KONGU ENGINEERING COLLEGE

(Autonomous)

PERUNDURAI, ERODE-638060

DEPARTMENT OF INFORMATION TECHNOLOGY

20ITT44-WEB TECHNOLOGY

PROJECT REPORT

PROJECT TITLE: FREELANCER EXPENSE TRACKER

SUBMITTED BY,
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23ITR016

FREELANCER EXPENSE TRACKER

OBJECTIVES:

- The objective of this project is to design and develop a secure and user-friendly
 Freelancer Expense Tracker System using the Angular framework for the
 frontend and MongoDB-based backend for managing expense records, user
 authentication, and data security.
- This system enables freelancers to add, update, and delete expense entries, view detailed transaction history, and monitor financial activity through an interactive dashboard with visual charts. It also allows administrators to track updates made to expenses, maintain logs, and ensure data integrity. The main goals include offering a seamless expense management experience, improving financial awareness, and ensuring secure access to personal financial data.

TECHNOLOGY STACK

1. Frontend Development

- HTML, CSS, Bootstrap For creating responsive and visually appealing UI components.
- Angular (v17) A modern JavaScript framework used for building dynamic and component-based user interfaces.

2. Backend Development

- Programming Language: Node.js Server-side runtime environment for handling API requests.
- Framework: Express.js Lightweight web framework for building RESTful APIs and routing.
- Database: MongoDB A NoSQL, document-based database used for storing user data and expenses securely.

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MODULE DESCRIPTION

1. Home Page

Provides an overview of the application, including its purpose, navigation links to login and signup pages, and an introduction to managing freelance expenses.

2. Login Page

Allows registered users to securely log in using their credentials and access their personalized dashboard.

3.Signup Page

Enables new users to create an account by submitting basic personal information; stores user data in the MongoDB database.

4. Dashboard Page

Displays a comprehensive view of the user's expenses, including:

- Add, update, and delete expense entries.
- View transaction history with dates and descriptions.
- Real-time graphical representation of expenses using charts.
- Edit and track past expense modifications

5.Admin Panel

Allows administrators to monitor user activities, view update logs, and maintain overall application health and data consistency.

ADVANTAGES

Secure and Authorized Access

Ensures only authenticated users can access and manage their expense data through secure login mechanisms.

• Real-Time Expense Tracking

Instantly reflects added, edited, or deleted expenses and updates the dashboard and charts dynamically.

• Modular and Scalable Architecture

Built using Angular's component-based structure, making the application easy to maintain and scale.

• Smooth Navigation with Angular Router

Enables fast and seamless transitions between pages like login, signup, and dashboard without reloading.

• Efficient Backend Integration

Robust Node.js and Express backend ensures reliable data handling, while MongoDB stores user and expense data securely.

SOURCE CODE:

home.component.html:

```
<!-- Title Section with Separate Background -->
<div class="title-section bg-dark text-white text-center py-5">
<div class="container" >
<h1 class="display-4"> <img src="logo.jpg" alt="No Image" width="100" height="100"
class="rounded-circle"> Freelancer Expense Tracker</h1>
Track your earnings, expenses, and profits in one place
<button class="btn btn-primary" onclick="window.location.href=login.html"">Login</button>
<button class="btn btn-secondary" onclick="window.location.href='signup.html'">Sign
Up</button>
</div>
</div>
<!-- Information Section -->
<div class="container my-5">
<div class="row justify-content-center">
<div class="col-md-10">
<div class="card shadow-lg card bg-secondary text-white text-center p-4">
<img " class="card-img-top" alt="About Freelancer Expense Tracker" width="100%"</pre>
height="250">
<div class="card-body text-center">
<h2 class="card-title">About Freelancer Expense Tracker</h2>
Our platform helps freelancers manage their finances efficiently. Track
your income, expenses, and profits with ease. Stay organized and make informed financial
decisions with our user-friendly tracker.
With intuitive tools, you can visualize your financial health, plan budgets,
and ensure financial security. Our secure system protects your data and offers detailed insights to
maximize your earnings.
Join us today and take control of your financial future!
</div>
</div>
</div>
</div>
</div>
<!-- Feature Cards Section -->
<div class="container my-5">
<div class="row">
<div class="col-md-4">
<div class="card shadow-lg">
<img " class="card-img-top" alt="Track Income" width="100%" height="200">
<div class="card-body text-center">
<h5 class="card-title">Track Income</h5>
Easily record and monitor your earnings from multiple sources.
</div>
</div>
```

```
</div>
<div class="col-md-4">
<div class="card shadow-lg">
<img src="https://encrypted-</pre>
tbn0.gstatic.com/images?q=tbn:ANd9GcS7vlOM7PzbNycYTca8j6nyS3VY-5DK5PiQZQ&s"
class="card-img-top" alt="Manage Expenses" width="100%" height="200">
<div class="card-body text-center">
<h5 class="card-title">Manage Expenses</h5>
Keep track of your spending and categorize your expenses efficiently.
</div>
</div>
</div>
<div class="col-md-4">
<div class="card shadow-lg">
<img " class="card-img-top" alt="Generate Reports" width="100%" height="200">
<div class="card-body text-center">
<h5 class="card-title">Generate Reports</h5>
View detailed financial reports to analyze your income and expenses.
</div>
</div>
</div>
</div>
</div>
<div class="container my-5">
<div class="row">
<div class="col-md-4">
<div class="card shadow-lg">
<img " class="card-img-top" alt="Budget Planning" width="100%" height="200">
<div class="card-body text-center">
<h5 class="card-title">Budget Planning</h5>
Plan your budget effectively to maximize savings and reduce
expenses.
</div>
</div>
</div>
<div class="col-md-4">
<div class="card shadow-lg">
<div class="card-body text-center">
<h5 class="card-title">Investment Insights</h5>
Get valuable insights on how to grow your earnings through smart
investments.
</div>
</div>
</div>
<div class="col-md-4">
<div class="card shadow-lg">
<img "class="card-img-top" alt="Secure Transactions" width="100%" height="200">
<div class="card-body text-center">
```

```
<h5 class="card-title">Secure Transactions</h5>
Ensure the security of your financial data with our encrypted system.
</div>
</div>
</div>
</div>
<div class="carousel-item">
<div class="card bg-secondary text-white text-center p-4">
<h5 class="card-title">Emily</h5>
"An excellent tool for freelancers! It helps me track both my income and
expenses effortlessly."
</div>
</div>
<div class="carousel-item">
<div class="card bg-secondary text-white text-center p-4">
<h5 class="card-title">Michael</h5>
"I was struggling with budgeting before, but this platform has made it so
easy!"
</div>
</div>
"A must-have for freelancers! Simple, effective, and very secure."
</div>
```

home.component.ts

```
// src/app/pages/index/index.component.ts
import { Component } from '@angular/core';
import { CommonModule } from '@angular/common';
@Component({
    selector: 'app-index',
    standalone: true,
    imports: [CommonModule],
    templateUrl: './index.component.html'
})
export class IndexComponent {}
```

Dashboard.component.html

```
<div class="container mt-4">
 <h2>Expense Dashboard</h2>
 <!-- Expense Form -->
 <form (ngSubmit)="addExpense()">
  <div class="mb-3">
   <input class="form-control" [(ngModel)]="expense.category" name="category"</pre>
placeholder="Category" required />
  </div>
  <div class="mb-3">
   <input type="number" class="form-control" [(ngModel)]="expense.amount"</pre>
name="amount" placeholder="Amount" required />
  </div>
  <div class="mb-3">
   <input class="form-control" [(ngModel)]="expense.description" name="description"</pre>
placeholder="Description" />
  </div>
  <div class="mb-3">
   <input type="date" class="form-control" [(ngModel)]="expense.date" name="date"</pre>
required />
  </div>
  <button type="submit" class="btn btn-success">{{ isEditing ? 'Update' : 'Add' }}
Expense</button>
 </form>
 <hr/>
 <!-- Current Expenses Table -->
 <h4>Current Expenses</h4>
 <thead>
   Category
    Amount
    Description
    Date
    Action
   </thead>
  {{ item.category }}
    {{ item.amount }}
    {{ item.description }}
    {{ item.date | date }}
     <button class="btn btn-sm btn-warning me-1" (click)="edit(item)">Edit</button>
```

```
<hr/>
<!-- Old Expense Logs Table -->
<h4>Old Expense Logs</h4>
<thead>
  Old Category
  Old Amount
  Old Description
  Old Date
  Updated At
 </thead>
 {{ item.oldCategory }}
  {{ item.oldAmount }}
  {{ item.oldDescription }}
  {{ item.oldDate | date }}
  {{ item.updatedAt | date: 'short' }}
  </div>
```

Dashboard.component.ts

```
import { Component } from '@angular/core';
import { CommonModule, DatePipe } from '@angular/common';
import { FormsModule } from '@angular/forms';
import { ApiService } from '../../services/api.service';
@Component({
 selector: 'app-dashboard',
 standalone: true,
 imports: [CommonModule, FormsModule],
 templateUrl: './dashboard.component.html',
 styleUrls: ['./dashboard.component.css'], // Changed to CSS since SCSS file is missing
 providers: [DatePipe]
export class DashboardComponent {
 expenses: any[] = [];
 oldExpenses: any[] = [];
 expense = {
  category: ",
```

```
amount: ",
  description: ",
  date: "
 };
 isEditing: boolean = false;
 editingId: string | null = null;
 constructor(private api: ApiService) {
  this.getExpenses();
  this.getOldExpenses();
addExpense() {
if (this.isEditing && this.editingId) {
  this.api.updateExpense(this.editingId, this.expense).subscribe({
   next: () => {
     this.getExpenses();
    this.resetForm();
  });
 } else {
  this.api.addExpense(this.expense).subscribe({
   next: () => {
     this.getExpenses();
    this.resetForm();
  });
 }
 edit(item: any) {
  this.isEditing = true;
  this.editingId = item._id;
  this.expense = { ...item };
 getExpenses() {
  this.api.getExpense().subscribe({
   next: (res) \Rightarrow \{
     this.expenses = res;
   }
  });
 getOldExpenses() {
  this.api.getOldExpenses().subscribe({
   next: (res:any) => {
     this.oldExpenses = res;
  });
```

```
resetForm() {
  this.expense = {
    category: ",
    amount: ",
    description: ",
    date: "
  };
  this.isEditing = false;
  this.editingId = null;
}

logout() {
  localStorage.removeItem('token');
  window.location.href = '/login';
  }
}
```

Admin.component.html

```
<!-- admin.component.html -->
<div class="container mt-4">
<div class="d-flex justify-content-between align-items-center mb-4">
 <h2>Admin Panel - User Expenses</h2>
 <button class="btn btn-danger" (click)="logout()">Logout</button>
</div>
<thead class="table-dark">
  User Name
   Email
   Title
  Amount
  Category
   Date
  </thead>
 {{ row.name }}
   {{ row.email }}
  {{ row.title }}
   {{ row.amount }}
   {{ row.category }}
   {{ row.date }}
```

Admin.component.ts

```
// admin.component.ts
import { Component, OnInit } from '@angular/core';
import { CommonModule } from '@angular/common';
@Component({
selector: 'app-admin',
standalone: true.
imports: [CommonModule],
templateUrl: './admin.component.html'
export class AdminComponent implements OnInit {
data: any[] = [];
ngOnInit() {
  this.fetchData();
 async fetchData() {
  const res = await fetch("http://localhost:3000/api/admin/join");
  this.data = await res.json();
logout() {
  localStorage.clear();
  window.location.href = "/login";
```

Login.component.html

```
<!-- src/app/pages/login/login.component.html -->
<nav class="navbar navbar-dark bg-dark p-3">
 <a class="navbar-brand" href="/">Freelancer Expense Tracker</a>.
</nav>
<div class="container mt-5" style="max-width: 400px;">
 <div class="card p-4 shadow">
  <h3 class="text-center mb-3">Login</h3>
  <form (ngSubmit)="onSubmit()">
   <input class="form-control mb-3" [(ngModel)]="email" name="email" type="email"</pre>
placeholder="Email" required>
   <input class="form-control mb-3" [(ngModel)]="password" name="password"</pre>
type="password" placeholder="Password" required>
   <button type="submit" class="btn btn-success w-100">Login/button>
   <div *ngIf="errorMsg" class="text-danger mt-2 text-center">{{ errorMsg }}</div>
  </form>
  <div class="text-center mt-3">
   <a routerLink="/signup">Don't have an account? Sign up</a>
  </div>
 </div>
```

Login.component.ts

```
// src/app/pages/login/login.component.ts
import { Component } from '@angular/core';
import { CommonModule } from '@angular/common';
import { FormsModule } from '@angular/forms';
import { Router } from '@angular/router';
@Component({
 selector: 'app-login',
 standalone: true,
 imports: [CommonModule, FormsModule],
 templateUrl: './login.component.html'
export class LoginComponent {
 email = ";
 password = ";
 errorMsg = ";
 constructor(private router: Router) { }
 async onSubmit() {
  const res = await fetch('http://localhost:3000/api/login', {
   method: 'POST',
   headers: { 'Content-Type': 'application/json' },
   body: JSON.stringify({ email: this.email, password: this.password })
  });
  const data = await res.json();
  if (res.ok) {
   localStorage.setItem('userId', data.userId);
   localStorage.setItem('role', data.role);
   this.router.navigate([data.role === 'admin' ? '/admin' : '/dashboard']);
   this.errorMsg = data.message || 'Login failed';
 }
}
```

Signup.component.html

Signup.component.ts

```
// src/app/pages/signup/signup.component.ts
import { Component } from '@angular/core';
import { CommonModule } from '@angular/common';
import { FormsModule } from '@angular/forms';
import { Router } from '@angular/router';
@Component({
 selector: 'app-signup',
 standalone: true,
 imports: [CommonModule, FormsModule],
 templateUrl: './signup.component.html'
export class SignupComponent {
 name = ";
 email = ";
 password = ";
 constructor(private router: Router) {}
 async onSubmit() {
  const res = await fetch('http://localhost:3000/api/signup', {
   method: 'POST',
   headers: { 'Content-Type': 'application/json' },
   body: JSON.stringify({ name: this.name, email: this.email, password: this.password
})
  });
  if (res.ok) {
   alert('Signup successful');
   this.router.navigate(['/login']);
  } else {
   alert('Signup failed. Try again.');
```

api.service.ts

```
import { Injectable } from '@angular/core';
import { HttpClient } from '@angular/common/http';
import { Observable } from 'rxjs';
@Injectable({
 providedIn: 'root',
export class ApiService {
 private baseUrl = 'http://localhost:3000';
 constructor(private http: HttpClient) {}
 // EXPENSES
addExpense(expenseData: any) {
 return this.http.post<any>('http://localhost:3000/expenses', expenseData);
 getExpense(): Observable<any> {
  return this.http.get(`${this.baseUrl}/expenses`);
updateExpense(id: string, expenseData: any) {
 return this.http.put<any>(`http://localhost:3000/expenses/${id}`, expenseData);
 deleteExpense(id: string): Observable<any> {
  return this.http.delete(`${this.baseUrl}/delete-expense/${id}`);
 }
 getOldExpenses(): Observable<any> {
  return this.http.get(`${this.baseUrl}/old-expenses`);
```

app.component.html

```
<!-- Global Navigation -->
<nav class="navbar navbar-expand-lg navbar-dark bg-dark">
<div class="container-fluid">
<a class="navbar-brand" routerLink="/">Freelancer Expense Tracker</a>
<div class="d-flex">
<a class="btn btn-outline-light me-2" routerLink="/login">Login</a>
<a class="btn btn-outline-light" routerLink="/signup">Sign Up</a>
</div>
</div>
</div>

- Angular Views Rendered Here -->
<div class="container mt-4">
<router-outlet></router-outlet>
</div>
</div>
```

app.module.ts

```
// src/app/app.routes.ts
import { Routes } from '@angular/router';
import { IndexComponent } from './pages/index/index.component';
import { LoginComponent } from './pages/login/login.component';
import { SignupComponent } from './pages/signup/signup.component';
import { DashboardComponent } from './pages/dashboard/dashboard.component';
import { AdminComponent } from './pages/admin/admin.component';

export const routes: Routes = [
    { path: ", component: IndexComponent },
    { path: 'login', component: LoginComponent },
    { path: 'signup', component: SignupComponent },
    { path: 'dashboard', component: DashboardComponent },
    { path: 'admin', component: AdminComponent },
}
```

Server.js

```
const express = require('express');
const mongoose = require('mongoose');
const cors = require('cors');
const bodyParser = require('body-parser');
const path = require('path');
const app = express();
app.use(cors());
app.use(bodyParser.json());
app.use(express.static(path.join(__dirname, '../frontend')));
app.get('/', (req, res) => \{
 res.sendFile(path.join(__dirname, '../frontend/index.html'));
});
// MongoDB Connection
mongoose.connect('mongodb://localhost:27017/freelancer_expense', {
 useNewUrlParser: true,
 useUnifiedTopology: true
}).then(() => console.log('MongoDB connected'))
 .catch(err => console.error('MongoDB connection error:', err));
// MongoDB Schemas
const userSchema = new mongoose.Schema({
 name: String,
 email: String,
 password: String
});
const userLogSchema = new mongoose.Schema({
 userId: mongoose.Schema.Types.ObjectId,
 name: String,
 email: String,
 createdAt: { type: Date, default: Date.now }
});
```

```
const expenseSchema = new mongoose.Schema({
 userId: mongoose.Schema.Types.ObjectId,
 title: String,
 amount: Number,
 category: String,
 date: Date
});
const expenseUpdateLogSchema = new mongoose.Schema({
 userId: mongoose.Schema.Types.ObjectId,
 title: String,
 amount: Number,
 category: String,
 date: Date,
 updatedAt: { type: Date, default: Date.now }
});
const User = mongoose.model('User', userSchema);
const UserLog = mongoose.model('UserLog', userLogSchema);
const Expense = mongoose.model('Expense', expenseSchema);
const ExpenseUpdateLog = mongoose.model('ExpenseUpdateLog', expenseUpdateLogSchema);
// Signup
app.post('/api/signup', async (req, res) => {
 const { name, email, password } = req.body;
 try {
  const newUser = new User({ name, email, password });
  const savedUser = await newUser.save();
  // Save to user logs
  const newLog = new UserLog({ userId: savedUser._id, name, email });
  await newLog.save();
  res.status(201).json({ message: 'Signup successful', userId: savedUser._id });
 } catch (err) {
  res.status(500).json({ message: 'Signup error' });
```

```
});
// Login
app.post('/api/login', async (req, res) => {
 const { email, password } = req.body;
 if (email.trim() === 'admin@gmail.com' && password === 'admin123') {
  return res.status(200).json({ message: 'Admin login successful', userId: 0, role: 'admin' });
 }
 try {
  const user = await User.findOne({ email, password });
  if (!user) return res.status(401).json({ message: 'Invalid credentials' });
  res.status(200).json({ message: 'Login successful', userId: user._id, role: 'user' });
 } catch (err) {
  res.status(500).json({ message: 'Internal server error' });
 }
});
// Add Expense
app.post('/api/expense', async (req, res) => {
 const { userId, title, amount, category, date } = req.body;
 try {
  const newExpense = new Expense({ userId, title, amount, category, date });
  await newExpense.save();
  res.status(201).json({ message: 'Expense added successfully' });
 } catch (err) {
  res.status(500).json({ message: 'Failed to add expense' });
 }
});
// Get Expenses
app.get('/api/expenses/:userId', async (req, res) => {
 try {
  const expenses = await Expense.find({ userId: req.params.userId }).sort({ date: -1 });
  res.json(expenses);
 } catch (err) {
```

```
res.status(500).json({ message: 'Failed to fetch expenses' });
 }
});
// Delete Expense
app.delete('/api/expense/:id', async (req, res) => {
 try {
  await Expense.findByIdAndDelete(req.params.id);
  res.json({ message: 'Expense deleted' });
 } catch (err) {
  res.status(500).json({ message: 'Delete failed' });
});
// Update Expense
app.put('/api/expense/:id', async (req, res) => {
 const { title, amount, category, date } = req.body;
 try {
  const oldExpense = await Expense.findById(req.params.id);
  if (!oldExpense) return res.status(404).json({ message: 'Expense not found' });
  // Log old data
  const log = new ExpenseUpdateLog({
   userId: oldExpense.userId,
   title: oldExpense.title,
   amount: oldExpense.amount,
   category: oldExpense.category,
   date: oldExpense.date
  });
  await log.save();
  // Update
  await Expense.findByIdAndUpdate(req.params.id, { title, amount, category, date });
  res.json({ message: 'Expense updated' });
 } catch (err) {
  res.status(500).json({ message: 'Error updating expense' });
```

```
});

// Show update logs
app.get('/api/expense-update-logs/:userId', async (req, res) => {
  try {
    const logs = await ExpenseUpdateLog.find({ userId: req.params.userId }).sort({ updatedAt: -1 });
    res.json(logs);
} catch (err) {
    res.status(500).json({ message: 'Error fetching logs' });
});
}
```

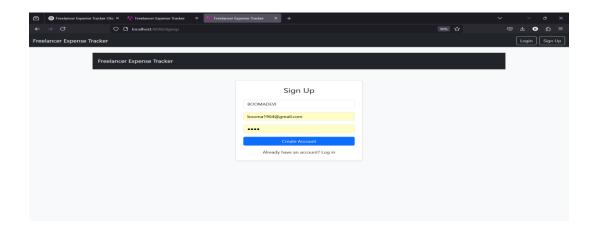
Github link:

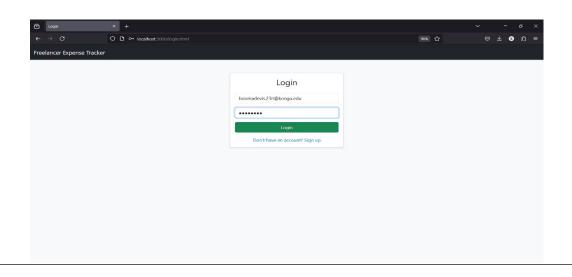
https://github.com/boomadevi-2006/freelancer

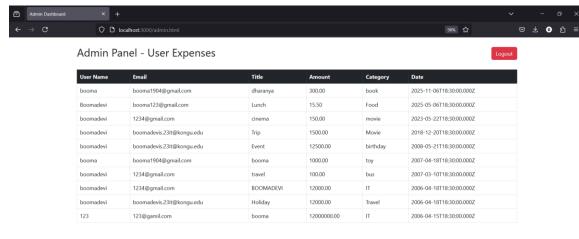
OUTPUT

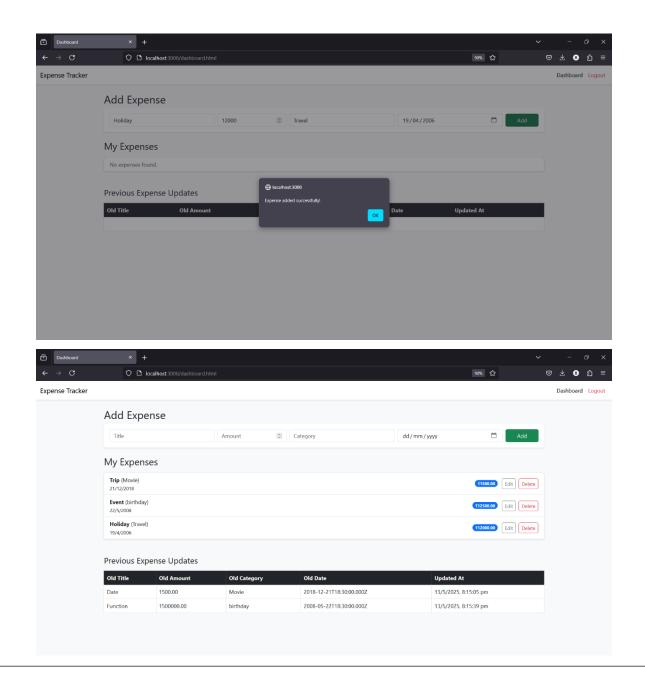


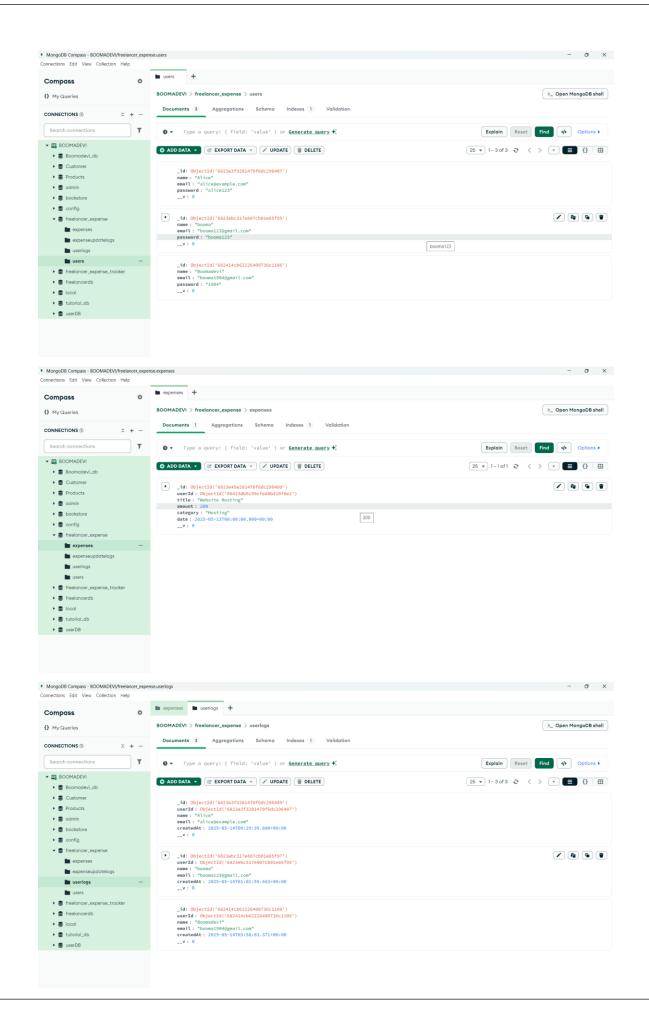












Certifications:

MongoDB Associate Developer:



MongoDB Associate Developer

ISSUED TO

BOOMADEVIS 23ITR016



Issued on: 07 MAY 2025 | Issued by: MongoDB Verify: https://www.credly.com/go/HzJTVM20

Github Foundations:



GitHub Foundations

ISSUED TO

BOOMADEVIS



Issued on: 11 APR 2025 | Expires on: 11 APR 2028 | Issued by: GitHub Verify: https://www.credly.com/go/I0llUkJ1

Angular Foundation



CERTIFICATE

OF COMPLETION

PROUDLY AWARDED TO

BOOMADEVIS 23ITR016

for successfully completing the course

Angular Foundations Course

Date: 8th Apr 2025 Certificate Id: 3OOZ080425



Shailendra Chauhan (Founder & CEO, ScholarHat)

The certificate Id can be verified at www.scholarhat.com/certificate/verify to check the authenticity of this certificate