Curriculum Vitae

MD.Al-Helal

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Career Objective

A passionate and skilled Software Engineer with a strong background in Android app development, having successfully developed 7 unique applications for diverse purposes. Committed to building innovative, user-centric solutions that enhance productivity and meet the evolving needs of clients and users. Seeking to leverage my technical expertise, problem-solving abilities, and dedication to continuous learning in a challenging role where I can contribute to the growth of both the organization and my career.

Job Experience

2021 — Software Developer
Brike Line Technology,
Banglamotor, Dhaka.

2019 — Assistant Programmer
AIS (Accounts and Information System) Project,
University of Dhaka.

Education

2022 — University of Dhaka, Dhaka-1000.
Completed M.S in Computer Science & Engineering.

	Obtained 1st class.
2019	University of Dhaka, Dhaka-1000. Completed B.S in Computer Science & Engineering. Obtained 1st class.
2014	Carmichael College, Rangpur. Passed H.S.C (Science Group) under Dinajpur Board in 2014. Obtained GPA 5.00 (without 4th subject score) out of 5.00.
2012	Moyenpur High School, Mithapukur, Rangpur. Passed S.S.C (Science Group) under Dinajpur Board in 2012. Obtained GPA 5.00 (without 4th subject score) out of 5.00.

Scholarship

2019	Obtained ICT fellowship for M.S thesis titled "Humanoid Robot Behavior Generation to Improve Social Skill of Autistic Children".
2014	Obtained National Education Board Scholarship for good result in H.S.C under Dinajpur Board.
2009	Obtained National Education Board Scholarship for good result in class 8.

Technical Skills

Languages	Dart, Python, C, Sql, Mysql, HTML, CSS JavaScript
Tools	Oracle database, Oracle Apex
Framework	Flutter
VCS	Git
Text Editor	VSCode
OS	Ubuntu
Typesetting	LaTeX, Open office, Microsoft office
Typing Speed	35 words/minute

Projects

MMS

A Flutter-based mobile application with Firebase integration designed to manage daily operations within a mess. The app includes user authentication, meal management, and a streamlined meal tracking system.
Key features are:

User Authentication: Implements Firebase Authentication for secure sign-up, login, and persistent sessions.
Meal Management: Users can add, edit, and view daily meals with detailed records, allowing accurate tracking of meals and individual consumption.
Dynamic UI: Utilizes Flutter's stateful widgets and StreamBuilder to create responsive interfaces, ensuring real-time data updates and conditional navigation.
Persistent Login & "Remember Me": Integrated with SharedPreferences to retain user credentials for seamless login experiences.
User Verification: Enforces email verification for additional security, ensuring only verified users access the application.
Scoped Navigation: Allows mess-specific meal management by associating users with particular mess codes during registration, streamlining access to relevant data.

In addition, the app provides users with access to payment information, meal summaries, bazar expenses, and detailed reports on meal planning and expenses.
App Link: https://play.google.com/store/apps/details?id=com.alhelal_mms.mess_app

BMS

Order Management System (Flutter App) Developed a robust order management system using Flutter for handling client orders, products, and deliveries. The app features the following:

Client, Product, and Order Management: Displays detailed client information (name, mobile number, institution), product details (name, quantity, price), and order summaries (total cost, paid amount, status).
Branch & Courier Integration: Retrieves and displays branch and courier details, ensuring seamless information flow related to order deliveries.
Interactive UI: Utilized ExpansionTile for expandable order cards, showing relevant order details in a clean, readable format.
Communication Features: Integrated communication options like WhatsApp, call, and SMS buttons, allowing quick client interaction from within the app.
Real-time Updates: Implemented forms for editing or deleting orders with direct updates to the database.
Database Operations: Managed CRUD operations for clients, products, orders and related entities using Firestore as the backend.

Technologies used: Flutter, Firestore, Dart, FontAwesome Icons, Date Formatting, ExpansionTile.
App link: https://play.google.com/store/apps/details?id=com.al_helal.bms

BatchManager

Developed the Batch Manager app to efficiently manage student information and batch assignments for educational institutions or individual teachers. The app allows administrators to add, edit, and filter student data based on various parameters like college, batch, and mess. It enhances the organization of student records and simplifies batch management.

Key Features:

Student Management: Create, edit, and manage student profiles, including details such as name, mobile number, college, batch, and mess.
Filter Functionality: Implemented advanced filtering options to display students based on college, batch, and mess selections.
Dynamic User Interface: Designed a user-friendly interface using Flutter, ensuring a smooth user experience on any Android devices.
Data Visualization: Provided visual feedback through count displays for each filter option, helping users make informed decisions.
Responsive Design: Ensured the app is responsive and accessible across various devices and screen sizes.

Technologies Used:

Frontend: Flutter/Dart for cross-platform mobile development.
Backend: Firebase for real-time data storage and retrieval.
State Management: Utilized efficient state management techniques to handle dynamic data updates. **User Interface:** Employed Flutter's widget library to create a clean and intuitive user interface.
App link: https://play.google.com/store/apps/details?id=com.alhelal.batchmanager

PotatoPro

Developed a comprehensive Potato Management Application that facilitates the management of potato batches for traders, focusing on cost tracking and operational efficiency.

Key features include:

Real-Time Data Management: Implemented Firebase Firestore for real-time database management, allowing users to add, update, and retrieve potato batch information efficiently.

Cost Analysis: Designed a cost analysis module that categorizes expenses into Farmer, Shipment, and Cold Storage Costs, providing users with a clear overview of financial performance.

Dynamic User Interface: Created a user-friendly interface using Flutter, featuring expandable tiles to display costs and batch statuses, enhancing user experience and accessibility of information.

Push Notifications: Integrated Firebase Cloud Messaging for sending updates and notifications to users regarding app enhancements and important alerts.

Status Tracking: Implemented a status tracking system for batches, allowing users to monitor the lifecycle of their potato products effectively.

Responsive Design: Ensured the app is responsive and visually appealing across different devices, enhancing usability for traders and stakeholders.

This application streamlines potato management processes, empowering traders with the tools they need for effective decision-making and operational success. It assist traders and business owners in making informed purchasing decisions for the upcoming potato season. The app enables users to track potato purchases by season and monitor total investment, offering valuable insights for strategic planning and budgeting.
App link: https://play.google.com/store/apps/details?id=com.alhelal.potatopro

QBS

Managed Large Question Database: Oversaw a repository of 56,000 questions (CQ, MCQ types) using Oracle Database, ensuring data accuracy and accessibility.
Contributed to System Development: Created a user-friendly website with Oracle APEX Builder, enabling contributors to efficiently enrich the question bank with advanced search and filter capabilities.
Automated PDF Generation: Developed Python scripts in Google Colab to fetch question data via REST API, producing customized question papers as PDFs through automated headless Chrome-based generation. Also developed doc file generation using BeautifulSoup
Seamless PDF Delivery System: Integrated Google Drive API with Google Colab to automatically upload generated PDFs/Docs into client-specific, shared folders for quick and secure access.
Mobile App for On-the-Go Access: Created a QBS Android app that allows clients to log in and directly access their respective Google Drive folders, enhancing usability and accessibility.
HTML/CSS Document Templates: Designed HTML and CSS templates for colorful, structured question papers, answer sheets, and OMR sheets, aiding teachers with professionally formatted resources.
Technologies Used:

Database & Backend: Oracle Database, Oracle APEX, REST API
Frontend & Document Design: HTML, CSS, Google Colab, Headless Chrome, pdfkit, BeautifulSoup

Cloud & Integration: Google Drive API
Mobile Access: Android app for direct client access to Google Drive folders
App link: https://play.google.com/store/apps/details?id=com.alhelal_qbs.qbs

PBC Seller List

Developed a cross-platform mobile application in Flutter that enables users to browse and find out expected seller from multiple sellers, featuring user authentication, product management, and Firebase integration for real-time updates. The app offers a seamless and engaging user experience by leveraging Flutter's extensive UI capabilities, making it versatile across Android.

Key Features

User Authentication: Secure login and registration supporting "Remember Me" functionality for returning users.
Seller Search and Filters: Comprehensive search and filtering options, allowing users to search by keywords (including in local languages) and categories for a tailored shopping experience.
Saved Login State: Utilized SharedPreferences to remember login details and streamline the user experience.
Responsive UI: Built an adaptive and visually appealing UI that provides a consistent experience across different devices and screen sizes.
Technologies Used

Flutter: For developing a responsive, cross-platform application.
Oracle Storage: For storing product, seller info and retrieval optimization.
Firebase Cloud Messaging (FCM): To send targeted push notifications to users.
Flutter Plugins: http: For API calls.
shared_preferences: To save login state.
url_launcher: For handling in-app URLs.
firebase_messaging and firebase_core: For integrating Firebase messaging and core functionality.
Additional Highlights

State Management: Utilized Flutter's provider architecture for efficient state management.
Scalable and Maintainable Code: Used modular and clean coding practices, ensuring the app is easily scalable and maintainable.
App link: https://play.google.com/store/apps/details?id=com.alhelal_pbc.pbc_seller

Connect

The Connect app is a Flutter-based social utility designed to create and maintain local community networks by connecting users to people and places like mosques within their vicinity. The app supports offline access to ensure seamless usage in areas with limited internet connectivity. Leveraging Firestore as the backend, it maintains real-time synchronization when online and provides stored data for offline usage.

Features:

User Authentication: Firebase Authentication allows users to securely sign in and out.
Community Connection Management: Users can explore and interact with local community members (called "Sathis"), view associated mosques, and connect with nearby locations and organizations.
Data Caching for Offline Access: Data fetched from Firestore is cached, enabling offline access to community members and mosque data.
Hierarchical Filtering: Users can filter by district, upazila, halka, and mosque, creating a drill-down approach to view and manage connections efficiently.
Localized Language Support: The app offers multilingual support with language localization for diverse user bases.
Messaging Feature: Integrated with WhatsApp for messaging.
Technologies and Tools:

Frontend: Flutter, Dart
Backend: Firestore (Firebase) for real-time database management
Authentication: Firebase Authentication for secure user access
Localization: Flutter's localization package for language support
Key Skills Demonstrated:

App link: https://play.google.com/store/apps/details?id=com.alhelal.connect

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References

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