



**COLLEGE CODE : 9623**

**COLLEGE NAME : Amrita College of Engineering And Technology**

**DEPARTMENT : Computer Science and Engineering**

**STUDENT NM-ID : E1A574A1654EEA1A26946F4C65CCACAF**

**ROLL NO : 23CS015**

**DATE : 07-10-2025**

**Completed the project named as**

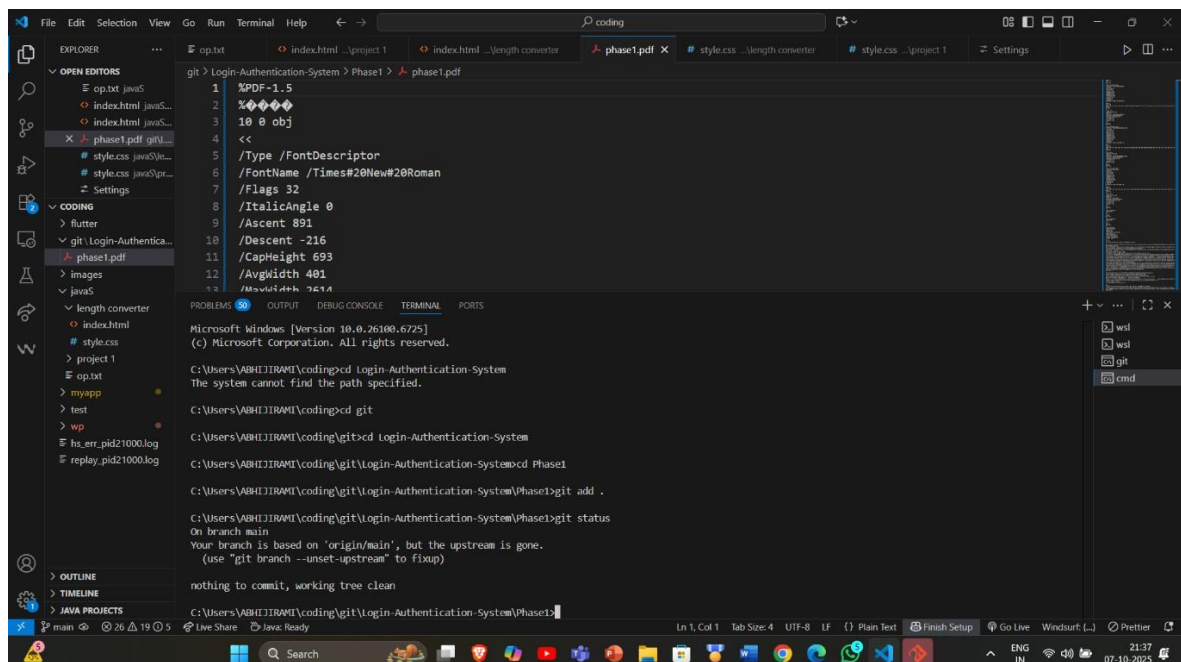
**Phase 5 Project Demonstration & Documentation**

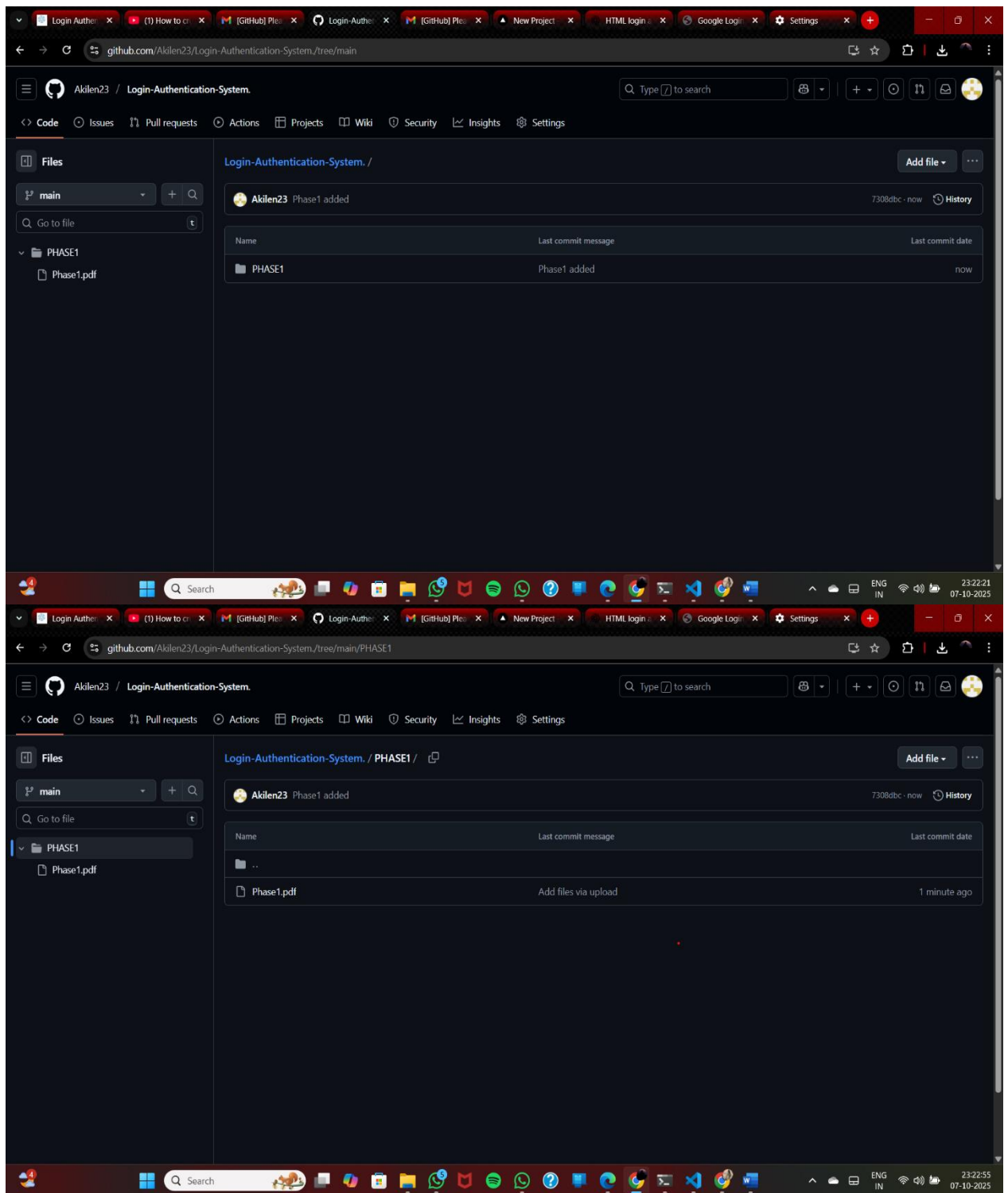
**PROJECT NAME : LOGIN AUTHENTICATION SYSTEM**

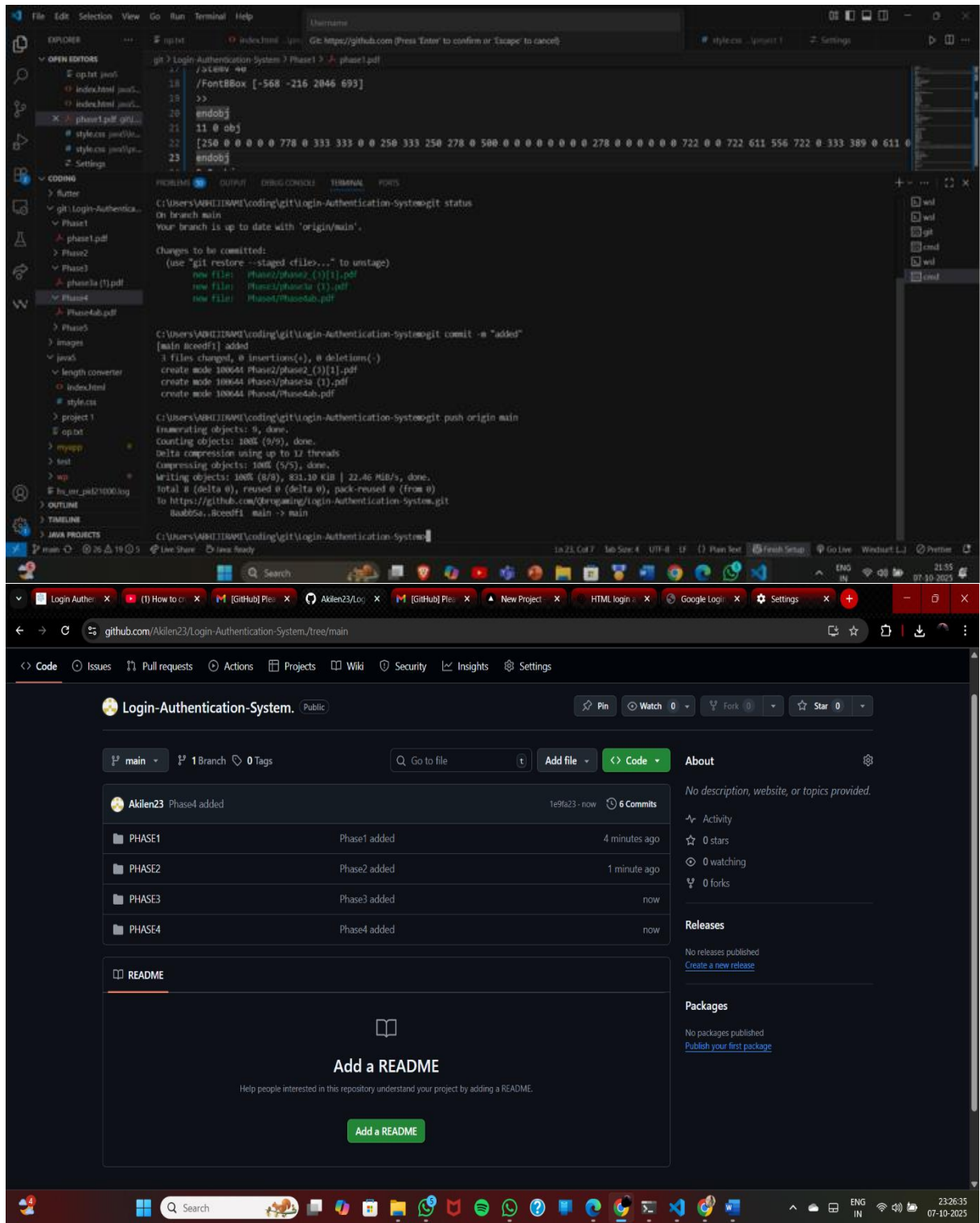
**SUBMITTED BY,**

**NAME : AKILEN J K**

**MOBILE NO : 9489785912**







## 4. Challenges & Solutions

During the project implementation, several challenges were encountered and successfully resolved:

1. **Challenge:** Handling authentication errors and exceptions in real-time.  
**Solution:** Implemented Firebase's built-in error handling methods and displayed descriptive messages for users.
2. **Challenge:** Integrating multiple authentication methods (Google and Email/Password).  
**Solution:** Utilized Firebase Auth providers and configured them properly in the Firebase Console.
3. **Challenge:** Maintaining user sessions after page refresh.  
**Solution:** Enabled Firebase's `onAuthStateChanged()` listener to maintain session persistence.
4. **Challenge:** Ensuring secure data transfer.  
**Solution:** Enforced HTTPS and Firebase security rules to restrict unauthorized access. These solutions resulted in a smooth, secure, and scalable authentication process that meets modern application requirements.

## 5. GitHub Link

### My repository link

<https://github.com/Akilen23/Login-Authentication-System..git>