

# TASK 01: COLLECTING DATA AND PERFORMING CRUD OPERATIONS.

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## OVERVIEW:

This project is designed to collect and manage basic user information such as first name, last name, phone number, email ID, and address. The application will include functionality for CRUD (Create, Read, Update, Delete) operations and data validation.

## TECH STACK USED:

- Backend: Python
- Database: MySQL WORKBENCH

### 1. Functional Requirements

- User Registration: Users can input their details via a console.
- CRUD Operations: Only admins can view, edit, or delete user details.
- Data Validation: Checks/validation for all fields.

### 2. Database Structure

- Database: user\_data
  - Table: userdetails
    - id (INT, Primary Key, Auto Increment)
    - first\_name (VARCHAR(50), Not Null)
    - last\_name (VARCHAR(50), Not Null)
    - phone\_number (VARCHAR(15), Not Null, Unique)
    - email (VARCHAR(100), Not Null, Unique)
    - address (VARCHAR(255), Not Null)

### 3. Implementation Details

- -connection establishment
- -creating database and table
- -implementing the logic using python

#### 4. Data Validation

- First Name, Last Name, Address: alphabetic characters only.
- Phone Number: length must not be greater than 10 digits and should contain only digits
- Email ID: must be in a valid email format (using a regular expression).

#### 5. Testing

- Unit tests for each CRUD operation and validation.

This document outlines the technical specifications for User Data Management using Python and MySQL.