## **Address Book**

The Address Book is organized into a set of four tables [contact\_master, address\_master, phone\_master, and date\_master]. Each of these tables are used to store the unique entites of a contact. The contact\_master serves as the basic/master table which holds the first name, middle name and the last name of the user in addition to the uniquely identifying field contact\_id. The address\_master is used to store the address of a user. It is worth mentioning that a user may have more than one addresses, and it uses the contact\_id of the contact\_master as the foreign key in addition to a primary key phone\_id. Similarly, the phone\_master and the date\_master stores the phone numbers and dates (birthday, anniversary, etc.) of the user.

Fields and the associated data types are listed below:

1. Contact\_master:
   1. Contact\_id: Primary key for the contact\_master table. Used to uniquely identify a contact stored in the address book. *Data Type: Integer.*
   2. Fname: First name of the contact. *Data Type: String.*
   3. Mname: Middle name of the contact. *Data Type: String.*
   4. Lname: Last name of the contact. *Data Type: String.*
2. Address\_master:
   1. Address\_id: Primary key for the address\_master table. Can be used to identify an address record in the address\_master table. *Data Type: Integer.*
   2. Contact\_id: Foreign key for the contact\_master table. Used to retrieve all the details that are associated with a particular contact. *Data Type: contact\_master instance.*
   3. Address\_type: Type of the address. *Data\_type: String.*
   4. Address: Address of the contact’s address. *Data\_type: String.*
   5. City: City of the contact’s address. *Data\_type: String.*
   6. State: State of the contact’s address. *Data\_type: String.*
   7. Zip: Zip of the contact’s address. *Data\_type: String.*
3. Phone\_master
   1. phone\_id: Primary key for the phone\_master table. Can be used to identify a phone record in the phone\_master table. *Data Type: Integer.*
   2. Contact\_id: Foreign key for the contact\_master table. Used to retrieve all the details that are associated with a particular contact. *Data Type: contact\_master instance.*
   3. phone\_type: Type of the phone number. *Data\_type: String.*
   4. Area\_code: area\_code of the contact’s phone number. *Data\_type: String.*
   5. Number: number field of the contact’s number. *Data\_type: String.*
4. Date\_master
   1. date\_id: Primary key for the date\_master table. Can be used to identify a date record in the phone\_master table. *Data Type: Integer.*
   2. Contact\_id: Foreign key for the contact\_master table. Used to retrieve all the details that are associated with a particular contact. *Data Type: contact\_master instance.*
   3. date\_type: Type of the phone number. *Data\_type: String.*
   4. Date: date field of the contact’s date. *Data\_type: String.*

Assumptions made by the model:

1. A user can have multiple phone numbers (cell, home, fax, etc.) but a phone number cannot be associated with more than one user. i.e. two users can’t have the same phone number
2. The phone number must be of the format area\_code-number{3}-number{4}
3. A user can have more than one addresses.