



CONTACT MANAGEMENT --- SYSTEM

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INTRODUCTION

- The Contact Management System is a project designed to simplify the organization and management of contact information.
- It provides core functionalities such as adding, viewing, updating, and deleting contact details
- The system is built using Java and uses basic data structures to handle contact data, providing an easy-to-use and practical solution for everyday contact management needs.

KEY FEATURES AND REQUIREMENTS

1. Create Contact

Allows users to add new contacts with various attributes, including name, phone number, email.

- The user provides the contact's name, phone number, and email address.
- The system checks if the name already exists to avoid duplicates.
- If the contact doesn't exist, it is added to the collection.

2. Read/Retrieve Contact

Provides options for searching, filtering, and sorting contacts based on criteria.

Details:

For single contact view, if the name doesn't exist, show an appropriate message.

Update Contact

Description: Modify the details of an existing contact.

Details:

The user can update the phone number, email, or both for an existing contact.

The system first checks if the contact exists. If not, it displays an error message.

Validation:

Similar checks for phone and email as during the creation process.

Delete Contact

Description: Remove a contact from the system.

Details:

The user specifies the name of the contact to delete.

If the name exists, the contact is removed from the collection.

If not, the system displays an appropriate error message.

Search Contacts

Description: Allows the user to search for contacts by their name.

Details:

Search for partial or complete matches of the name.

Return a list of contacts matching the search term.

Sample Output:

```
Contact Management System
```

1. Add Contact
2. View All Contacts
3. Update Contact
4. Delete Contact
5. Search Contact
6. Exit

```
Enter your choice: 1
```

WORKING

User Interface (UI):

The system provides a GUI (desktop or web-based) for users to interact with.

Input Handling:

Users input data like name, phone number, email, and address via forms.
The input is validated to ensure data consistency.

Processing Logic:

CRUD operations (Create, Read, Update, ~~Delete~~) are handled here.

Database Interaction:

The data is stored and retrieved from a relational database like MySQL

Search and Filter:

The system allows users to search for contacts based on criteria like name phone number.

SOFTWARE REQUIREMENTS

- **Operating System:** Windows, macOS, or Linux
- **Java Development Kit (JDK):** Version 8 or higher
- **Integrated Development Environment (IDE):** Eclipse IDE for Java Developers, with JDK 8
- **Database:** MySQL

OTHER TECHNICAL COMPONENTS

Collections

store, retrieve, update, and delete contact information, which involves:

Efficient Data Retrieval

Dynamic Storage.

Flexibility

HashMap

Used to store contacts, where the key is the unique identifier (e.g., name or ID) and the value is the object

ArrayList

Displaying contacts in a specific order.

Performing operations on a list of all contacts.

THANK YOU

