET
- Payload:
  - Request Query:

Parameter	Type	Required	Description
page	int	N	For pagination, specify page number. Default = 1.

limit	int	N	For pagination, specify the number of blog posts per page. Default = 10.

- An example request
  - http://localhost:3000/api/templates/viewOwn
- An example response


```
{
    "templates": [
        {
            "id": 1,
            "title": "Modified Template",
            "explanation": "This template was modified.",
            "code": "console.log('This was modified!')",
            "language": "javascript",
            "tags": [
                "Modified",
                "code",
                "javascript"
            ],
            "forked": false,
            "userId": 1
        },
        {
            "id": 2,
            "title": "Forked: Code Template",
            "explanation": "This is a test code template!",
            "code": "console.log('Modified Code')",
            "language": "javascript",
            "tags": [
                "javascript",
                "coding"
            ],
            "forked": true,
            "userId": 1
        }
    ],
    "page": 1,
    "limit": 10,
```

```
    "totalTemplates": 2
}
```

/api/templates/delete

- Short description:
  - This API endpoint allows an authenticated user to delete a template they own, based on the template ID.
- Allowed methods:
  - DELETE
- Payload:
  - Request Body:

Parameter	Type	Required	Description
id	int	Y	The ID of the template to retrieve.

- An example request
  - http://localhost:3000/api/templates/delete

```
{
    "id": 2
}
```

- An example response

```
{
    "message": "Template deleted"
}
```

/api/templates/viewAll

- Short description:
  - This API endpoint allows users to search for templates based on title, tags, or explanation and retrieve them in a paginated format. Or if nothing is specified it displays all the templates.
- Allowed methods:
  - GET
- Payload:
  - Request Query:

Parameter	Type	Required	Description
page	int	N	For pagination, specify page number. Default = 1.
limit	int	N	For pagination, specify the number of blog posts per page. Default = 10.

search	string	N	A search term to filter templates by title, tags, or explanation.

- An example request
  - http://localhost:3000/api/templates/viewAll
- An example response (I created another template with a different user)


```
[
    {
        "id": 1,
        "title": "Modified Template",
        "explanation": "This template was modified.",
        "code": "console.log('This was modified!')",
        "language": "javascript",
        "tags": [
            "Modified",
            "code",
            "javascript"
        ],
        "forked": false,
        "userId": 1,
        "blogPosts": []
    },
    {
        "id": 3,
        "title": "Code Template Number Two",
        "explanation": "This is another test code template!",
        "code": "console.log('Hi!')",
        "language": "c",
        "tags": [
            "c",
            "coding"
        ],
        "forked": false,
        "userId": 2,
        "blogPosts": []
    }
]
```

http://localhost:3000/api/templates/viewAll?search=javascript


```
[
    {
        "id": 1,
        "title": "Modified Template",
        "explanation": "This template was modified.",
        "code": "console.log('This was modified!')",
        "language": "javascript",
        "tags": [
            "Modified",
            "code",
            "javascript"
        ],
        "forked": false,
        "userId": 1,
        "blogPosts": []
    }
]
```


/api/templates/[id]

- Short description:
  - This API endpoint retrieves a specific template by its ID.
- Allowed methods:
  - GET
- Payload:
  - Request Query:

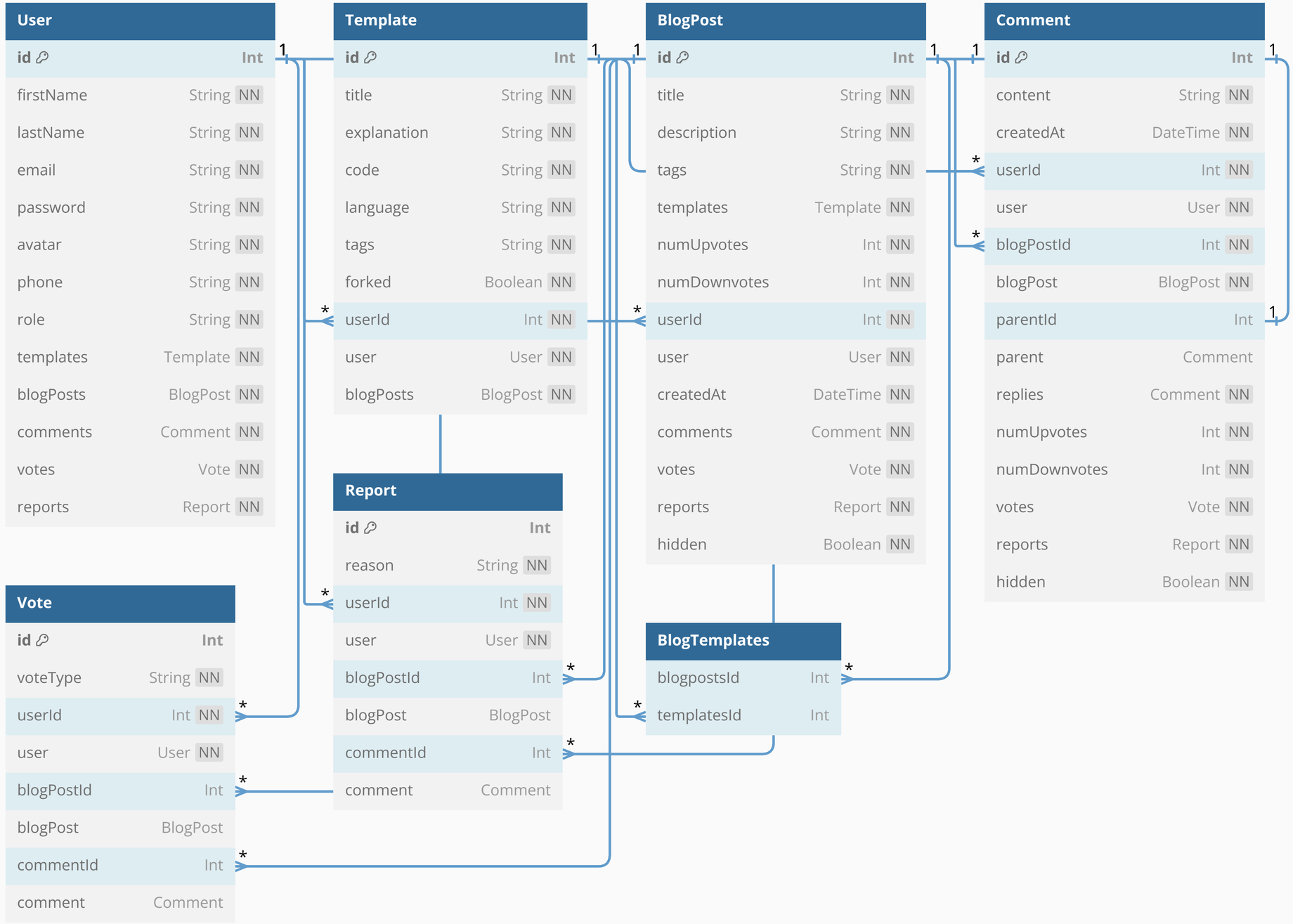
Parameter	Type	Required	Description
id	int	Y	The ID of the template to retrieve.

- An example request
  - http://localhost:3000/api/templates/1
- An example response


```
{
    "id": 1,
    "title": "Modified Template",
```

```
    "explanation": "This template was modified.",
    "code": "console.log('This was modified!')",
    "language": "javascript",
    "tags": "Modified,code,javascript",
    "forked": false,
    "userId": 1
}
```


Model Diagram On Next Page



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