



# Phone Book Manager in C

## Group 11

A command-line based Phone Book Manager written in C. This application enables users to manage contacts by adding, editing, deleting, searching, and viewing them in a sorted list. It uses in-memory data storage with simple input validation.



## Team Members

Name	Roll Number
Aditi Barman	241001001182
Sanjana Mahata	241001001274
Krish Ranjan	241001001212
Vaibhav Jha	241001001234
Pushpesh Kant Ojha	241001001233



## How to Clone the Project

To get a local copy of the project, run the following command in your terminal:

```
git clone https://github.com/Aditi-Barman/Phonebook.git
cd Phone-Book-Manager
```










## Project Structure

- `phonebook.c` – Main C source file
- `README.md` – Project documentation



## Features

-  Add contacts with country-specific phone code
-  Delete contacts by name
-  Edit existing contacts (name and/or phone number)
-  Search contacts (supports partial, case-insensitive matches)
-  View all contacts sorted by name (alphabetically)
-  Country code support (India, US, Canada, UK, etc.)
-  Validates phone number length and digits



## Technologies Used

- Language: **C**
- Interface: **Command-Line Interface (CLI)**
- No external libraries used beyond standard C libraries ( `stdio.h` , `stdlib.h` , `string.h` , `ctype.h` )



## Data Structures Used

```
typedef struct {  
    char name[MAX_NAME_LENGTH];  
    char phone[MAX_PHONE_LENGTH];  
} Contact;
```

- Uses a global array of `Contact` structures
- Contact name: up to 49 characters
- Phone number: up to 10 digits



## Sample Interaction

Phone Book Application

1. Add Contact
2. Delete Contact
3. Edit Contact
4. View Contacts (Sorted)
5. Search Contact
6. Exit

Enter your choice: 1

Enter name: Aditi

Enter phone number (up to 10 digits): 9876543210

Contact added successfully!



## Compilation & Execution

### Compile:

```
gcc phonebook.c -o phonebook
```

### Run:

```
./phonebook
```



## Input Validation

- Phone numbers must:
  - Contain only digits ( 0-9 )
  - Be no longer than 10 digits
- Names can contain any characters but are case-sensitive during search/edit/delete



## Possible Enhancements

- File-based data persistence
- Case-insensitive search
- Contact grouping or categorization
- GUI version using libraries like GTK



## License

This project is provided for educational purposes.