Contacts App

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* **Libraries used**
  + CherryPy: Object oriented web application framework using Python for rapid development of web applications.
  + Mako: python based template library to render templates using python modules.
  + Bootstrap: CSS library for basic styling of HTML elements.
  + Twillio REST API: API for text messaging.
* **Files & Workflow**

The project contains following files:

* ContactsApp.py: Main entry point that implements the key requirements of the web application such as View contact list, View Contact Information, Send Message, etc and renders the templates using the mako library.
* ContactList.html: Template for displaying contact list with First & Last names.
* ContactInfo.html: Template for displaying the contact info selected from list in ContactList.html
* ComposeMessage.html: Template for generating SMS text with OTP & sending the SMS.
* SentMessage.html: Template to display history of messages sent sorted in descending order of time.
* MessageHistory.txt: Text file to store OTP sent to mobile numbers with their respective time.

Initialization & Basic Flow of App:

* Executing ContactsApp.py host the web app on localhost with default port 8080.
* Root url “/” opens ContactsList.html by default. Selection of contact can be done from the given list.
* Static navigation bar is provided to switch between contact list and sent message history.
* Upon selection, ContactInfo.html is opened with selected contact details and button to send message to mobile number.
* ComposeMessage.html generates OTP in a read only text field with button to send the message.
* Alert is provided for status of request i.e. either message sent or error in case of failure in validations and redirects user to root.
* Sent message history can be obtained from url /MessageHistory for navigation using nav bar on top.
* **Validations**

Following validations were considered in the web application:

1. Check for valid mobile number i.e. all digit characters.
2. Check mobile number exists for contact in input json string.

**Note**: Edit sid and token for Twillio API in SendMessage method of ContactsApp.py for proper functioning of messaging service.