**Task done:**

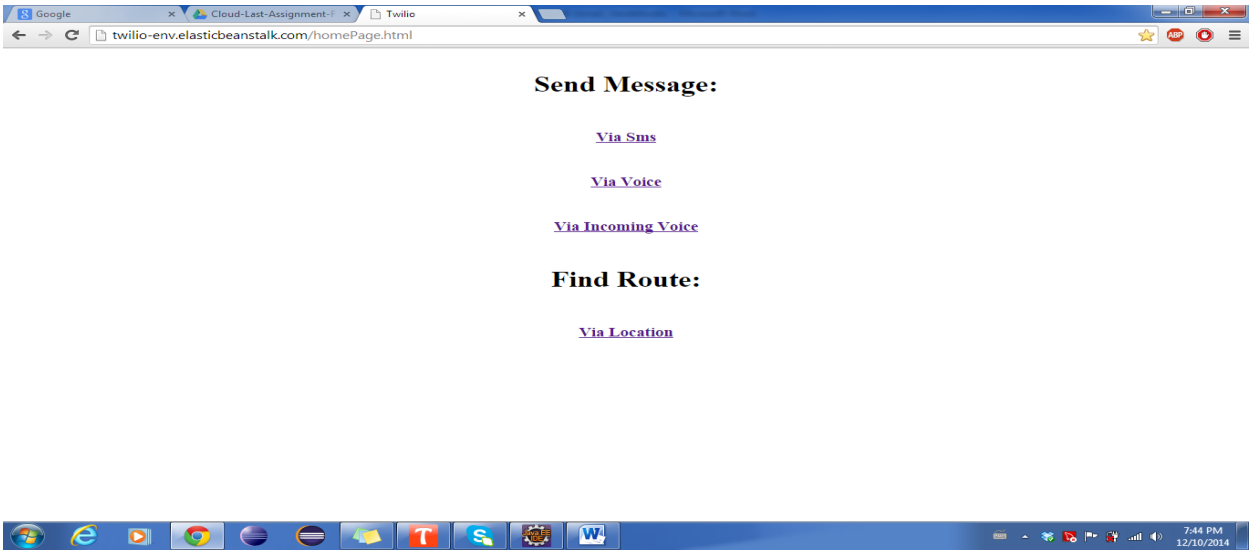
1) Used Amazon Bean stalk for scaling and load balancing.

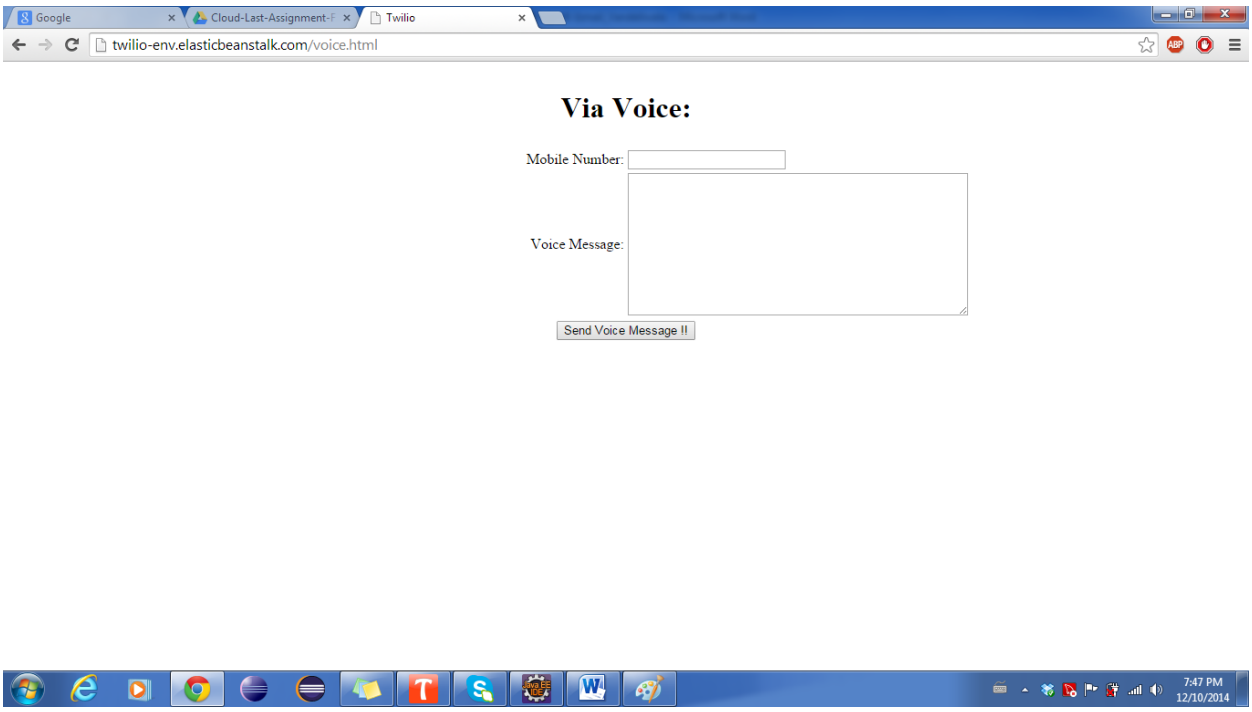
2) Used geolocation to find the route between 2 places.

3) Used Twilio to send message and voice calls.

4) Used dynamic web interface.

**Screen shots:**




**Via Sms:**

Mobile Number:

Message:

Send Message !!



**Find Route between 2 places:**

From: Current Address Get my position

To: Destination Address Get my position

Submit Reset


**Via Incoming Voice:**

Click !!


## Twilio SMS and Voice:

Used Twilio Labs to configure customized voice message. You can create new Twimlet which in turn gives you url which has message parameter. Message parameter can be set in program to read that message when user gets the call.

For both twilio sms and voice, used their pre-defined library and code to access the functionality.

For twilio, you need to create account which gives you one free number to access it. My application asks the user to enter number and message they want to send to that number. Application send that message from my twilio number to the number given by user.

If user wants to send voice message, he enters the same information as above and application calls that number from twilio number.

Also, if the user calls my twilio number than user will hear pre-defined message that I have set on twilio labs. For that, we have to create twiml apps in twilio where you can specify the url given by twilio labs. It will read the message from that location and will speak it to user.

## Geolocation:

User can enter source and destination address to get the route. Application user pre-defined js file http://maps.google.com/maps/api/js?sensor=true. It creates object of direction service. Then it creates direction Request which takes parameters as source, destination and travel mode such as car, bike or walk. Using direction service, it calls route to find the route between 2 places. Also to get the current location for source address, application uses navigator.geolocation.getCurrentPosition function to access the current longitude and latitude and displays the retrieved address.

## Elastic Bean Stalk:

I created a dynamic web application in eclipse and configured it with tomcat server. After that I exported the project as war file. I uploaded and deployed war file at Amazon Elastic bean stalk. This is the url: http://twilio-env.elasticbeanstalk.com/homePage.html to access the application.

### How to do auto scaling and load balancing?

In the configuration for the environment created for elastic bean stalk application, one can set environment type as load balancing, auto scaling. You can select minimum and maximum instances to create. You can set the trigger measurement which says when application needs to create more instances. It can be network out, cpu utilization, network in, etc.

## How to run:

I am submitting source code and war file both. You can both upload and deploy war file at your own elastic bean stalk or you can import the given source code in eclipse and run it using apache tomcat 7 server.

**Reference:**

https://www.twilio.com/login?g=%2Flabs%2Ftwimlets%2Fmy&t=19a8dd92d3499ddc157f6c3c6df6100c0de726bd474a02f37bb5635d12afcf3c#

http://www.sitepoint.com/find-a-route-using-the-geolocation-and-the-google-maps-api/

https://www.twilio.com/docs/quickstart/java

http://www.w3schools.com/html/html5_geolocation.asp