Monitoring Project - UserService Module Contribution

# Summary

This contribution delivers a complete UserService module as part of the Monitoring system, providing essential backend APIs to support frontend dashboard functionalities.

# Features

- RESTful APIs built with Gin framework  
- MongoDB integration via environment variables  
- Modular architecture (routes, controllers, models, utils)  
- Email service integration using SMTP  
- FCM token management  
- Ready for expansion with AWS services (S3, SNS)

# ⚙️ Setup Instructions

## Prerequisites

- Go 1.18+  
- MongoDB (Local or Atlas)  
- (Optional) AWS CLI for future enhancements

## Installation Steps

1. Clone the repository:

git clone https://github.com/rahul-chaube/monitoring.git  
 cd monitoring

2. Copy `.env` file and configure MongoDB URI and SMTP credentials.

3. Install dependencies:

go mod tidy

4. Start the server:

go run main.go

# 🚀 API Endpoints

* 1️⃣ User Registration - POST /user/register - Registers a new user.
* 2️⃣ User Login - POST /user/login - Authenticate user with email and password.
* 3️⃣ Store Device Token - POST /user/device-token - Update user's FCM token.
* 4️⃣ Get User by ID - GET /user/{id} - Fetch user details.
* 5️⃣ Send Test Email - GET /user/send-test-email - Trigger a test email.
* 6️⃣ Send Forwarding Email - POST /user/send-forwarding-email - Sends a custom HTML-formatted email.

\_For detailed request/response samples, refer to the Postman collection.\_

# 📂 Postman Collection

• Use: Monitoring\_UserService\_APIs\_with\_Welcome\_Email.postman\_collection.json  
• Set {{base\_url}} to your deployed server (e.g., http://<EC2-IP>:8080)

# 🚀 Deployment Guide (AWS EC2)

## Prerequisites

- AWS EC2 instance (Amazon Linux)  
- Port 8080 open in Security Group  
- monitor-ec2.pem key file  
- Go 1.18+ installed  
- MongoDB URI & SMTP credentials ready

## Steps

ssh -i "monitor-ec2.pem" ec2-user@<EC2-IP>

sudo yum update -y

sudo yum install golang -y

git clone https://github.com/rahul-chaube/monitoring.git

cd monitoring

go mod tidy

go run main.go

nohup go run main.go & (optional)

• Ensure port 8080 is open in AWS security group.  
• Test: http://<EC2-IP>:8080/user/send-test-email  
• Share: 'Deployed UserService API on: http://<EC2-IP>:8080'

# ✅ Notes

• Ensure .env is correctly set before running.

• Use Postman for API testing.

• Coordinate with frontend team for Dashboard API consumption.

• For enhancements, contact backend team.

• User registration auto-triggers a welcome email using an HTML template.