1. Insert Contact

Start

If (phonebook has space) Then

Add contact

Display "Contact added"

Else

Display "Phonebook is full"

End

**Phonebook has space**

**Add contact**

**Display “Contact added”**

**Display “Phonebook is full”**

True

False

2. Search Contact

Start

For each contact in phonebook

If (name matches) Then

Display contact's phone number

Else

If (no match found) Then

Display "Contact not found"

End

**Name == match**

**Display contact’s phone number**

**Display “Contact not found”**

**For each contact in phonebook**

**No match found**

True

False

3. Display All Contacts

Start

If (phonebook is empty) Then

Display "No contacts"

Else

Display each contact's name and phone number

End

**Phonebook == empty**

**Display “No contacts”**

**Display each contact’s name and phone number**

True

False

4. Delete Contact

Start

For each contact in phonebook

If (name matches) Then

Delete contact

Display "Contact deleted"

Else

If (no match found) Then

Display "Contact not found"

End

**name == matches**

**Delete contact**

**Display “Contact deleted”**

**Display “Contact not found”**

**For each contact in phonebook**

**No matches found**

True

False

5. Update Contact

Start

For each contact in phonebook

If (name matches) Then

Update phone number

Display "Contact updated"

Else

If (no match found) Then

Display "Contact not found"

End

**name == match**

**Update phone number**

**Display “Contact updated”**

**Display “Contact not found”**

**For each contact in phonebook**

**No matches found**

True

False

6. Sort Contacts

Start

If (phonebook is not empty) Then

Sort contacts alphabetically

Display "Contacts sorted"

Else

Display "Phonebook is empty"

End

**Phonebook != empty**

**Sort contacts alphabetically**

**Display “Contact sorted”**

**Display “Phonebook is empty”**

True

False

7. Analyse Search Efficiency

Start

Count total contacts in phonebook

Display "Search time depends on number of contacts"

End

**Count total contacts in phonebook**

**Display” Search time depends on number of contacts**”