223043702 - LUSWENYO MAFENYEHO

[Company name]  [Company address]

DSA PROJECT

1. **Pseudocode**

FUNCTION displayContactList():

    CLEAR the current display

    FOR each contact in contacts:

        DISPLAY contact details (name, phone, email)

FUNCTION addContact(name, phone, email):

    IF name IS NOT EMPTY AND phone IS NOT EMPTY AND email IS NOT EMPTY:

        CREATE new Contact object with (name, phone, email)

        ADD contact to contacts

        DISPLAY message "Contact added successfully."

        CALL displayContactList()

    ELSE:

        DISPLAY error message "All fields are required."

FUNCTION deleteContact(selectedIndex):

    IF selectedIndex IS VALID:

        REMOVE contact at selectedIndex from contacts

        DISPLAY message "Contact deleted successfully."

        CALL displayContactList()

    ELSE:

        DISPLAY error message "Select a contact to delete."

FUNCTION editContact(selectedIndex, newName, newPhone, newEmail):

    IF selectedIndex IS VALID AND newName IS NOT EMPTY AND newPhone IS NOT EMPTY AND newEmail IS NOT EMPTY:

        SET contact = contacts[selectedIndex]

        SET contact.name = newName

        SET contact.phone = newPhone

        SET contact.email = newEmail

        DISPLAY message "Contact updated successfully."

        CALL displayContactList()

    ELSE:

        DISPLAY error message "Select a contact to edit and fill all fields."

FUNCTION searchContact(searchQuery):

    IF searchQuery IS NOT EMPTY:

        INITIALIZE empty list searchResults

        FOR each contact in contacts:

            IF contact.name MATCHES searchQuery:

                ADD contact to searchResults

        DISPLAY searchResults in the table

    ELSE:

        DISPLAY error message "Enter a name to search."

FUNCTION refreshContacts():

    CALL displayContactList()

ON NewContactButton click:

    CALL addContact(nameField.text, phoneField.text, emailField.text)

ON DeleteButton click:

    CALL deleteContact(selectedIndex from contactList)

ON EditButton click:

    CALL editContact(selectedIndex from contactList, newName, newPhone, newEmail)

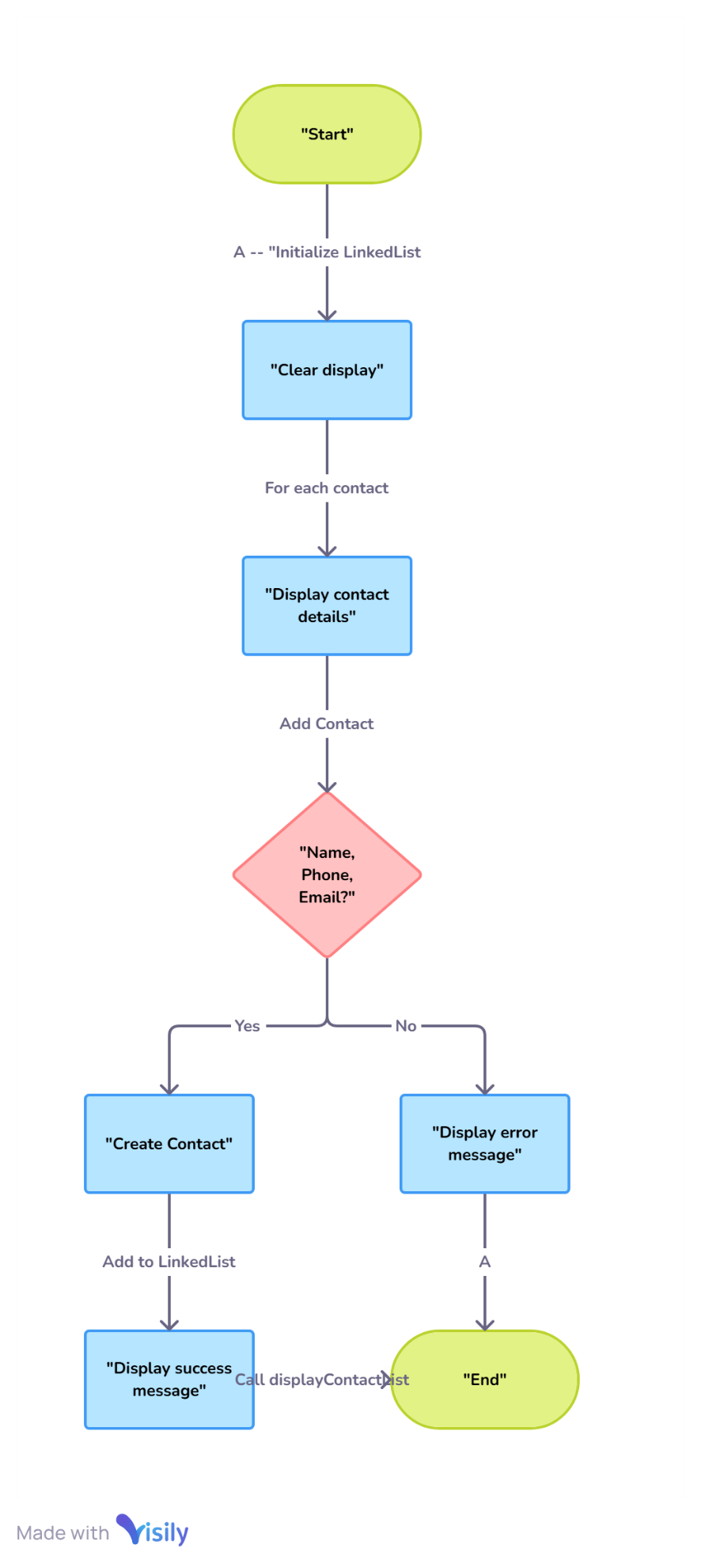
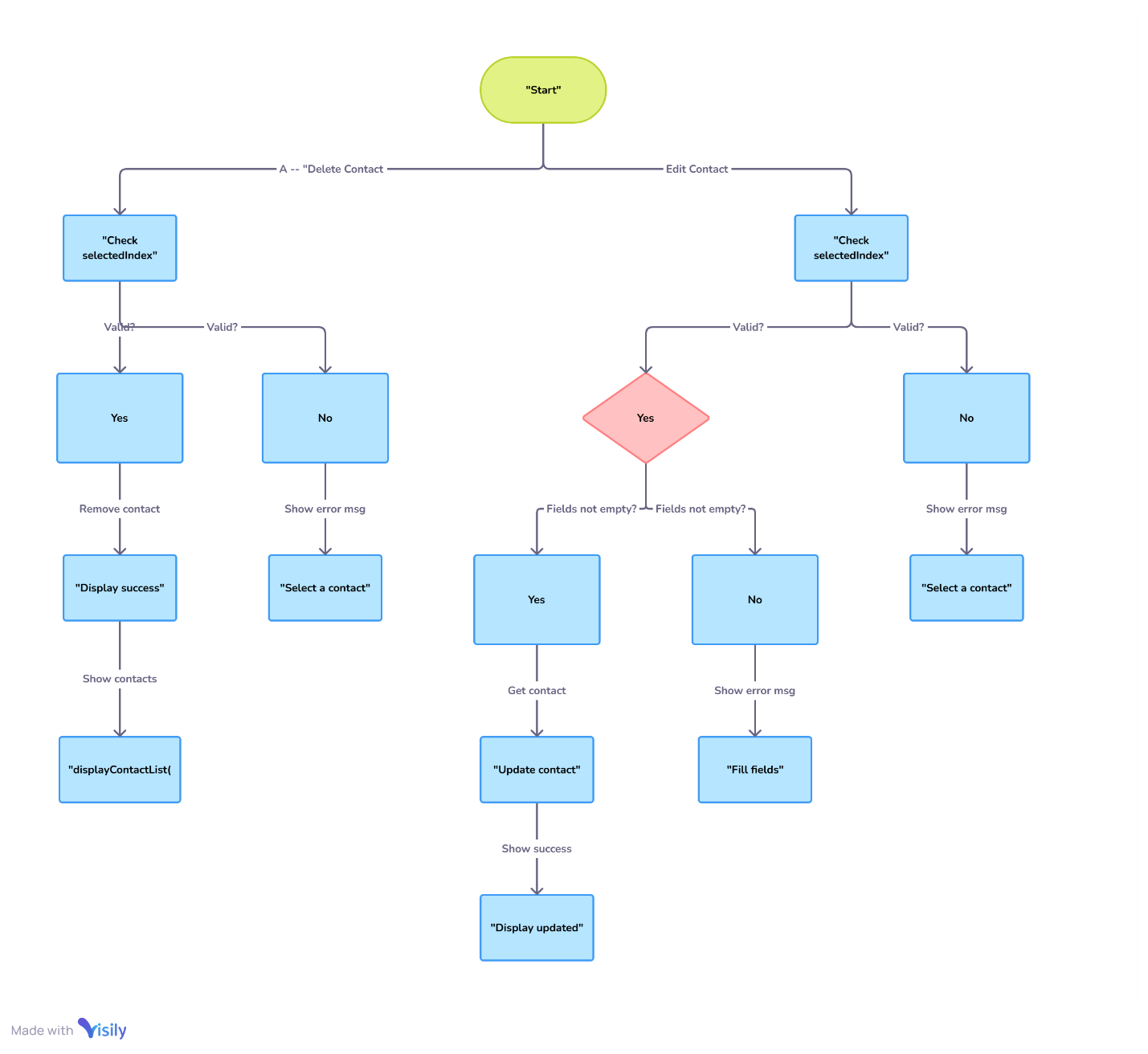
ON SearchButton click:

    CALL searchContact(searchField.text)

ON RefreshButton click:

    CALL refreshContacts()

1. **Flowchart**

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