DSA GROUP PROJECT

Phonebook Application.

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Our phonebook application uses the **linked list data structure.** This data structure makes it easy to add and remove contacts. It also only uses memory when needed, making it efficient. This helps make searching for contacts fast and easy.

Phonebook application

Pseudocode

START

Prompt user for Name and contact number

Get Name and contact number

WHILE true DO

DISPLAY "Phonebook Menu:"

DISPLAY "1. Insert Contact"

DISPLAY "2. Search Contact"

DISPLAY "3. Display All Contacts"

DISPLAY "4. Delete Contact"

DISPLAY "5. Update Contact"

DISPLAY "6. Sort Contact"

DISPLAY "7. Exit"

Prompt user for choice

Get userChoice

IF (userChoice = 1) THEN

CALL insertContact()

ELSE IF (userChoice = 2) THEN

CALL searchContact()

ELSE IF (userChoice = 3) THEN

CALL displayContacts()

ELSE IF (userChoice = 4) THEN

CALL deleteContact()

ELSE IF (userChoice = 5) THEN

CALL updateContact()

ELSE IF (userChoice = 6) THEN

CALL sortContact()

ELSE IF (userChoice = 7) THEN

DISPLAY " Exiting phonebook"

ELSE

DISPLAY "Invalid choice, please try again."

END IF

ENDIF

ENDIF

ENDIF

ENDIF

END WHILE

END

insertContact(){

Prompt for name and contact number

Get name and contact number

IF (name and phoneNumber to hashTable

PRINT "Contact added."

END

}

searchContact(){

Prompt a name to search:"

Get searchName

IF (searchName is found in hashTable) THEN

DISPLAY "searchName and corresponding phone number"

ELSE

DISPLAY "Contact not found."

END IF

END

}

displayContacts(){

DISPLAY "Displaying all contacts:"

FOR EACH name in hashTable DO

PRINT name and corresponding phone number

END FOR

END

}

deleteContact(){

Prompt Name to delete

GET name

IF (name is found in hashTable) THEN

DISPLAY "Contact deleted."

ELSE

DISPLAY "Contact not found."

END IF

END

}

updateContact(){

Prompt for Name to update

GET name

IF (name is found in hashTable) THEN

DISPLAY "Contact found and updated:"

ELSE

DISPLAY "Contact not found."

END IF

END

}

sortContact(){

SORT contact list alphabetically

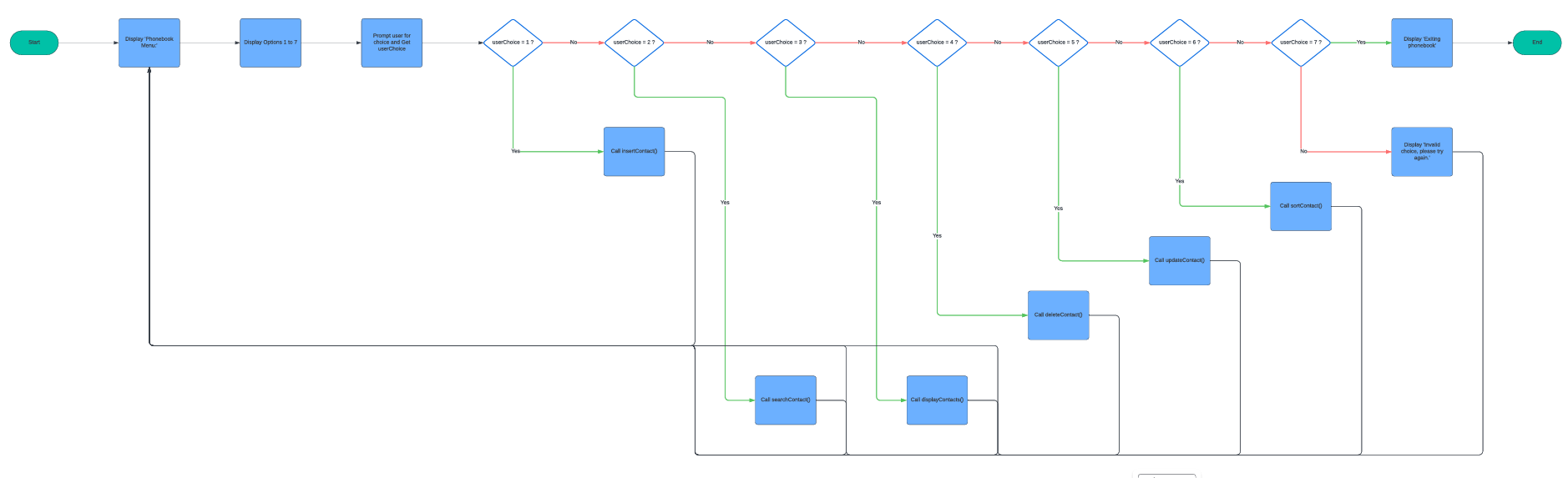
DISPLAY " Contacts sorted alphabetically"

END

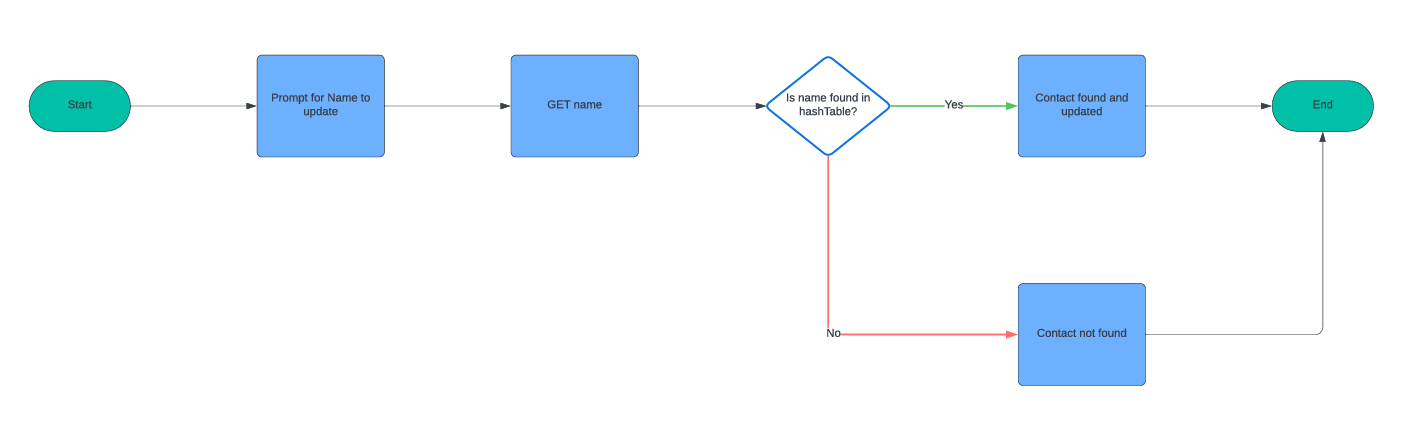
}

END

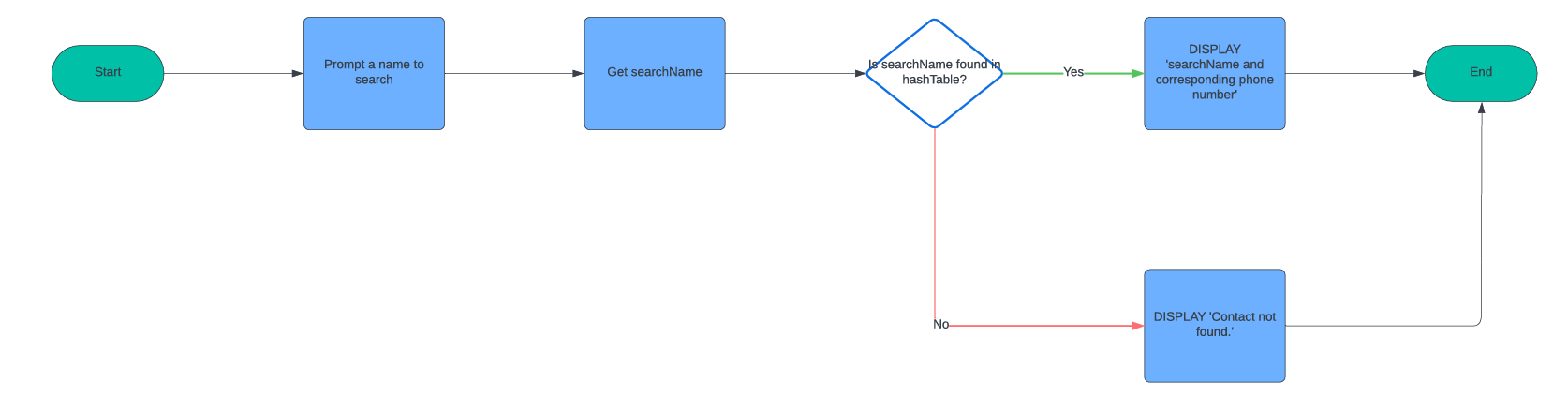
Flowchart



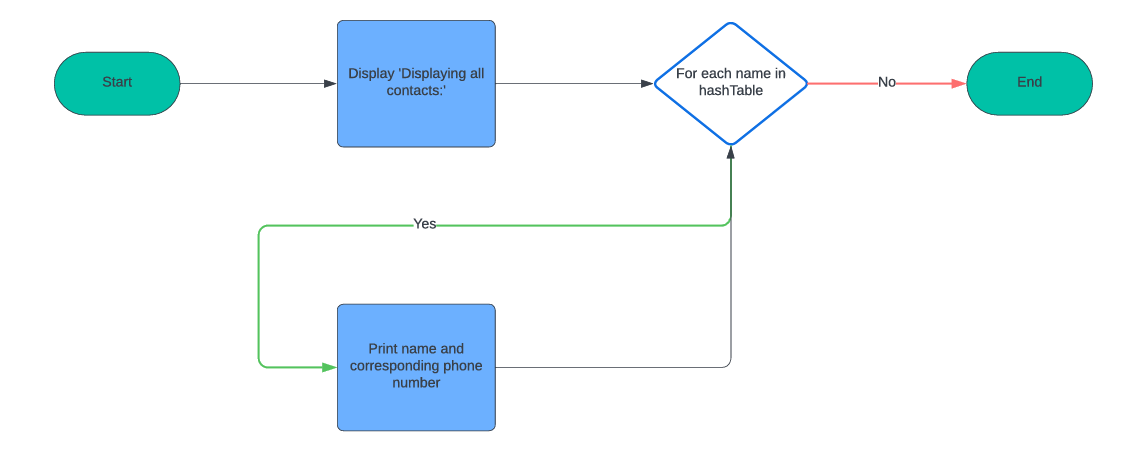
Adding a contact



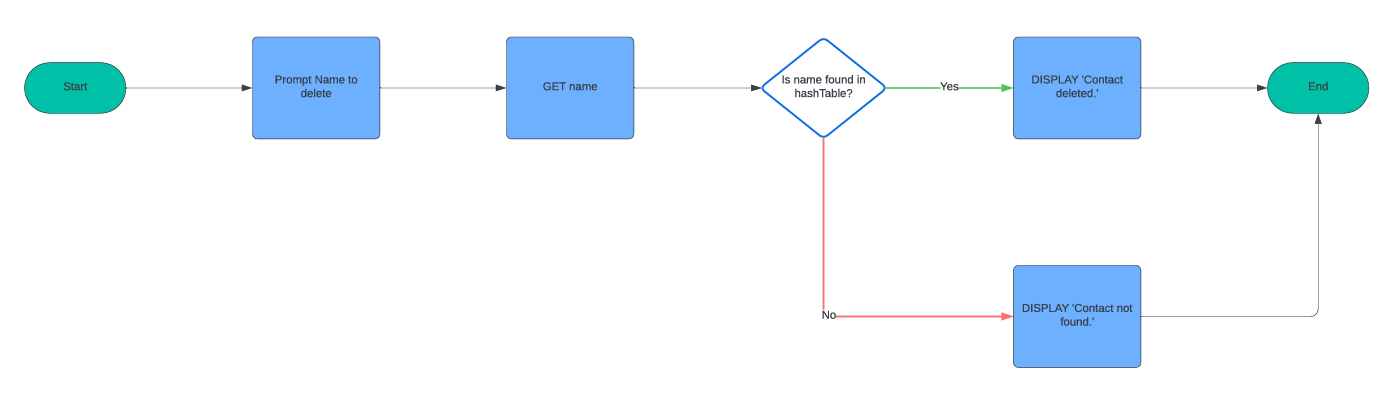
Searching for a contact



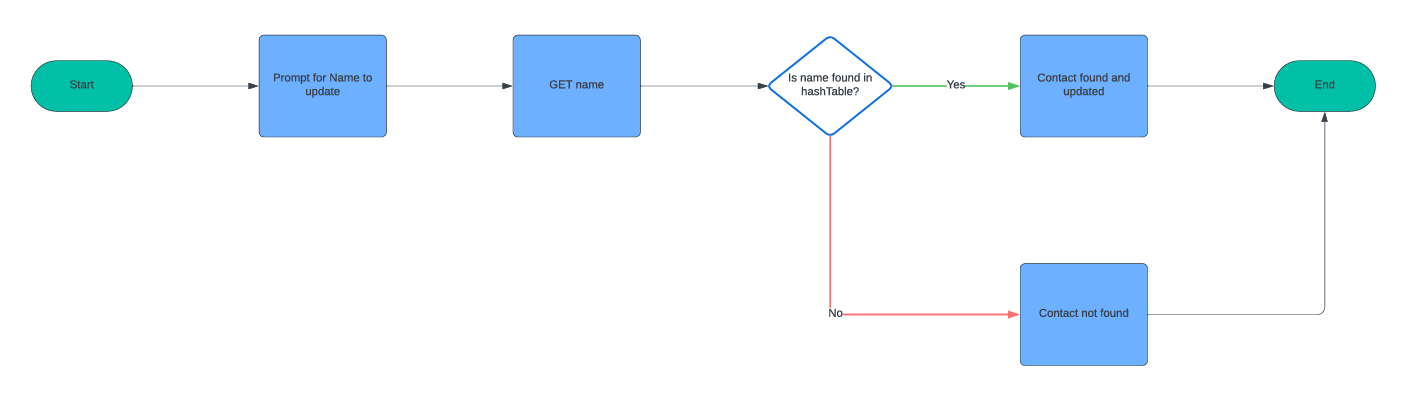
Displaying all contacts



Deleting a contact



Updating a contact



Sorting all contacts

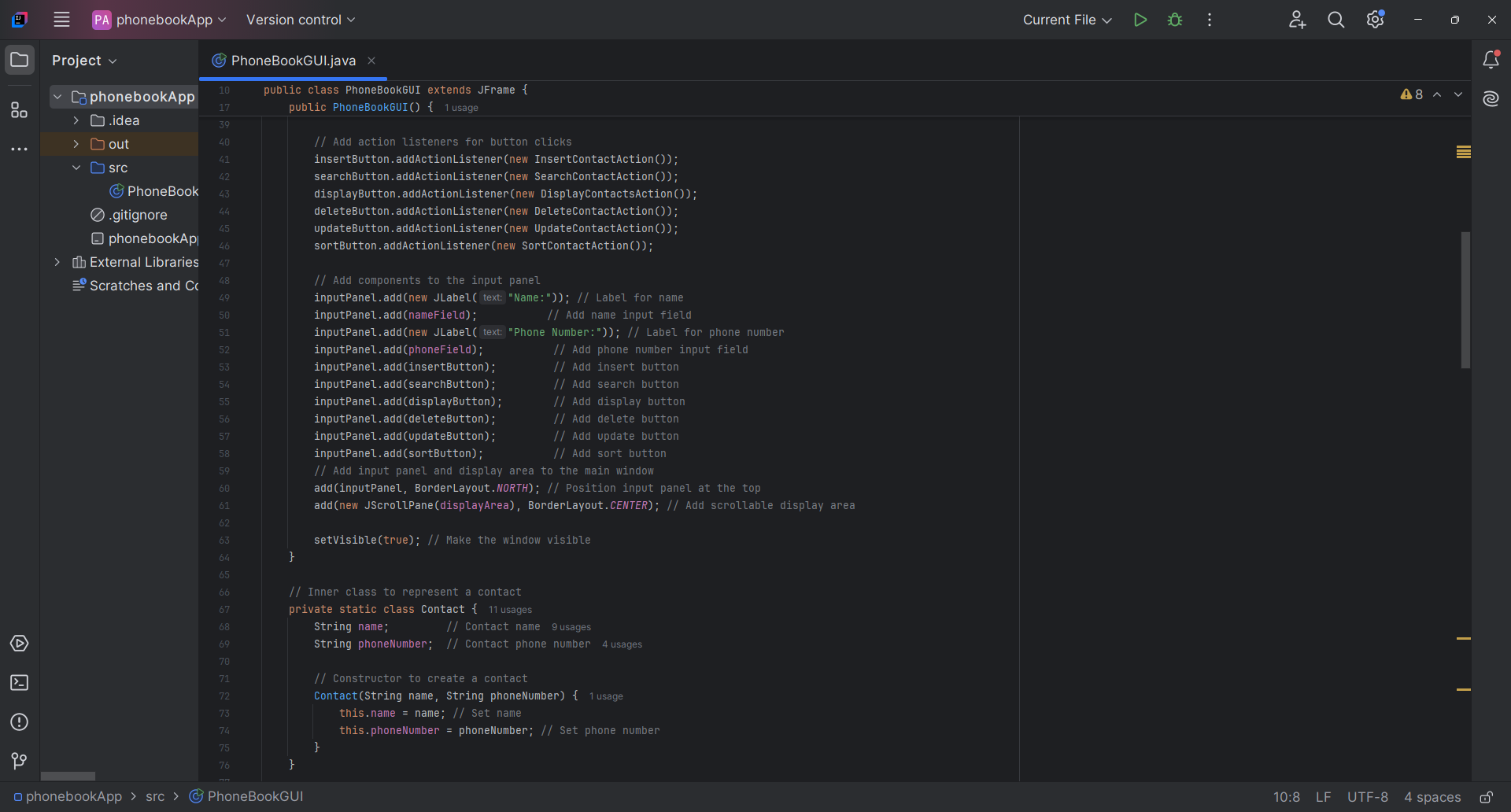
A diagram of a diagram

Description automatically generated

Source Code & GUI

A screenshot of a computer program

Description automatically generated



A screenshot of a computer program

Description automatically generated

A screenshot of a computer program

Description automatically generated

A screenshot of a computer program

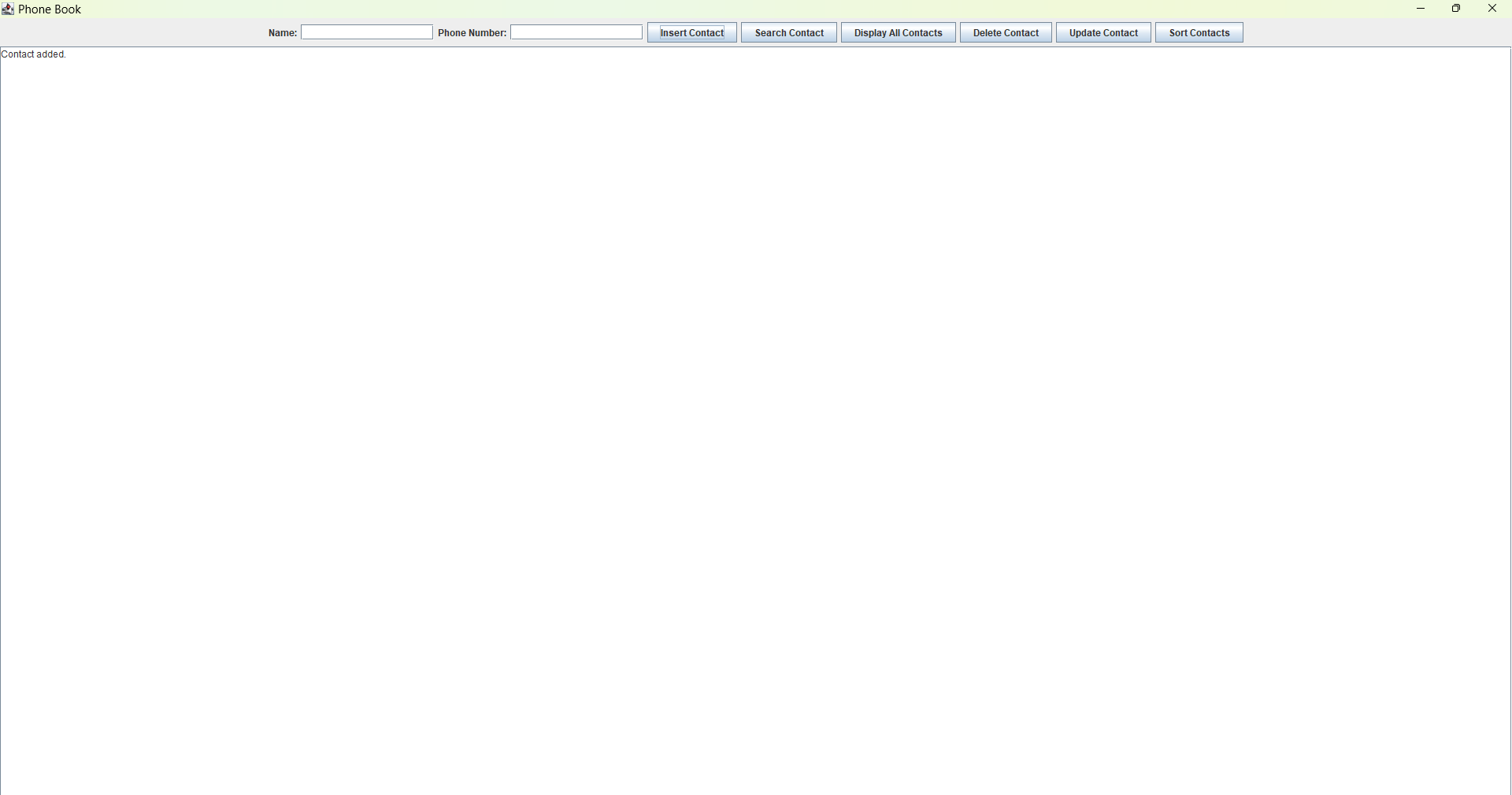
Description automatically generated

Screenshots of the application

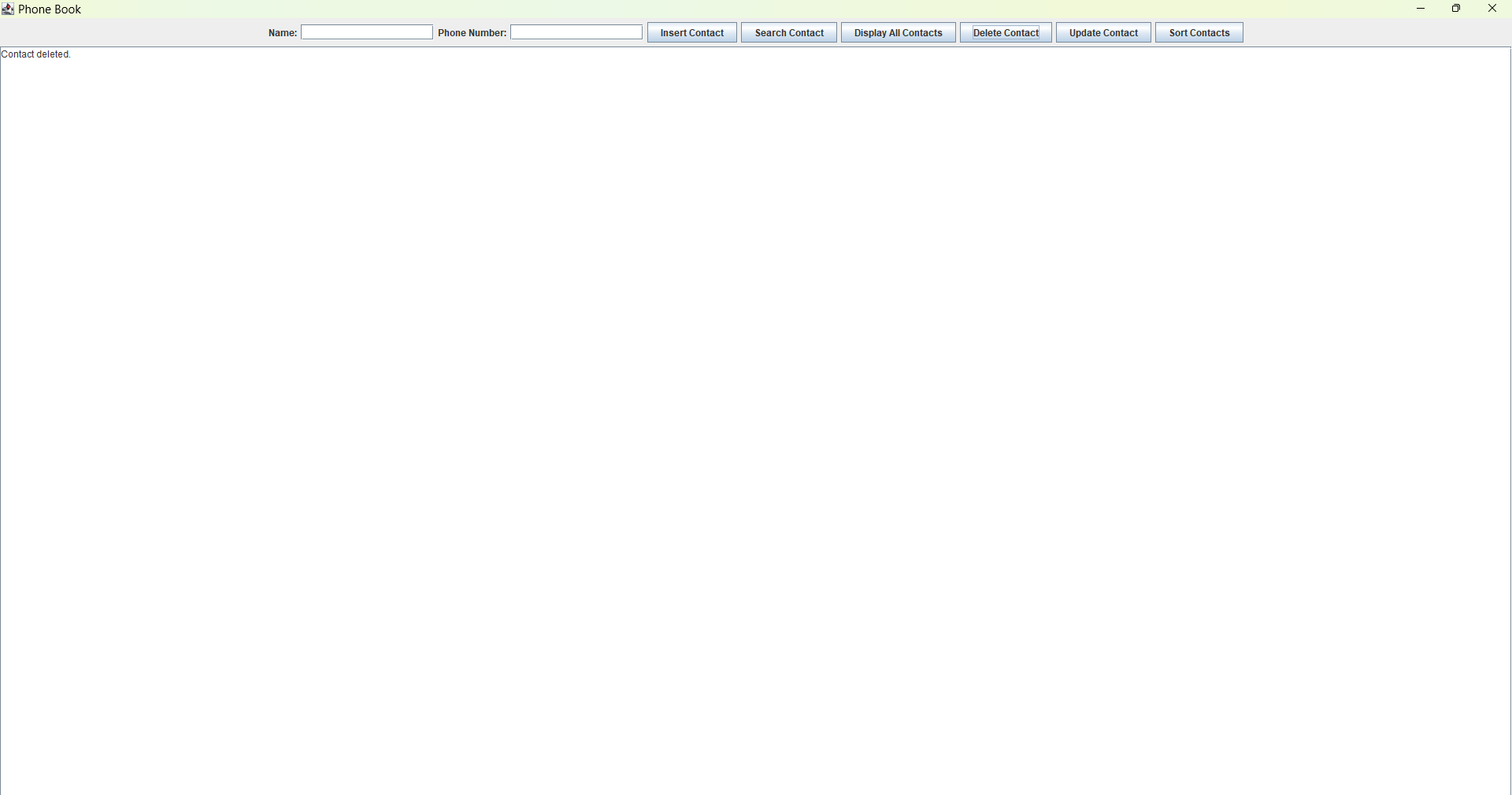
A screenshot of a computer

Description automatically generated

Inserting a contact



Deleting a contact

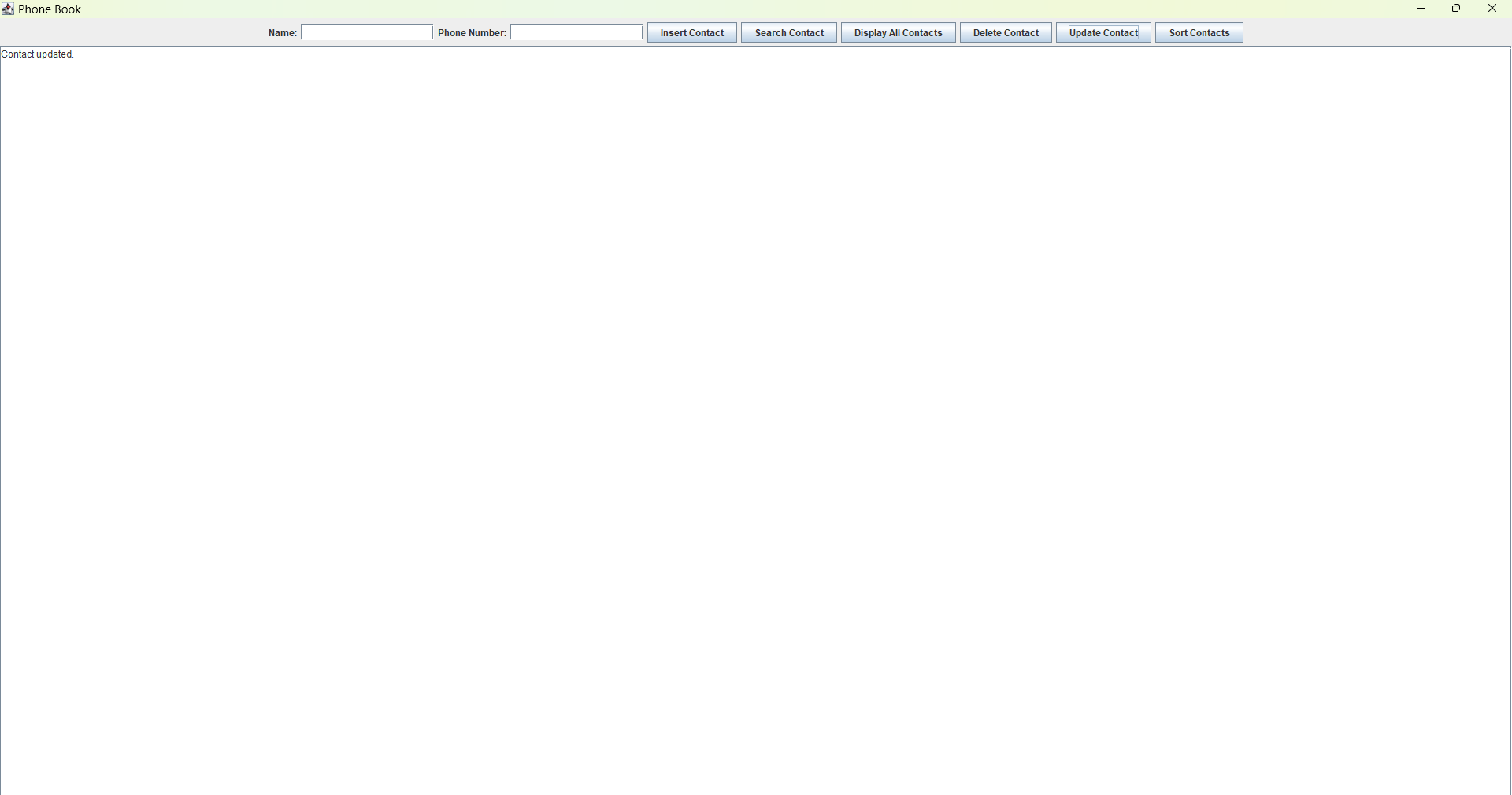


Searching a contact

A screenshot of a computer

Description automatically generated

Updating a contact



Sorting contacts

A screenshot of a computer

Description automatically generated

Displaying all contacts

