

Blog Project Report

Group 13

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Git Repo URL:

Backend: <https://github.com/terryishi/infos-blog> (Lexi Shi's Repo)

Frontend: <https://github.com/Jonathanwu916/react-blog>
(Jonathan Wu's Repo)

Web client public URL:

<http://react-blog-1.s3-website-ap-northeast-1.amazonaws.com/>

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Introduction

This report provides a comprehensive summary of the development of a dynamic blog application designed to facilitate seamless sharing and discovery of blog posts. Built on a robust technology stack consisting of SpringBoot and MyBatis for the back-end, React and Redux for the front-end, and MariaDB for database management, the application optimizes for both functionality and user experience.

The application is envisioned not just as a platform for individual expression through blog posts, but also as a space for users to browse and interact with content shared by others. From registration to logging in, from creating a new blog post to browsing existing ones, the application caters to all these needs in an intuitive and user-friendly manner.

Additionally, the project leverages the AWS Cloud Platform for deployment, ensuring that it achieves high availability and scalability to handle varying traffic demands efficiently. By leveraging AWS services like EC2 for hosting, RDS for database management, and S3 for storing static resources, the application is equipped to deliver consistent performance, regardless of scale.

This report will delve into the details of the project planning, design, development, and deployment process of the application.

Project planning

Planning is the first and crucial phase of any project. It establishes the groundwork, setting clear goals, identifying necessary resources, and creating a roadmap to guide the project's execution. Below are the steps we followed during the planning phase of this blog application project.

1. Setting Goals

At the outset, we set out clear, achievable goals for the project. These included:

Building a full-featured, user-friendly blog application.

Incorporating registration, login, blog posting, and blog browsing functions.

Ensuring robust performance and scalability with modern technologies.

Deploying the application on a reliable cloud platform - AWS.

2. Identifying Key Features and Requirements

Next, we identified the key features we wanted our application to have. These included user registration and login, the ability to publish and browse blog posts, and ensuring that our application would be scalable and performant.

3. Technology Stack Decisions

Once we had defined our goals and identified key features, we decided on the technology stack that we would use for our project.

For the back-end, we chose SpringBoot and MyBatis because of their powerful features and ease of use. SpringBoot makes it easy to create stand-alone, production-grade Spring based Applications, and MyBatis is a first class persistence framework with support for custom SQL, stored procedures and advanced mappings.

On the front-end, we decided to use React and Redux because of their flexibility and efficiency in building user interfaces. React allows for the creation of reusable UI components, and Redux helps manage the state of these components, leading to a more predictable flow of data.

For the database, we chose MariaDB for its reliability, high performance, and wide acceptance in the industry.

Finally, we decided to use AWS for deployment because of its scalability, reliability, and wide array of services.

Design

Key Features of the Blog

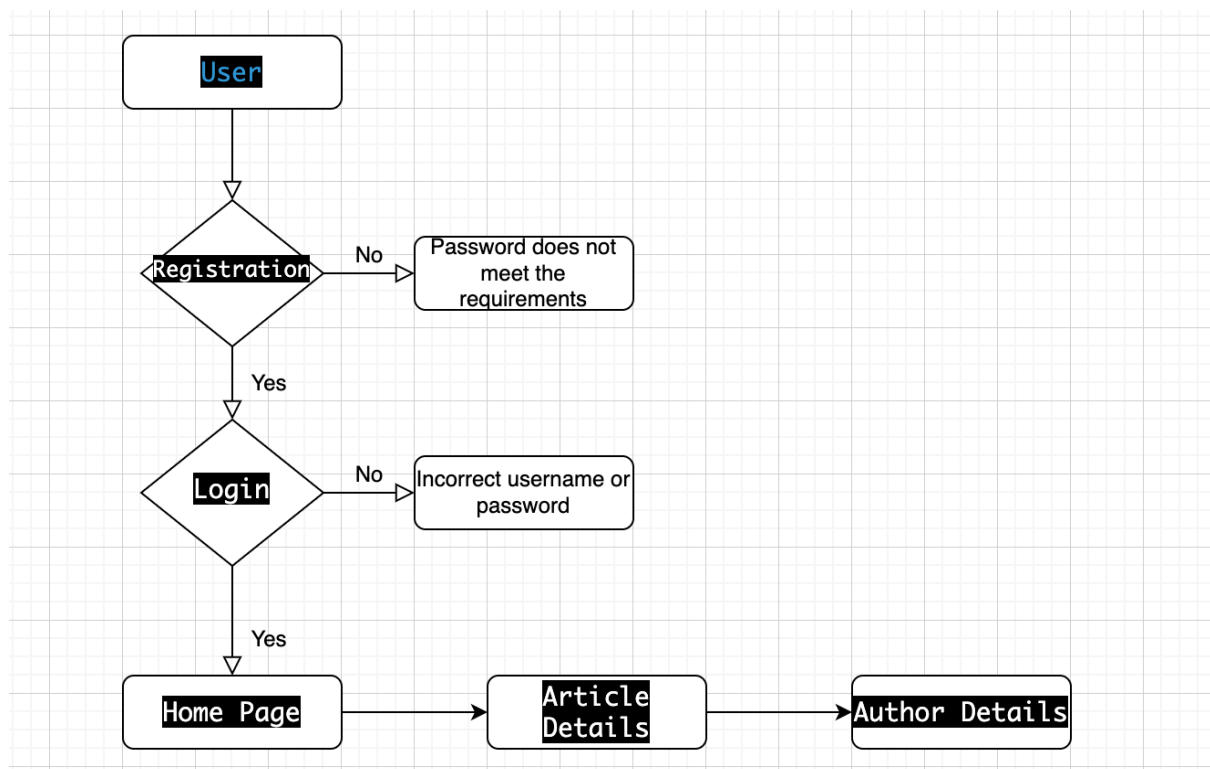


Fig. User operation flow chart

The blog application is designed with an array of features to enhance the experience of both blog creators and readers. Here are the key features of the application:

User Registration and Login

The application includes a secure user registration and login function. This feature enables users to create their own accounts, manage their personal details, and securely log in to access and manage their content.

Publishing Blog Posts

Once logged in, users have the ability to create and publish their own blog posts. This feature includes text editing capabilities, allowing users to compose their posts within the application itself.

Browsing Blog Posts

All visitors to the application, whether logged in or not, can browse the latest blog posts on the home page. This feature allows for easy discovery of new content and promotes engagement with various posts.

Responsive User Interface

Built with React, Redux, and Antd, the application's user interface is designed to be responsive and intuitive, providing an excellent user experience across various devices and screen sizes.

Scalability and Performance

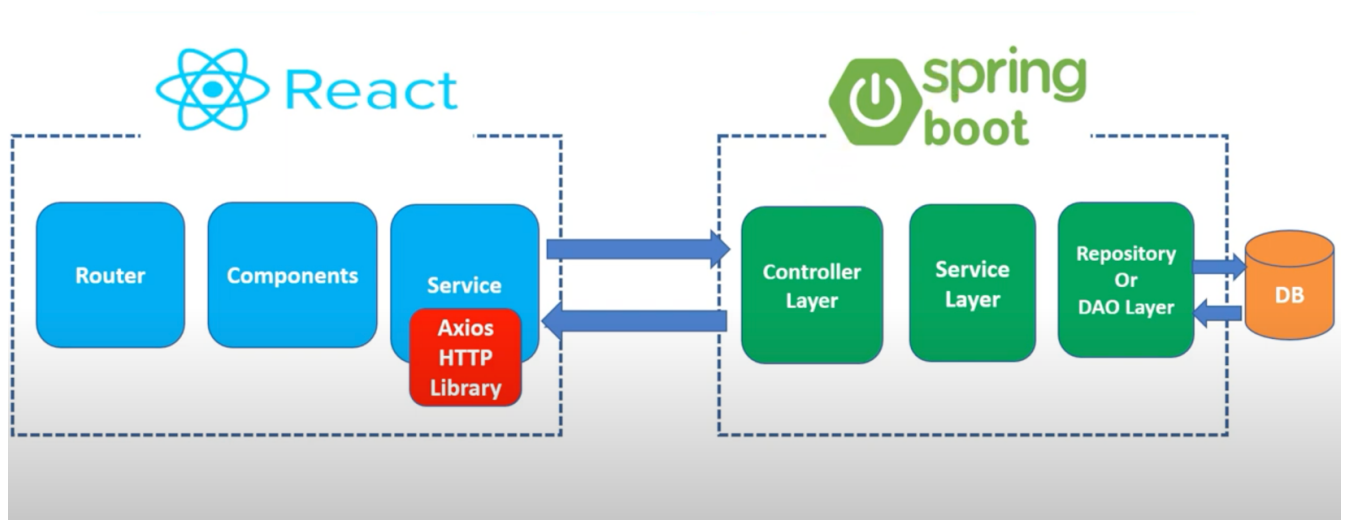
Leveraging the SpringBoot and MyBatis frameworks, along with AWS's load balancer and auto-scaling services, the application has been designed for excellent performance and scalability. This ensures that it can handle fluctuating traffic and user demands with ease.

Deployment on AWS Cloud Platform

To ensure high availability and seamless access, the application is deployed on the AWS Cloud Platform. This enables users to access the application anytime, anywhere.

These features collectively make the blog application a comprehensive and user-friendly platform for sharing and discovering blog posts.

Application Architecture



Backend Architecture

1. Technology Stack:

We have chosen the following technology stack to build our blog application:

- **Spring Boot:** Spring Boot is a rapid development framework based on the Spring framework. It provides a set of out-of-the-box features and conventions, greatly simplifying the development process of Java applications. Spring Boot features auto-configuration, embedded web servers, simplified dependency management, and more. It helps us quickly build stable and efficient backend services.
- **MyBatis:** MyBatis is an excellent Java persistence framework. It establishes a mapping between Java objects and database tables, providing flexible SQL queries and transaction management capabilities. MyBatis uses XML or annotation configurations to define SQL statements and mappings, making database operations

simple and intuitive. Its lightweight design and high performance make it a preferred framework for many Java developers.

- MariaDB: MariaDB is an open-source relational database management system and a fork of MySQL. It inherits many advantages of MySQL, including high performance, reliability, and extensive community support. It has good compatibility with MySQL and can be seamlessly replaced. MariaDB adopts modern storage engines such as InnoDB, providing robust transaction support and advanced data management features. As the database choice for our backend application, MariaDB offers stable and reliable data storage and management capabilities.

2. Architectural Design:

Our blog application adopts the classic three-tier architecture, including the presentation layer, business logic layer, and data access layer.

- Presentation Layer: The presentation layer is responsible for handling user requests and returning corresponding results. In our architecture, we use the Spring Boot framework to build RESTful APIs, which receive requests from the frontend through the HTTP protocol and forward them to the appropriate business logic layer for processing. By using RESTful APIs, we provide standardized interfaces that allow different clients (such as web and mobile applications) to interact with the backend easily.
- Business Logic Layer: The business logic layer handles the application's business rules and logic. In our architecture, we use service components to implement the business logic. Service components are responsible for receiving and processing requests from the presentation layer, including user authentication, executing business logic, invoking the data access layer, and more. They act as a bridge between the presentation layer and the data access layer, ensuring the correct execution of business logic.
- Data Access Layer: The data access layer is responsible for interacting with the database, performing data persistence and retrieval operations. In our architecture, we use MyBatis as the ORM framework, which allows us to define SQL statements and mappings through XML or annotations. This enables us to perform database operations in a simple and intuitive manner. The data access layer abstracts and encapsulates the underlying database details, providing an object-oriented way to perform database operations.

3. Feature Implementation:

Our blog application implements the following core features:

- **Homepage Browsing:** Users can browse the latest blog post list and view information such as the title, summary, and author of each post. This feature is implemented by invoking the corresponding interfaces in the business logic layer from the presentation layer. The business logic layer retrieves article data from the data access layer and returns the results to the presentation layer for display.
- **Login and Registration:** Users can log in by providing their username and password, and they can also register for new user accounts. This feature involves user authentication and storage of user information, which are handled in the business logic layer.
- **Article Posting:** Logged-in users can publish their own blog posts, including information such as the title, content, and tags. This feature is implemented by invoking the corresponding interfaces in the business logic layer from the presentation layer. The business logic layer stores the user-submitted article data in the database.
- **Article Details, Theme Details, and Author Details:** Users can retrieve detailed information about specific articles, themes, and authors by sending HTTP requests. These features involve querying the database for the relevant data in the business logic layer and returning the results via APIs to the presentation layer.

Frontend Architecture (React, Redux)

The front-end architecture of our application is designed to provide a seamless and user-friendly experience for various functionalities, including homepage browsing, login, registration, article posting, article details, theme details, and author details. The architecture is built using React, Redux for state management, Axios for network connectivity, and react-router for routing.

React: React is a JavaScript library for building user interfaces. It provides a component-based architecture, allowing us to break down the user interface into reusable and modular components. React efficiently updates and renders the components when there are changes, providing a fast and responsive user experience.

Redux: Redux is a state management library that works seamlessly with React. It provides a predictable state container that allows us to manage the application's global state in a

centralized manner. Redux helps in managing complex application states, making it easier to share data across components and ensure consistency throughout the application.

Axios: Axios is a popular JavaScript library used for making HTTP requests from the browser. It simplifies the process of handling asynchronous API calls and provides a clean and consistent interface for sending HTTP requests and handling responses. With axios, we can easily communicate with the server-side API to fetch and send data.

React Router: React Router is a routing library for React applications. It allows us to define different routes for different components and enables navigation between these components. With react-router, we can implement client-side routing, providing a seamless browsing experience by updating the UI without a page refresh.

Architecture Design:

Our front-end architecture follows a modular and component-based approach, ensuring code reusability, maintainability, and scalability. The key components and their responsibilities are as follows:

App Component: The App component serves as the entry point for our application. It sets up the overall structure of the application, including routing configuration and global state management using Redux.

Redux Store: The Redux store holds the global state of the application. It contains reducers, actions, and middleware to handle state updates, API calls, and asynchronous operations. The store provides data to the components and allows them to dispatch actions to modify the state.

Components: We have a set of components that handle specific functionalities:

Homepage: The homepage component displays a list of articles and allows users to browse through them. It fetches the data from the server using axios and renders the articles dynamically.

Login and Registration: These components provide a user-friendly interface for login and registration. They interact with the server-side API to handle user authentication and store the user's credentials.

Article Posting: This component allows users to create and post new articles. It includes a form for users to input the article details, and upon submission, it sends the data to the server using axios.

Article Details: This component displays the details of a specific article, including its content, author, and comments. It fetches the article data from the server and renders it dynamically.

Theme Details: The theme details component provides information about a particular theme or topic. It fetches the theme data from the server and renders it accordingly.

Author Details: This component displays information about a specific author, including their profile, bio, and other articles they have written. It fetches the author data from the server and renders it dynamically.

Redux Actions: Redux actions are responsible for triggering state updates. They include actions for fetching articles, updating user information, posting articles, and handling authentication.

Routing: We use react-router to define routes for different components. It enables navigation between different pages and ensures that the UI is updated accordingly based on the current route.

Database Design (MariaDB)

Why MariaDB?

MariaDB is an open-source relational database management system (RDBMS) that was developed as a community-driven fork of MySQL. It aims to be a drop-in replacement for MySQL, providing enhanced performance, scalability, and new features while maintaining a high level of compatibility with MySQL.

Key Features of MariaDB:

1. **Performance:** MariaDB is known for its excellent performance and scalability. It incorporates several performance optimizations and storage engines such as InnoDB, Aria, and MyRocks. These engines offer different trade-offs between

performance, reliability, and storage requirements, allowing users to choose the most suitable option for their specific use cases.

2. **Compatibility:** MariaDB is designed to be highly compatible with MySQL. It supports standard SQL syntax, and most applications and tools that work with MySQL can seamlessly transition to MariaDB without requiring significant modifications. The database engine, storage engines, connectors, and APIs are all compatible, making it easy for developers to migrate from MySQL to MariaDB.
3. **High Availability:** MariaDB provides features for ensuring high availability and fault tolerance. It supports replication, allowing data to be replicated across multiple database servers, providing redundancy and enabling load balancing. This enables improved performance and resilience against server failures.
4. **Security:** MariaDB offers robust security features to protect data and ensure its integrity. It supports authentication mechanisms such as password-based authentication, encryption of data in transit using SSL/TLS, and access control through user privileges and roles. These features help safeguard sensitive data and prevent unauthorized access.
5. **Community Support:** MariaDB has a vibrant and active open-source community that contributes to its development and provides support. The community actively maintains and updates the software, ensuring bug fixes, security patches, and new feature releases. Users can access documentation, forums, and community resources for assistance and collaboration.
6. **Extensibility:** MariaDB supports a wide range of plugins and extensions, allowing users to extend the functionality of the database system. These plugins cover areas such as authentication, storage engines, replication, and query optimization, providing flexibility to tailor the database to specific requirements.

Here is the table structure of our database:

access_token	article	theme	user
<p>access_token_id</p> <p>token</p> <p>user_id</p> <p>create_date</p>	<p>article_id</p> <p>channel_name</p> <p>theme_name</p> <p>site_name</p> <p>title</p> <p>content</p> <p>excerpt</p> <p>author</p> <p>avatar</p> <p>article_url</p> <p>view_count</p> <p>reply_count</p> <p>last_reply_author</p> <p>last_reply_time</p> <p>top</p> <p>good</p> <p>is_delete</p> <p>show_content</p> <p>create_date</p> <p>update_date</p> <p>remark</p> <p>crawler_article_id</p> <p>weight</p> <p>up</p> <p>down</p>	<p>theme_id</p> <p>theme_code</p> <p>channel_name</p> <p>theme_name</p> <p>theme_url</p> <p>theme_desc</p> <p>avatar_normal</p> <p>avatar_mini</p> <p>avatar_large</p> <p>is_delete</p> <p>create_date</p> <p>update_date</p>	<p>user_id</p> <p>username</p> <p>password</p> <p>email</p> <p>avatar</p> <p>signature</p> <p>user_url</p> <p>score</p> <p>website</p> <p>is_block</p> <p>is_delete</p> <p>role</p> <p>create_date</p> <p>update_date</p> <p>remark</p>

1. Table: `access_token`

- Design: This table stores access tokens associated with user authentication.
- Architecture: The table has an auto-incremented primary key `access_token_id` and columns for the token value, associated `user_id`, and `create_date`.

2. Table: `article`

- Design: This table represents articles published on a website.
- Architecture: The table has an auto-incremented primary key `article_id` and columns for various attributes like `channel_name`, `theme_name`, `title`, `content`, `author`, `view_count`, `reply_count`, etc. It also includes columns for timestamps such as `create_date` and `update_date`.

3. Table: `theme`

- Design: This table stores information about themes/categories for articles.

- Architecture: The table has an auto-incremented primary key `theme_id` and columns for attributes like `theme_code`, `channel_name`, `theme_name`, `theme_url`, `theme_desc`, etc. It includes columns for timestamps such as `create_date` and `update_date`.

4. Table: `user`

- Design: This table represents user information and accounts.
- Architecture: The table has an auto-incremented primary key `user_id` and columns for attributes such as `username`, `password`, `email`, `avatar`, `signature`, `user_url`, `score`, `website`, etc. It includes columns for timestamps such as `create_date` and `update_date`.

The database follows a relational model, where tables are interconnected using primary keys (`user_id`, `article_id`, `theme_id`) and foreign keys (not specified in the provided SQL statements). The tables are designed to store and manage data related to access tokens, articles, themes, and users.

The InnoDB storage engine is used, which provides features like transaction support and data integrity. The `CHARSET` used is `utf8mb4`, which supports a broader range of characters.

Overall, this database design allows for the storage and retrieval of data related to access tokens, articles, themes, and users, enabling functionality such as user authentication, article publication, categorization, and user management within an application or website.

User Interface Design

Homepage Layout

The homepage is the primary landing page for users and therefore designed for immediate interaction. It showcases the latest blog posts in a grid format for a clean, structured look. Each post in the grid includes a brief summary, the title, author details. A navigation bar at the top provides links to login, registration, and Create Article.

Blog Post Layout

Each blog post page is designed to focus on the content of the post. At the top, the post title is prominently displayed, followed by the author's name and the date of publication. The

main body of the blog post is displayed beneath these details, using typography that enhances readability.

Login and Registration Pages

For the login and registration pages, simplicity and ease of use were our primary design principles. Each page features a simple form with clear instructions and indications for each input field.

The registration page requires users to input their name, email, and password. Once users have registered, they are redirected to the login page.

The login page requires users to input their registered email and password. Once the users have logged in, they are redirected to the homepage.

Security Measures

Security Measures for AWS EC2

1. **Security Groups:** Security groups function as a virtual firewall for controlling traffic to and from EC2 instances. They allow you to set access rules based on IP addresses, protocols, and ports. To facilitate access from external IPs, we temporarily allowed all IPv4 addresses to access the blog page through the security group.
2. **IAM Roles:** Identity and Access Management (IAM) roles are used to authorize EC2 instances to access other AWS resources, helping to limit permissions and reduce security risks. We created an IAM role named 'guest' on our EC2 instance and set corresponding permissions for this role. However, the permissions are much less than those of the root user. The root user can delete the instance running the backend service, but the 'guest' role cannot, thus preventing disruption to the backend service.
3. **SSH Key Pairs:** SSH key pairs are used for remote logins to EC2 instances, offering higher security than password-based authentication. The '.pem' key is only kept by the person who launches the backend service, further enhancing security.

Security Measures for AWS RDS

1. Security Groups: Similar to EC2, RDS also uses security groups to control traffic into and out of database instances.
2. Database Identity and Access Management: RDS supports the management of IAM roles and database users, controlling who can access the database and their permissions.
3. Encryption: RDS supports data encryption, using SSL/TLS encryption during the data transmission and storage phases to protect data confidentiality.
4. Database Snapshots and Backups: RDS provides automatic backup and database snapshot functions, which can help protect our data and facilitate recovery.

Performance and Scalability Strategy

1. Caching: With increased traffic, we may consider implementing caching mechanisms to reduce database load and improve response time. Using Redis to cache frequently accessed data, such as blog posts, user profiles, and static content, can enhance application performance. This is achieved by directly providing cached data from memory.
2. Database Optimization: As part of the continuous program optimization process, we analyze and optimize database queries, create indices on frequently accessed columns, and correctly configure database connection pools to enhance database performance. We use AWS RDS performance monitoring tools to monitor and adjust database performance and use EXPLAIN statements to optimize queries, identifying potential bottlenecks.
3. Horizontal Scaling: We implement horizontal scaling to handle increased traffic and improve application availability. We use AWS auto-scaling to automatically add or remove EC2 instances based on traffic patterns and resource utilization. AWS Elastic Load Balancer is used to balance incoming traffic, distributing requests evenly across multiple instances.
4. Database Sharding or Partitioning: If the blog application generates a significant amount of data in the future, we may consider implementing database sharding or partitioning techniques, distributing data across multiple database instances or partitions based on certain criteria (such as user ID or date range). This can help improve database performance and scalability.

Worklog

Development Process

1. Backend Development Progress

Git commit history:

Commits on May 22, 2023		
Revise login logic-Lexi	556d79c	<>
terryishi committed last week		
Repair the problem of missing user avatar on the home page-Lexi	4a25cf3	<>
terryishi committed last week		
Revise login logic-Lexi	cd61a8d	<>
terryishi committed last week		
Revise login logic-Lexi	f62cc55	<>
terryishi committed last week		
Revise login logic-Lexi	40992a3	<>
terryishi committed last week		
Revise login logic-Lexi	938545f	<>
terryishi committed last week		
Revise login logic-Lexi	c1597c6	<>
terryishi committed last week		
Revise login logic-Lexi	da25a39	<>
terryishi committed last week		
Revise login logic-Lexi	3b61b27	<>
terryishi committed last week		
Commits on May 21, 2023		
Revise login logic-Lexi	4a7d0dc	<>
terryishi committed last week		
Add CROS conf-Lexi	74f14f1	<>
terryishi committed last week		
Revise pom-Lexi	70b5cc8	<>
terryishi committed last week		
Revise pom-Lexi	caaa561	<>
terryishi committed last week		
Revise pom-Lexi	f31182b	<>
terryishi committed last week		
Revise pom-Lexi	8140435	<>
terryishi committed last week		
Revise pom-Lexi	e983b7f	<>
terryishi committed last week		

2. Frontend Development Progress

Git commit history:

Commits on May 27, 2023		
Fix article nav title Jonathanwu916 committed 9 hours ago	d3f2863	<>
Commits on May 22, 2023		
Further changes Jonathanwu916 committed last week	c32211b	<>
Further changes Jonathanwu916 committed last week	44e6222	<>
Change title Jonathanwu916 committed last week	375bba2	<>
Bug fixes Jonathanwu916 committed last week	690ebe5	<>
Commits on May 21, 2023		
Bug fixes Jonathanwu916 committed last week	f7dda5f	<>
Update base url Jonathanwu916 committed last week	fa5c34e	<>
Implement react blog Jonathanwu916 committed last week	08444d2	<>
Commits on May 18, 2023		
create react app Jonathanwu916 committed last week	f7763f4	<>

Challenges Encountered and Solutions

In the process of deploying the backend application to the EC2 instance, some problems arose. We found that the back-end service could start normally on the instance, but the interface could not be debugged through. After troubleshooting in several aspects, we found that it was not a problem of the back-end service or the firewall. After carefully checking the settings of the security group, we found that it was the improper configuration of the security group and the lack of permission for the backend to listen to the port. So after adding the inbound rules for port 8080, the API interface returned to normal accordingly.

Testing and Quality Assurance

1. Start the backend service: In the local development environment, use IDEA to start the backend service. Make sure the backend service starts successfully and listens to the specified port.
2. Start the front-end application: Start the React application using VScode. Make sure the front-end application starts successfully and accesses the specified development server address.
3. Use front-end debugging tools: Open e.g. Chrome developer tools, check network requests, view front-end logs, debug JavaScript code, etc.
4. Test page interactions and functionality: Open the blog application in the browser and test the interactions and functionality of each page. For example, try operations such as logging in, registering, browsing posts, and publishing posts, and make sure they work as expected.
5. API testing with Postman: Open Postman, create API requests and send them to the back-end service for testing. You can test API interfaces such as login, register, get article list, create article, etc. and verify that they respond as expected.
6. Check logs and error messages: During testing, check the logs and error messages of back-end services and front-end applications to troubleshoot problems and debug. View log files or console output from back-end services and view error messages from front-end applications in the front-end debugging tool.
7. Iterate and fix issues: Iterate development and fixes based on test results. Make code adjustments, logic optimizations, or bug fixes based on the issues found, and re-test and validate.

Deployment Process

1. Preparing AWS Account and Console
Register a root user with the mailbox and enter the corresponding console (EC2 or RDS).
2. Setting up EC2 instance
Log in to the AWS Management Console and navigate to the EC2 Services page. Click "Launch Instance" to start the instance creation process.

Select an Amazon Machine Image (AMI) that represents the operating system and software stack you want to use in the instance.

Select the instance type that matches your performance and resource requirements. Instance types vary in terms of CPU, memory, storage, and network capacity. Here we choose the machine that is free to use.

Configure the details of the instance, including the number of instances, network settings, security groups, and other options.

Check your instance configuration and make any necessary adjustments.

Select an existing key pair or create a new one to securely access your instance using SSH (Secure Shell).

Start the instance and wait for it to start running. You will receive a public DNS name or IP address that you can use to connect to the instance.

Depending on the operating system, use SSH or RDP to access the instance. For Linux-based instances, use the private key associated with the key pair for SSH.

3. Configuring MariaDB Database on Amazon RDS

Sign in to the AWS Management Console and navigate to the Amazon RDS service page.

Choose "Create database" to start the database creation process.

Select the appropriate options, such as the database engine (MariaDB), version, and other configuration settings.

Specify the database instance details, including the instance identifier, username, and password.

Configure the instance size and storage capacity based on your workload requirements.

Set up networking and security settings, such as security groups, and access control.

Configure additional options like backup, monitoring, and maintenance settings.

Review the configuration details and confirm the creation of the database instance.

Wait for the database instance to be provisioned, which usually takes a few minutes.

Once the database instance is ready, use the provided endpoints and credentials to connect to the database instance using the graphical interface.

4. Storing static resources using AWS S3

1. Package the React application: In your local development environment, use a suitable bundling tool such as webpack or Parcel to package the React application

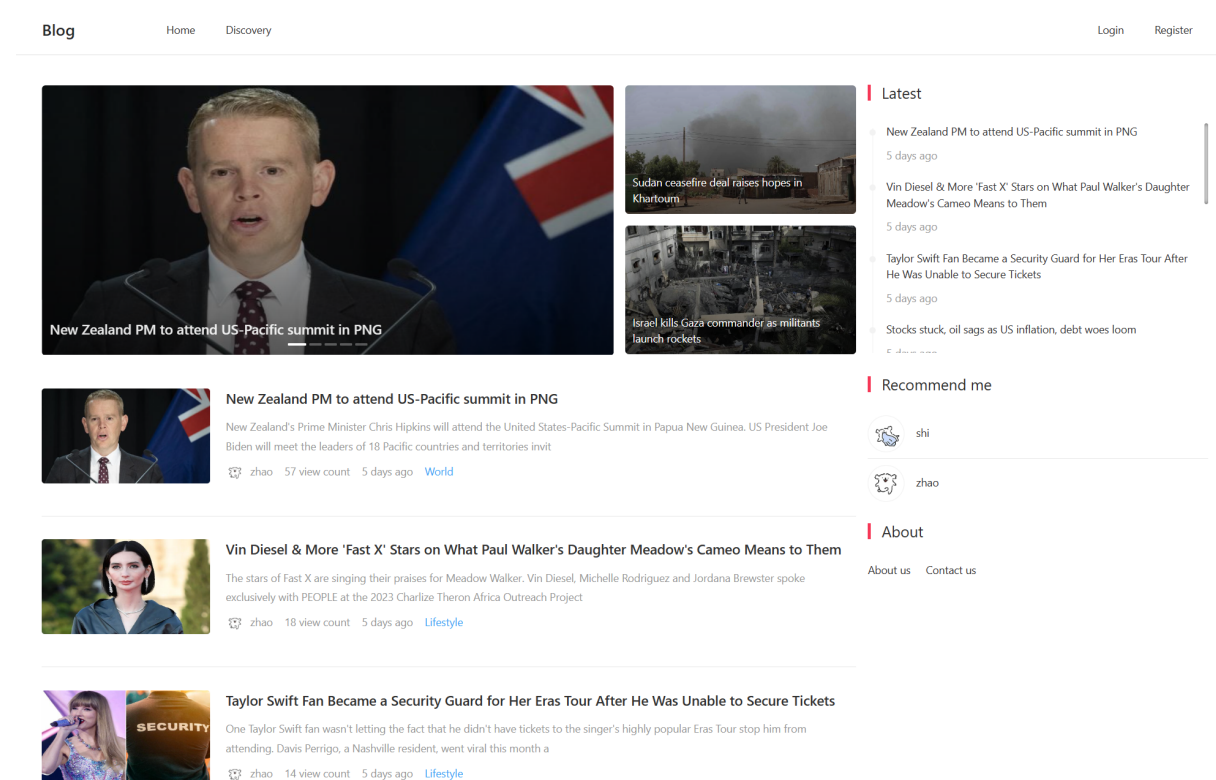
into static resource files. The bundling process will generate a build folder containing HTML, CSS, and JavaScript files.

2. Create an S3 bucket: Log in to the AWS Management Console, navigate to the S3 service page. Click the "Create Bucket" button, enter a unique bucket name, choose the appropriate region and other configuration options, and then click "Create Bucket" to complete the creation.
3. Configure bucket permissions: In the bucket page, click the "Permissions" tab. Select "Bucket Policy" and "Cross-Origin Resource Sharing (CORS)" and configure the appropriate access permissions and CORS policies as needed.
4. Upload files: Click the "Upload" button to upload the packaged static resource files to the S3 bucket. You can choose to upload the entire build folder or only the necessary files. Make sure to set the files to have public read access so that visitors can load and access them in the browser.
5. Configure static website hosting: In the bucket page, click the "Properties" tab. Select "Static website hosting," enable static website hosting, and set the index document (usually "index.html")

User manual

We have created a website that is intuitive and easy to use. In this section we will show how users should use the various features of the website, with screenshots to make it easier for the reader to understand.

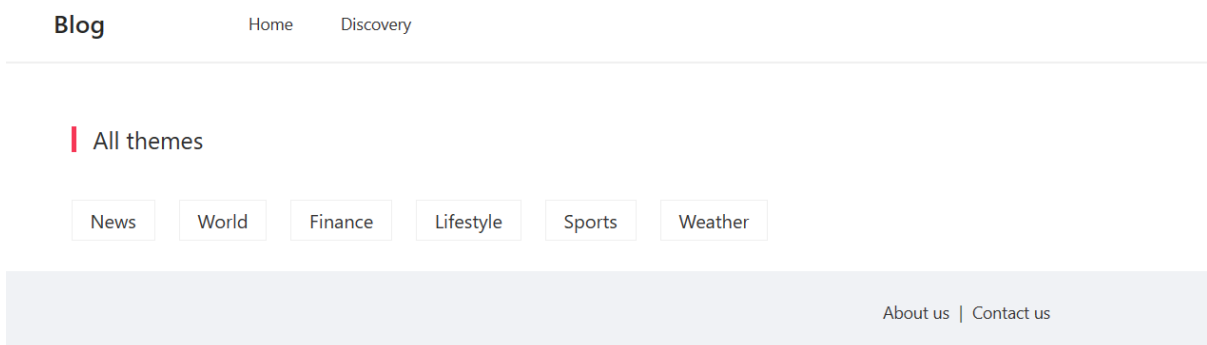
1. Open any browser (this article uses Microsoft Edge) and type `http://react-blog-1.s3-website-ap-northeast-1.amazonaws.com/` to open the website.



2. Click on the article title to see the details. And user can click 'Home' on any page to return to the home page



3. Click on 'Discovery' to view articles by different types.



4. Click on the type you want to view and the page will show all articles under that type.

Blog

Home

Discovery

| World



New Zealand PM to attend US-Pacific summit in PNG

New Zealand's Prime Minister Chris Hipkins will attend the United States-Pacific Summit in Papua New Guinea. US President Joe Biden will meet the leaders of 18 Pacific countries and territories invit

zhao 5 days ago



Israel kills Gaza commander as militants launch rockets

Israeli air strikes have killed the head of Islamic Jihad's rocket force in Gaza, part of an operation that has killed 25 people including women and children and been met with hundreds of rockets fire

zhao 5 days ago



Two dead after shooting at Mercedes plant in Germany

A suspect has been detained after a shooting at a Mercedes-Benz plant in southwestern Germany left two people dead, adding to pressure on Germany to tighten its already-strict gun laws. The suspect w

shi 5 days ago

5. Click on the author's name anywhere and you can see all articles by the same author.



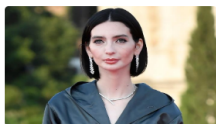
zhao



New Zealand PM to attend US-Pacific summit in PNG

New Zealand's Prime Minister Chris Hipkins will attend the United States-Pacific Summit in Papua New Guinea. US President Joe Biden will meet the leaders of 18 Pacific countries and territories invit

5 days ago • [World](#)



Vin Diesel & More 'Fast X' Stars on What Paul Walker's Daughter Meadow's Cameo Means to Them

The stars of Fast X are singing their praises for Meadow Walker. Vin Diesel, Michelle Rodriguez and Jordana Brewster spoke exclusively with PEOPLE at the 2023 Charlize Theron Africa Outreach Project

5 days ago • [Lifestyle](#)



Taylor Swift Fan Became a Security Guard for Her Eras Tour After He Was Unable to Secure Tickets

One Taylor Swift fan wasn't letting the fact that he didn't have tickets to the singer's highly popular Eras Tour stop him from attending. Davis Perrigo, a Nashville resident, went viral this month a

5 days ago • [Lifestyle](#)

6. To create an article, users will first need to register an account. Click on 'Register' in the top right corner of the page and enter your username, password and personal email to complete your registration

Register

×

* User Name

* Password

Email

Cancel

Register

7. Click on 'Login' in the top right corner of the page and enter your username and password to complete your login.

Login

×

* User Name

* Password

Cancel

login

8. After the user has successfully logged in, click on 'Create Article' in the top right corner and then the user can enter the title, content and image link in the corresponding fields on the page. Once the input is complete click on 'Submit'

* Title:

* Content:

[Edit](#) [Preview](#)

Please enter content

Avatar:

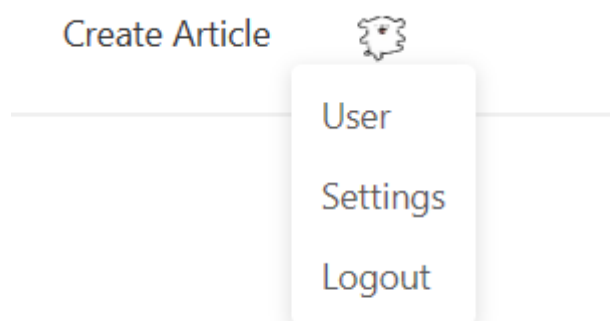
Excerpt:

Theme:

Please choose a theme

[Submit](#)

9. By clicking on the user's avatar in the top right corner and clicking on Settings, the user will be taken to the personal settings page. There are three types of settings that can be modified by the user.



Personal Settings

Basic Settings

Account Settings

Privacy Settings

Personal description:

This guy was lazy and left nothing behind

Personal Website:

+
Upload avatar

Submit

Personal Settings

Basic Settings

Account Settings

Privacy Settings

Old Password:

New Password:

New Password:

Submit

Personal Settings

Basic Settings

Account Settings

Privacy Settings

Who can see my posts:

Everyone

Who can see my comments:

Everyone

Submit

Conclusion

Project Outcome

Upon completion, the blog application project was successful in meeting the outlined goals and expectations. The application provides a dynamic and engaging platform where users can register, log in, create, and browse blog posts.

Future work

At present, the overall functionality of this blog website is relatively simple. In the future, we plan to add some useful features to the blog page. On the user profile page, we are considering adding a feature that allows users to upload avatars. This feature could enhance user experience and the personalized avatars could also add a sense of novelty for users. Also, in terms of security, we are considering the introduction of a token verification mechanism and encryption of user passwords to avoid plaintext passwords, protecting user safety while using the blog.

If the number of users increases in the future, we could also consider using AWS's Elastic Load Balancer (ELB) feature. ELB can automatically distribute incoming requests to backend targets based on traffic load, ensuring that requests are evenly distributed among available targets. ELB also has the ability to automatically detect faults and reroute traffic to available targets to achieve high availability and fault tolerance. This feature can improve the high availability of the application, ensuring that even in the face of large traffic, the user experience won't be compromised.

Restful API list

No.	Resource API	HTTP Method	Parameters	Description
1	/article/{id}	GET	@PathVariable Integer id	Get article details
2	/article	GET		Add new article
3	/articles	GET		List all articles
4	/register	POST	@RequestBody User	Register
5	/login	POST	@RequestBody User	Login
6	/theme/articles	GET	@RequestParam(value = "themeName")	Search articles by topic name
7	/themes	GET		Get all topics
8	/user/articles	GET	@RequestParam(value = "username")	Get the article according to the author
9	/users/{username}	GET	@PathVariable(value = "username")	Get user data based on user name

API 1: /article/{id}

Request URL:

http://ec2-13-113-190-100.ap-northeast-1.compute.amazonaws.com:8080/blog/article/5305

JSON response:

```
{"code":200,"description":"success","detail":{"articleId":5305,"channelName":null,"themeName":"Finance","siteName":null,"title":"Allkem in $15.7bn lithium merger with US-based Livent","content":"<p>One of the ASX's biggest lithium producers has agreed to a $15 billion merger of equals with a US counterpart, amid rising demand for the vital component in electric vehicle batteries.</p>\n<p>Brisbane-headquartered Allkem, which is focused on
```

lithium production in Argentina, said on Thursday it had agreed to an all-stock merger with the New York Stock Exchange-listed Livent.

The deal will create an entity among the top ranks of the world's battery-grade supply chain.

Its global footprint will include Western Australia, Canada and Argentina as well as processing plants close to customers in Japan, China and the United Kingdom to serve the world's fast-growing electric vehicle market.

Current Allkem shareholders would own 56 per cent of the combined company, which at recent stock prices would be worth \$US10.6 billion (\$A15.7 billion).

Livent president and chief executive Paul Graves, who will be CEO of the new company, said he was excited for what lay ahead, with the combined forces to help power the transition to electric vehicles, cleaner energy and a more sustainable future.

"We look forward to playing an even bigger role in the acceleration of decarbonisation policies by providing the lithium needed to enable this critical global energy shift," he said.

Mr Graves said the combined company would have the enhanced scale, product range, geographic coverage and execution capabilities to meet customers' growing demand for lithium chemicals.

"We will have a production presence in three major lithium geographies, that is Western Australia, Canada and South America," he told a webcast.

"Operationally, we expect to grow production capacity to grow to 250,000 tonnes per year by 2027."

Allkem chief executive Martin Perez de Solay, who will take an advisory role, called the deal transformational.

"We are bringing together two highly complementary businesses to create a leading global lithium chemicals company, building on Allkem's demonstrated track record of integration," he said.

Allkem was formed via the 2021 merger of ASX-listed lithium miners Galaxy Resources and Orocobre, a tie-up that made it the world's fifth-biggest lithium producer.

Mr de Solay said the latest merger would transform Allkem into a "truly global player, with listings in the US and Australia".

The combined entity, which is yet to be named, will have a primary listing on the New York Stock Exchange, with a secondary listing on the ASX via a CHESS Depository Interests (CDI).

Its corporate headquarters will be in North America and current Allkem non-executive chairman Peter Coleman will be its chairman.

Philadelphia-headquartered Livent excels in lithium processing technology, while Allkem has complementary expertise in conventional brine-based lithium extraction, the companies said.

They expect the merger will save \$US125 million a year plus \$US200 million in one-off savings, due in part to how close together some of the two companies' assets are in Argentina and Quebec.

Allkem also has operations in Australia, mining the lithium ore known as spodumene concentrate at Mt Cattlin, WA, for export to Asia.

RBC Capital Markets analyst Kaan Peker said RBC saw the merger as value accretive and raised its price target

on Allkem by about 11 per cent to \$14. Based on the company's last closing prices, he estimated the merger had a seven per cent premium for Allkem shareholders.

The companies hope to complete the deal this calendar year.

"One of the ASX's biggest lithium producers has agreed to a \$15 billion merger of equals with a US counterpart, amid rising demand for the vital component in electric vehicle batteries."

Brisbane-headq", "author": "zhao", "avatar": "https://s.yimg.com/ny/api/res/1.2/IW71XiPAQBSYEdFcEGrPMw--/YXBwaWQ9aGlnaGxhbmRlcj3PTk2MDtoPTU0MDtjZj13ZWJw/https://media.zenfs.com/en/aap.com.au/9bfd7b2c186766ab4c71bfbf436f2de2", "articleUrl": null, "viewCount": 28, "replyCount": 0, "lastReplyAuthor": null, "lastReplyTime": null, "top": false, "good": false, "showContent": true, "createDate": 1684720907000, "updateDate": null, "remark": null, "crawlerArticleId": null, "weight": 0.0, "up": 0, "down": 0, "user": {"userId": 5156, "username": "zhao", "password": null, "email": null, "avatar": "https://pic4.zhimg.com/v2-ba57f7a5bb4f33ac57c2ba89e29af2a7_b.webp", "signature": null, "userUrl": null, "score": null, "website": null, "role": null, "createDate": null, "updateDate": null, "remark": null, "block": null, "delete": null}, "delete": false}}

API 2: /article

Request URL:

http://ec2-13-113-190-100.ap-northeast-1.compute.amazonaws.com:8080/blog/article

JSON response:

```
{
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    "siteName": null,
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    "content": "<p>123</p>\n",
    "excerpt": "123",
    "author": "shi",
    "avatar": "https://s.yimg.com/ny/api/res/1.2/ZiTrh1WFOUmSH1.F4rFzQ--/YXBwaWQ9aGlnaGxhbmRlcj3PTcwNTtoPTM5Nw--/https://media.zenfs.com/en/aap.com.au/f8b39a1462a3d50355c5d3562582928b",
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    "viewCount": null,
    "replyCount": null,
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    "crawlerArticleId": null,
    "weight": null,
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    "down": null,
    "user": null,
    "delete": null
  }
}
```

API 3: /articles

Request URL:

http://ec2-13-113-190-100.ap-northeast-1.compute.amazonaws.com:8080/blog/articles

JSON response:

```
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        "siteName": null,
        "title": "New Zealand PM to attend US-Pacific summit in PNG",
        "content": null,
        "excerpt": "New Zealand's Prime Minister Chris Hipkins will attend the United States-Pacific Summit in Papua"
      }
    ]
  }
}
```


New Guinea.\n\nUS President Joe Biden will meet the leaders of 18 Pacific countries and territories

invit","author":"zhao","avatar":"https://s.yimg.com/ny/api/res/1.2/v8piQkTUMzOf4V8uQ2RCxA--/YXBwaWQ9aGlnaGxhbmRlcjt3PTcwNTtoPTM5Nw--/https://media.zenfs.com/en/aap.com.au/81f4e0d919f32411edad47b6916a0ab0","articleUrl":null,"viewCount":57,"replyCount":0,"lastReplyAuthor":null,"lastReplyTime":null,"top":false,"good":false,"showContent":true,"createDate":1684721694000,"updateDate":null,"remark":null,"crawlerArticleId":null,"weight":0.0,"up":0,"down":0,"user":{"userId":5156,"username":"zhao","password":null,"email":null,"avatar":"https://pic4.zhimg.com/v2-ba57f7a5bb4f33ac57c2ba89e29af2a7_b.webp","signature":null,"userUrl":null,"score":null,"website":null,"role":null,"createDate":null,"updateDate":null,"remark":null,"block":null,"delete":null},"delete":false},{ "articleId":5308,"channelName":null,"themeName":"Lifestyle","siteName":null,"title":"Vin Diesel & More 'Fast X' Stars on What Paul Walker's Daughter Meadow's Cameo Means to Them","content":null,"excerpt":"The stars of Fast X are singing their praises for Meadow Walker.\n\nVin Diesel, Michelle Rodriguez and Jordana Brewster spoke exclusively with PEOPLE at the 2023 Charlize Theron Africa Outreach Project

","author":"zhao","avatar":"https://s.yimg.com/ny/api/res/1.2/RfXAA5cQw2EkJNJM6eAM6A--/YXBwaWQ9aGlnaGxhbmRlcjt3PTcwNTtoPTQ3MA--/https://media.zenfs.com/en/people_218/8d8539ed4465be3a1aa086795b81ef0c","articleUrl":null,"viewCount":18,"replyCount":0,"lastReplyAuthor":null,"lastReplyTime":null,"top":false,"good":false,"showContent":true,"createDate":1684721620000,"updateDate":null,"remark":null,"crawlerArticleId":null,"weight":0.0,"up":0,"down":0,"user":{"userId":5156,"username":"zhao","password":null,"email":null,"avatar":"https://pic4.zhimg.com/v2-ba57f7a5bb4f33ac57c2ba89e29af2a7_b.webp","signature":null,"userUrl":null,"score":null,"website":null,"role":null,"createDate":null,"updateDate":null,"remark":null,"block":null,"delete":null},"delete":false},{ "articleId":5307,"channelName":null,"themeName":"Lifestyle","siteName":null,"title":"Taylor Swift Fan Became a Security Guard for Her Eras Tour After He Was Unable to Secure Tickets","content":null,"excerpt":"One Taylor Swift fan wasn't letting the fact that he didn't have tickets to the singer's highly popular Eras Tour stop him from attending.\n\nDavis Perrigo, a Nashville resident, went viral this month

a","author":"zhao","avatar":"https://s.yimg.com/ny/api/res/1.2/msihuPd1LXg_WpcuOrzGKw--/YXBwaWQ9aGlnaGxhbmRlcjt3PTcwNTtoPTQ3MA--/https://media.zenfs.com/en/people_218/1b2b56370fa0b324a443dd913f07767d","articleUrl":null,"viewCount":14,"replyCount":0,"lastReplyAuthor":null,"lastReplyTime":null,"top":false,"good":false,"showContent":true,"createDate":1684721406000,"updateDate":null,"remark":null,"crawlerArticleId":null,"weight":0.0,"up":0,"down":0,"user":{"userId":5156,"username":"zhao","password":null,"email":null,"avatar":"https://pic4.zhimg.com/v2-ba57f7a5bb4f33ac57c2ba89e29af2a7_b.webp","signature":null,"userUrl":null,"score":null,"website":null,"role":null,"createDate":null,"updateDate":null,"remark":null,"

block":null,"delete":null},"delete":false},{ "articleId":5306,"channelName":null,"themeName":"Finance","siteName":null,"title":"Stocks stuck, oil sags as US inflation, debt woes loom","content":null,"excerpt":"Stocks have been lethargic and oil has slid ahead of United States consumer price data that could damage hopes for interest rate cuts later this year, while President Joe Biden's failure to break a

de","author":"zhao","avatar":"https://s.yimg.com/ny/api/res/1.2/tER5D8EpXOqZQecIHgsjSw--/YXBwaWQ9aGlnaGxhbmRlcj13PTk2MDtoPTU0MDtjZj13ZWJw/https://media.zenfs.com/en/aap.com.au/09c0a209bf53a9d9ebf6d51b26e5b8c9","articleUrl":null,"viewCount":35,"replyCount":0,"lastReplyAuthor":null,"lastReplyTime":null,"top":false,"good":false,"showContent":true,"createDate":1684721055000,"updateDate":null,"remark":null,"crawlerArticleId":null,"weight":0.0,"up":0,"down":0,"user":{"userId":5156,"username":"zhao","password":null,"email":null,"avatar":"https://pic4.zhimg.com/v2-ba57f7a5bb4f33ac57c2ba89e29af2a7_b.webp","signature":null,"userUrl":null,"score":null,"website":null,"role":null,"createDate":null,"updateDate":null,"remark":null,"block":null,"delete":null},"delete":false},{ "articleId":5305,"channelName":null,"themeName":"Finance","siteName":null,"title":"Allkem in \$15.7bn lithium merger with US-based Livent","content":null,"excerpt":"One of the ASX's biggest lithium producers has agreed to a \$15 billion merger of equals with a US counterpart, amid rising demand for the vital component in electric vehicle

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2","author":"zhao","avatar":"https://s.yimg.com/ny/api/res/1.2/IGLY58oR_8_8HgdGPpUOXA--/YXBwaWQ9aGlnaGxhbmRlcj13PTcwNTtoPTM5Nw--/https://media.zenfs.com/en/aap.com.au/3966cf08d88662c835f1e0b4a109d492","articleUrl":null,"viewCount":4,"replyCount":0,"lastReplyAuthor":null,"lastReplyTime":null,"top":false,"good":false,"showContent":true,"createDate":1684720802000,"updateDate":null,"remark":null,"crawlerArticleId":null,"weight":0.0,"up":0,"down":0,"user":{"userId":5156,"username":"zhao","password":null,"email":null,"avatar":"https

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Mercedes-Benz plant in southwestern Germany left two people dead, adding to pressure on
Germany to tighten its already-strict gun laws.\n\nThe suspect
w","author":"shi","avatar":"https://s.yimg.com/ny/api/res/1.2/8xrLV_f6uhmNGAx_Q151xQ--/Y
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"up":0,"down":0,"user":{"userId":1,"username":"shi","password":null,"email":null,"avatar":"http
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```

API 4: /register

Request URL:

<http://ec2-13-113-190-100.ap-northeast-1.compute.amazonaws.com:8080/blog/register>

JSON response :

```
{"code":200,"description":"success","detail":{"avatar":"https://www.keaitupian.cn/cjp/c/pic/frombd/2/253/1141464738/3718995333.jpg","username":"admin111"}}
```

API 5: /login

Request URL:

<http://ec2-13-113-190-100.ap-northeast-1.compute.amazonaws.com:8080/blog/login>

JSON response :

```
{"code":200,"description":"success","detail":{"avatar":"https://pic2.zhimg.com/v2-03c50d2178c38fa1f26162abce0f2731\_b.webp","username":"shi"}}
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API 6: /theme/articles

Request URL:

<http://ec2-13-113-190-100.ap-northeast-1.compute.amazonaws.com:8080/blog/theme/articles?themeName=Finance&pageNo=1>

JSON response:

```
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batteries.\n\nBrisbane-headq", "author": "zhao", "avatar": "<https://s.yimg.com/ny/api/res/1.2/IW71XiPAQBSYEdFcEGrPMw--/YXBwaWQ9aGlnaGxhbmRlcjt3PTk2MDtoPTU0MDtjZj13ZWJw/https://media.zenfs.com/en/aap.com.au/9bfd7b2c186766ab4c71bfbf436f2de2>", "articleUrl": null, "viewCount": 32, "replyCount": 0, "lastReplyAuthor": null, "lastReplyTime": null, "top": false, "good": false, "showContent": true, "createDate": 1684720907000, "updateDate": null, "remark": null, "crawlerArticleId": null, "weight": 0.0, "up": 0, "down": 0, "user": {"userId": 5156, "username": "zhao", "password": null, "email": null, "avatar": "https://pic4.zhimg.com/v2-ba57f7a5bb4f33ac57c2ba89e29af2a7_b.webp", "signature": null, "userUri": null, "score": null, "website": null, "role": null, "createDate": null, "updateDate": null, "remark": null, "block": null, "delete": null}, "delete": false}, {"first": true, "last": true}]}

API 7: /themes

Request URL:

<http://ec2-13-113-190-100.ap-northeast-1.compute.amazonaws.com:8080/blog/themes>

JSON response:

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API 8: /user/articles

Request URL:

<http://ec2-13-113-190-100.ap-northeast-1.compute.amazonaws.com:8080/blog/user/articles?username=zhao&pageNo=1>

JSON

```
response:{"code":200,"description":"success","detail":{"number":1,"size":20,"totalPages":1,"totalCount":10,"content":[{"articleId":5309,"channelName":null,"themeName":"World","siteName":null,"title":"New Zealand PM to attend US-Pacific summit in PNG","content":null,"excerpt":"New Zealand's Prime Minister Chris Hipkins will attend the United States-Pacific Summit in Papua New Guinea.\n\nUS President Joe Biden will meet the leaders of 18 Pacific countries and territories invit","author":"zhao","avatar":"https://s.yimg.com/ny/api/res/1.2/v8piQkTUMzOf4V8uQ2RCxA--/YXBwaWQ9aGlnaGxhbmRlcjt3PTcwNTtoPTM5Nw--/https://media.zenfs.com/en/aap.com.au/81f4e0d919f32411edad47b6916a0ab0","articleUrl":null,"viewCount":59,"replyCount":0,"lastReplyAuthor":null,"lastReplyTime":null,"top":false,"good":false,"showContent":true,"createDate":1684721694000,"updateDate":null,"remark":null,"crawlerArticleId":null,"weight":0.0,"up":0,"down":0,"user":{"userId":5156,"username":"zhao","password":null,"email":null,"avatar":"https://pic4.zhimg.com/v2-ba57f7a5bb4f33ac57c2ba89e29af2a7_b.webp","signature":null,"userUrl":null,"score":null,"website":null,"role":null,"createDate":null,"updateDate":null,"remark":null,"block":null,"delete":null},"delete":false},{"articleId":5308,"channelName":null,"themeName":"Lifestyle","siteName":null,"title":"Vin Diesel & More 'Fast X' Stars on What Paul Walker's Daughter Meadow's Cameo Means to Them","content":null,"excerpt":"The stars of Fast X are singing their praises for Meadow Walker.\n\nVin Diesel, Michelle Rodriguez and Jordana Brewster spoke exclusively with PEOPLE at the 2023 Charlize Theron Africa Outreach Project","author":"zhao","avatar":"https://s.yimg.com/ny/api/res/1.2/RFxAA5cQw2EkJNJM6eAM6A--/YXBwaWQ9aGlnaGxhbmRlcjt3PTcwNTtoPTQ3MA--/https://media.zenfs.com/en/people_218/8d8539ed4465be3a1aa086795b81ef0c","articleUrl":null,"viewCount":18,"replyCount":0,"lastReplyAuthor":null,"lastReplyTime":null,"top":false,"good":false,"showContent":true,"createDate":1684721620000,"updateDate":null,"remark":null,"crawlerArticleId":null,"weight":0.0,"up":0,"down":0,"user":{"userId":5156,"username":"zhao","password":null,"email":null,"avatar":"https://pic4.zhimg.com/v2-ba57f7a5bb4f33ac57c2ba89e29af2a7_b.webp","signature":null,"userUrl":null,"score":null,"website":null,"role":null,"createDate":null,"updateDate":null,"remark":null,"block":null,"delete":null},"delete":false},{"articleId":5307,"channelName":null,"themeName":"Lifestyle","siteName":null,"title":"Taylor Swift Fan Became a Security Guard for Her Eras Tour After He Was Unable to Secure Tickets","content":null,"excerpt":"One Taylor Swift fan wasn't letting the fact that he didn't have tickets to the singer's highly popular Eras Tour stop him
```

from attending.\n\nDavis Perrigo, a Nashville resident, went viral this month

a","author":"zhao","avatar":"https://s.yimg.com/ny/api/res/1.2/msihuPd1LXg_WpcuOrzGKw--/YXBwaWQ9aGlnaGxhbmRlcjt3PTcwNTtoPTQ3MA--/https://media.zenfs.com/en/people_218/1b2b56370fa0b324a443dd913f07767d","articleUrl":null,"viewCount":14,"replyCount":0,"lastReplyAuthor":null,"lastReplyTime":null,"top":false,"good":false,"showContent":true,"createDate":1684721406000,"updateDate":null,"remark":null,"crawlerArticleId":null,"weight":0.0,"up":0,"down":0,"user":{"userId":5156,"username":"zhao","password":null,"email":null,"avatar":"https://pic4.zhimg.com/v2-ba57f7a5bb4f33ac57c2ba89e29af2a7_b.webp","signature":null,"userUrl":null,"score":null,"website":null,"role":null,"createDate":null,"updateDate":null,"remark":null,"block":null,"delete":null},"delete":false},"articleId":5306,"channelName":null,"themeName":"Finance","siteName":null,"title":"Stocks stuck, oil sags as US inflation, debt woes loom","content":null,"excerpt":"Stocks have been lethargic and oil has slid ahead of United States consumer price data that could damage hopes for interest rate cuts later this year, while President Joe Biden's failure to break a

de","author":"zhao","avatar":"https://s.yimg.com/ny/api/res/1.2/tER5D8EpXOqZQeclHgsjSw--/YXBwaWQ9aGlnaGxhbmRlcjt3PTk2MDtoPTU0MDtjZj13ZWJw/https://media.zenfs.com/en/aap.com.au/09c0a209bf53a9d9ebf6d51b26e5b8c9","articleUrl":null,"viewCount":37,"replyCount":0,"lastReplyAuthor":null,"lastReplyTime":null,"top":false,"good":false,"showContent":true,"createDate":1684721055000,"updateDate":null,"remark":null,"crawlerArticleId":null,"weight":0.0,"up":0,"down":0,"user":{"userId":5156,"username":"zhao","password":null,"email":null,"avatar":"https://pic4.zhimg.com/v2-ba57f7a5bb4f33ac57c2ba89e29af2a7_b.webp","signature":null,"userUrl":null,"score":null,"website":null,"role":null,"createDate":null,"updateDate":null,"remark":null,"block":null,"delete":null},"delete":false},"articleId":5305,"channelName":null,"themeName":"Finance","siteName":null,"title":"Allkem in \$15.7bn lithium merger with US-based Livent","content":null,"excerpt":"One of the ASX's biggest lithium producers has agreed to a \$15 billion merger of equals with a US counterpart, amid rising demand for the vital component in electric vehicle

batteries.\n\nBrisbane-headq","author":"zhao","avatar":"https://s.yimg.com/ny/api/res/1.2/IW71XiPAQBSYEdFcEGrPMw--/YXBwaWQ9aGlnaGxhbmRlcjt3PTk2MDtoPTU0MDtjZj13ZWJw/https://media.zenfs.com/en/aap.com.au/9bfd7b2c186766ab4c71bfbf436f2de2","articleUrl":null,"viewCount":32,"replyCount":0,"lastReplyAuthor":null,"lastReplyTime":null,"top":false,"good":false,"showContent":true,"createDate":1684720907000,"updateDate":null,"remark":null,"crawlerArticleId":null,"weight":0.0,"up":0,"down":0,"user":{"userId":5156,"username":"zhao","password":null,"email":null,"avatar":"https://pic4.zhimg.com/v2-ba57f7a5bb4f33ac57c2ba89e29af2a7_b.webp","signature":null,"userUrl":null,"score":null,"website":null,"role":null,"createDate":null,"updateDate":null,"remark":null,"block":null,"delete":null},"delete":false},"articleId":5304,"channelName":null,"themeName":"Sports","siteName":null,"title":"Nadal out of French Open,

expects 2024 to be final year", "content": null, "excerpt": "Rafael Nadal has admitted he is staring at the end of his tennis career after announcing he will miss the French Open and the majority of the season ahead of what he expects to be a farewell tour in

2", "author": "zhao", "avatar": "https://s.yimg.com/ny/api/res/1.2/IGLY58oR_8_8HgdGPpUOXA--/YXBwaWQ9aGlnaGxhbmRlcj3PTcwNTtoPTM5Nw--/https://media.zenfs.com/en/aap.com.au/3966cf08d88662c835f1e0b4a109d492", "articleUrl": null, "viewCount": 4, "replyCount": 0, "lastReplyAuthor": null, "lastReplyTime": null, "top": false, "good": false, "showContent": true, "createDate": 1684720802000, "updateDate": null, "remark": null, "crawlerArticleId": null, "weight": 0.0, "up": 0, "down": 0, "user": {"userId": 5156, "username": "zhao", "password": null, "email": null, "avatar": "https://pic4.zhimg.com/v2-ba57f7a5bb4f33ac57c2ba89e29af2a7_b.webp", "signature": null, "userUrl": null, "score": null, "website": null, "role": null, "createDate": null, "updateDate": null, "remark": null, "block": null, "delete": null}, "delete": false}, {"articleId": 5303, "channelName": null, "themeName": "Lifestyle", "siteName": null, "title": "Trailblazing star of Oscar-winning film to be honoured by Ulster University", "content": null, "excerpt": "The trailblazing Belfast-born star of an Oscar-winning film is to be honoured by Ulster University.\n\nActor James Martin was part of the cast of the short film An Irish Goodbye which swept the major

aw", "author": "zhao", "avatar": "https://s.yimg.com/ny/api/res/1.2/EZCrBE1huVdNZcyB1GBBkQ--/YXBwaWQ9aGlnaGxhbmRlcj3PTcwNTtoPTM5Nw--/https://media.zenfs.com/en/snappa_entertainment_819/1ff71465a626cdaf062fcc7969ca155", "articleUrl": null, "viewCount": 6, "replyCount": 0, "lastReplyAuthor": null, "lastReplyTime": null, "top": false, "good": false, "showContent": true, "createDate": 1684720709000, "updateDate": null, "remark": null, "crawlerArticleId": null, "weight": 0.0, "up": 0, "down": 0, "user": {"userId": 5156, "username": "zhao", "password": null, "email": null, "avatar": "https://pic4.zhimg.com/v2-ba57f7a5bb4f33ac57c2ba89e29af2a7_b.webp", "signature": null, "userUrl": null, "score": null, "website": null, "role": null, "createDate": null, "updateDate": null, "remark": null, "block": null, "delete": null}, "delete": false}, {"articleId": 5301, "channelName": null, "themeName": "Sports", "siteName": null, "title": "Cameron beats Taylor in showdown of boxing champions", "content": null, "excerpt": "Katie Taylor's long-awaited Irish homecoming has ended in her first professional loss after England's Chantelle Cameron won the showdown of undisputed and undefeated boxing champions by majority

decis", "author": "zhao", "avatar": "https://s.yimg.com/ny/api/res/1.2/trUk6PcmIXe37db7qeFk0w--/YXBwaWQ9aGlnaGxhbmRlcj3PTk2MDtoPTU0MDtjZj13ZWJw/https://media.zenfs.com/en/aap.com.au/bd0ca4029be30a5d708f5ae1d446ae73", "articleUrl": null, "viewCount": 2, "replyCount": 0, "lastReplyAuthor": null, "lastReplyTime": null, "top": false, "good": false, "showContent": true, "createDate": 1684720298000, "updateDate": null, "remark": null, "crawlerArticleId": null, "weight": 0.0, "up": 0, "down": 0, "user": {"userId": 5156, "username": "zhao", "password": null, "email": null, "avatar": "https://pic4.zhimg.com/v2-ba57f7a5bb4f33ac57c2ba89e29af2a7_b.webp", "signature": null, "userUrl": null, "score": null, "website": null, "role": null, "createDate": null, "updateDate": null, "r

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a week-long ceasefire raised hopes of a pause in
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children and been met with hundreds of rockets
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//pic4.zhimg.com/v2-ba57f7a5bb4f33ac57c2ba89e29af2a7_b.webp","signature":null,"userUr
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API 9: /users/{username}

Request URL:

<http://ec2-13-113-190-100.ap-northeast-1.compute.amazonaws.com:8080/blog/users/shi>

JSON response:

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{"code":200,"description":"success","detail":{"userId":1,"username":"shi","password":"123","e
mail":"123@qq.com","avatar":"https://pic2.zhimg.com/v2-03c50d2178c38fa1f26162abce0f27
31_b.webp","signature":"This guy was lazy and left nothing

```

behind","userUrl":"/user/shi","score":0,"website":null,"role":null,"createDate":null,"updateDate":null,"remark":null,"block":false,"delete":false}}