



AICP Internship Task

1. To design a Business Information C++ & Python based Application allows users (business admin and individual) to add and find various businesses in categories such as food, healthcare, hotels, and education. Users can search for businesses by location, category, and popularity, making it easy for them to find their desired places.
2. Project Setup
 - Initialize a new C++ project with a well-structured folder hierarchy.
 - Set up a build system (e.g., CMake or Makefile) for compiling the project.
 - Ensure all necessary libraries for console input/output and file handling are included.
3. User Registration and Authentication
 - Splash Screen:
 - Implement a simple text-based splash screen that displays the app's name and logo.
 - Login Screen:
 - Create a function to prompt the user for email/username and password.
 - Implement validation logic to authenticate user credentials.
 - Redirect authenticated users to the home screen; handle failed login attempts with appropriate messages.
 - Sign Up Screen:
 - Create a function to collect user details: Picture, Name, Email, Password, Confirm Password, City, and Address.
 - Validate user inputs (e.g., check for valid email format, matching passwords).
 - Store the new user information securely and redirect to the home screen upon successful registration.
 - Update Profile Screen:
 - Allow users to update their profile details (Picture, Name, Email, Password, City, Address).
 - Implement input validation and save changes to the user profile.
 - Logout Screen:
 - Implement a logout function that asks for confirmation before logging the user out.
 - Ensure the user session is properly terminated and the app returns to the login screen.
4. Home Screen and Category Navigation
 - Home Screen:
 - Display a list of categories (Food, Healthcare, Hotels, Education).
 - Implement navigation logic that allows users to select a category and view corresponding businesses.
 - Category Screens:
 - Develop functions to display businesses under each category (e.g., Desi, Chinese under Food; Clinics, Hospitals under Healthcare).
 - Show a list of businesses with thumbnails, names, addresses, and short descriptions.
 - Implement filters for location, sub-category, and popularity. Allow users to refine search results based on selected criteria.



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5. Business Details and Listing Management

- Business Details Screen:
 - Create a function to display detailed information about a selected business, including Name, Address, Contact Number, Photos, and Reviews.
 - Implement actions for users to call the business, read reviews, and write ratings/reviews.
- Add Business Screen:
 - Develop a function to allow users (business admins) to add new businesses.
 - Capture necessary details (Business Name, Address, Phone Number, Category, Description, Photos).
 - Validate input data and save the new business to the appropriate category.
- Search Screen:
 - Implement a search functionality with filters for location, category, and popularity.
 - Tailor the search filters based on the category (e.g., sub-categories and specific dishes for Food, service types for Healthcare).
 - Display search results dynamically as the user types or applies filters.

6. User Profile and Business Management

- User Profile Screen:
 - Create a profile screen displaying user details (Name, Email, Phone Number).
 - Implement functions to edit profile details and save changes.
 - Allow users to view and manage their listed businesses (e.g., edit or delete).

7. User Reviews and Ratings

- Review and Rating System:
 - Implement functionality for users to write and submit reviews and ratings for businesses.
 - Display average ratings and user reviews on the Business Details screen.
 - Ensure reviews are properly formatted and stored for retrieval.

8. Data Storage and Management

- Database Integration:
 - Set up a basic file-based or lightweight database system to store user information, business listings, reviews, and ratings.
 - Develop functions to read from and write to the database, ensuring data consistency and integrity.
- Data Validation:
 - Implement robust validation for all user inputs, including sanitizing text inputs to prevent potential security vulnerabilities.