

# Getting started with Program 4:

## Contact List application

At this point, you should be referring to the document

**Last pre-break steps with Program 4: Contact List application**

<https://docs.google.com/document/d/1NpkrfoXq1Qmaoy-T4ENI-KLBEdR7NzpiuvBmVldcO8w/edit#>

All the relevant content of this document is included there.

In this program project, we'll be talking about the *process* of developing an application as you're building it out, so we'll be delivering the full program description later this week.

We're going to use a bottom-up approach to get started on the application.

<https://www.tutorialspoint.com/difference-between-bottom-up-model-and-top-down-model>

We'll need two classes for the application - Contact and ContactList - and you'll be working on the Contact class in lab this week (but you can feel free to start it before lab.)

**Note:** there will be additional member functions required in the final project, but adding something later will not be an issue if you know your code.

class **Contact**

**data**

char

contactType // P(ersonal) or W(ork)

string

firstName lastName,streetName,city,state,email, dateOfBirth

int

streetNumber, postalCode

vector of PhoneNumbers (a struct with string number and char phoneType  
// W(ork), H(ome), C(ell)

**constructors**

create with just a contact type, first name and last name

create with a contact type and phone number

**basic getters and setters**

getFirstName

getLastName

getContactType

getState

getEmail

getDateOfBirth

setFirstName

setLastName

setContactType

setEmail

setDateOfBirth

**other "setters"**

setAddress (number, street, city, state, postalCode)

**other public member functions**

getName

// returns ln,<sp>fn

getAddress

// returns number<sp>street,<sp>city,<sp>state<sp>postalcode

string tester(); // you'll declare this **but not define it**; we'll do that in the test script

class **ContactList**

**data**

vector of contacts

**functions**

importContactsFromFile (accepts a filename);  
    loops the file, creates contacts, adds to vector

deleteContact()

addContact()

string tester(); // you'll declare this but not define it; we'll do that in the test script