ASSIGNMENT – 6
ADVANCED SOFTWARE ENGINEERING
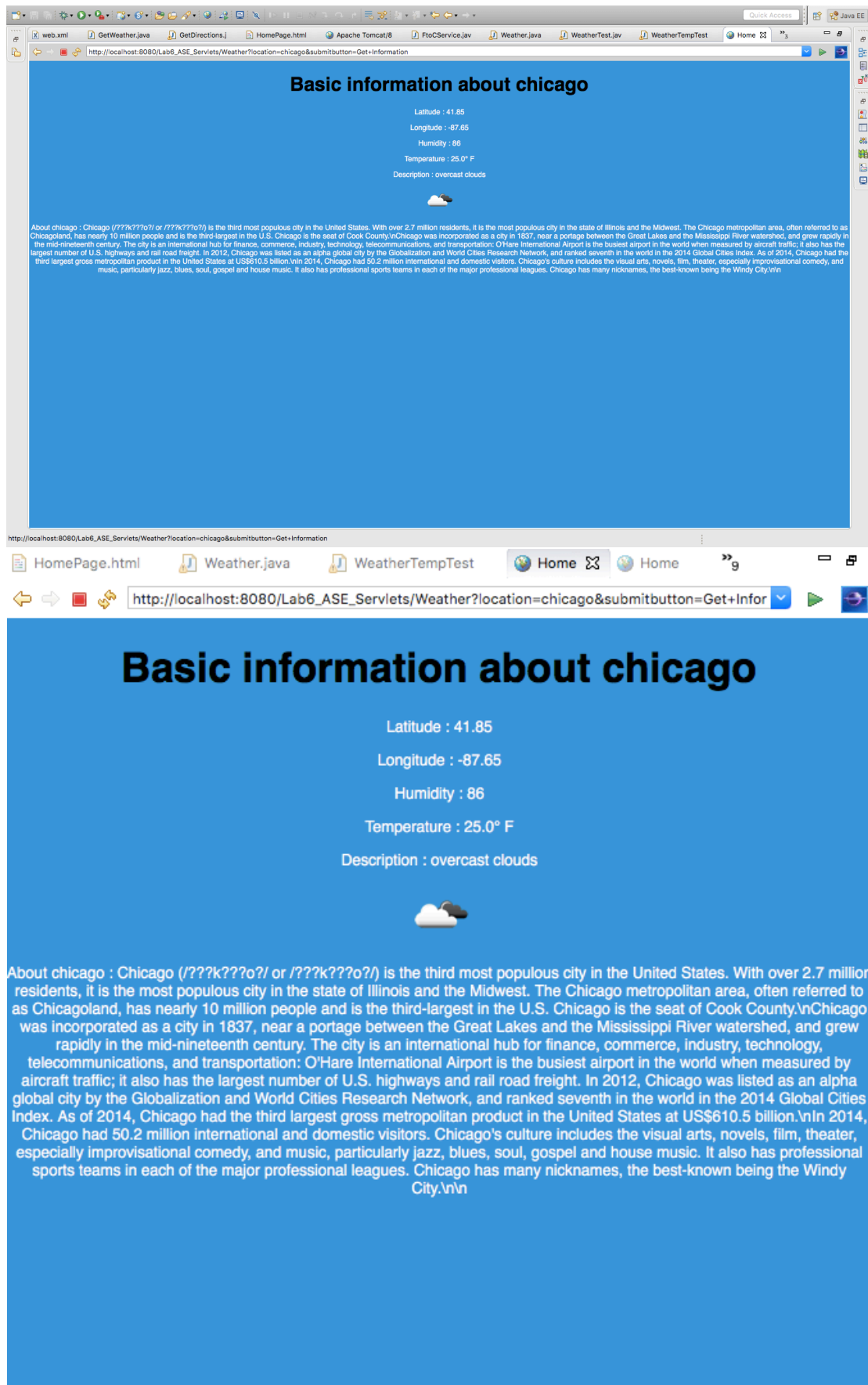
SERVLETS MASHUP

- This application intends to give the basic information of a city entered by the user.
- It makes use of **Openweathermap** API to give the weather details, **Wikipedia** API to give the information about the city.
- This application consists of two pages:
  1. Enter the name of a city to get the basic information.
  2. Displays the information about the city.
- Junit Testing is done on both failure and success cases.

Screenshots:

Screen 1 – Enter the name of a city to get the basic information.
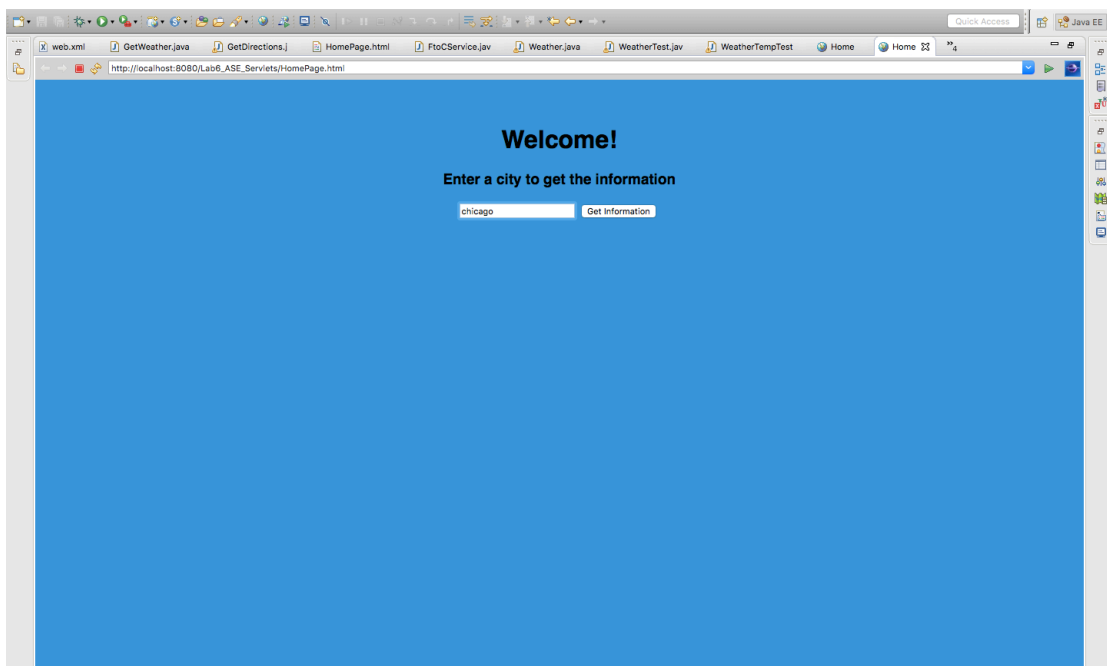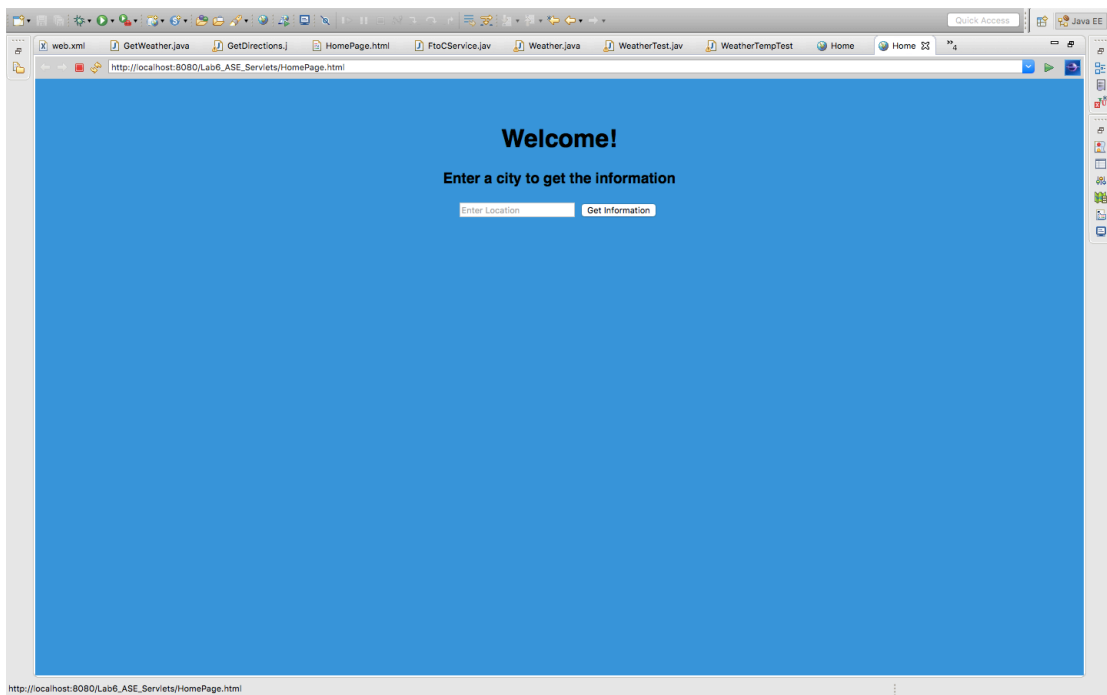
Screen 2 – Gives the information about the city making use of Openweathermap and Wikipedia API

Basic information about chicago
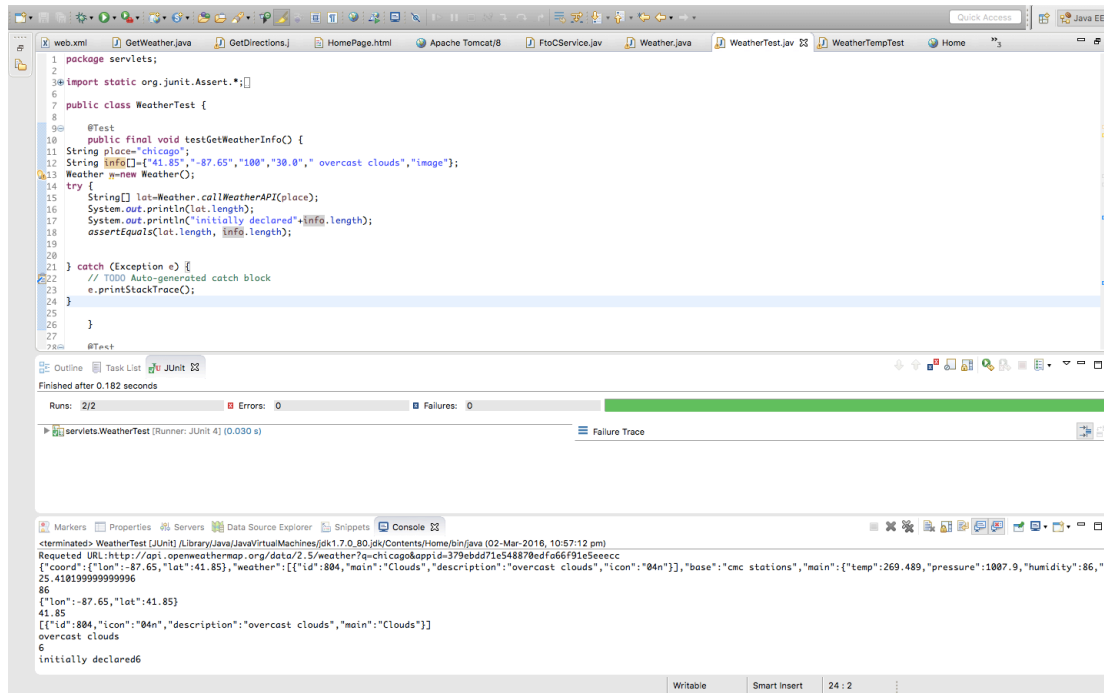
Latitude : 41.85

Longitude : -87.65

Humidity : 86

Temperature : 25.0° F

Description : overcast clouds

About chicago : Chicago (/???k???o?/ or /???k???o?/) is the third most populous city in the United States. With over 2.7 million residents, it is the most populous city in the state of Illinois and the Midwest. The Chicago metropolitan area, often referred to as Chicagoland, has nearly 10 million people and is the third-largest in the U.S. Chicago is the seat of Cook County.\nChicago was incorporated as a city in 1837, near a portage between the Great Lakes and the Mississippi River watershed, and grew rapidly in the mid-nineteenth century. The city is an international hub for finance, commerce, industry, technology, telecommunications, and transportation: O'Hare International Airport is the busiest airport in the world when measured by aircraft traffic; it also has the largest number of U.S. highways and rail road freight. In 2012, Chicago was listed as an alpha global city by the Globalization and World Cities Research Network, and ranked seventh in the world in the 2014 Global Cities Index. As of 2014, Chicago had the third largest gross metropolitan product in the United States at US$610.5 billion.\nIn 2014, Chicago had 50.2 million international and domestic visitors. Chicago's culture includes the visual arts, novels, film, theater, especially improvisational comedy, and music, particularly jazz, blues, soul, gospel and house music. It also has professional sports teams in each of the major professional leagues. Chicago has many nicknames, the best-known being the Windy City.\n\n
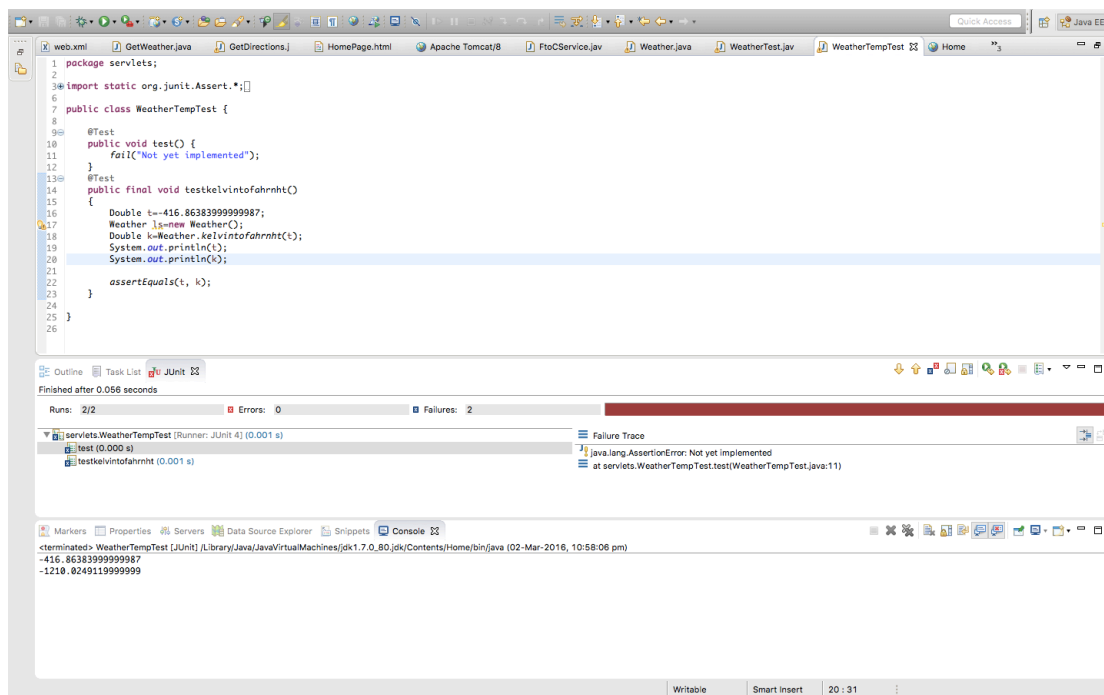
JUnit Testing :

Success:

package servlets;

import static org.junit.Assert.*;

public class WeatherTest {

    @Test
    public final void testGetWeatherInfo() {
    String place="chicago";
    String info[]={"41.85","-87.65","100","30.0"," overcast clouds","image"};
    Weather w=new Weather();
    try {
        String[] lat=Weather.callWeatherAPI(place);
        System.out.println(lat.length);
        System.out.println("initially declared"+info.length);
        assertEquals(lat.length, info.length);

    } catch (Exception e) {
        // TODO Auto-generated catch block
        e.printStackTrace();
    }

    }

    @Test

Outline   Task List   JUnit

Finished after 0.182 seconds

Runs: 2/2   Errors: 0   Failures: 0

▶ servlets.WeatherTest [Runner: JUnit 4] (0.030 s)   Failure Trace

Markers   Properties   Servers   Data Source Explorer   Snippets   Console

<terminated> WeatherTest [JUnit] /Library/Java/JavaVirtualMachines/jdk1.7.0_80.jdk/Contents/Home/bin/java (02-Mar-2016, 10:57:12 pm)
Requeted URL:http://api.openweathermap.org/data/2.5/weather?q=chicago&appid=379ebdd71e548870edfa66f91e5eeeccc
{"coord":{"lon":-87.65,"lat":41.85},"weather":[{"id":804,"main":"Clouds","description":"overcast clouds","icon":"04n"}],"base":"cmc stations","main":{"temp":269.489,"pressure":1007.9,"humidity":86,"t
25.410199999999996
86
{"lon":-87.65,"lat":41.85}
41.85
[{"id":804,"icon":"04n","description":"overcast clouds","main":"Clouds"}]
overcast clouds
6
initially declared6

Writable   Smart Insert   24 : 2

Failure:

package servlets;

import static org.junit.Assert.*;

public class WeatherTempTest {

    @Test
    public void test() {
        fail("Not yet implemented");
    }
    @Test
    public final void testkelvintofahrnht()
    {
        Double t=-416.86383999999987;
        Weather l=new Weather();
        Double k=Weather.kelvintofahrnht(t);
        System.out.println(t);
        System.out.println(k);

        assertEquals(t, k);
    }
}

Outline   Task List   JUnit

Finished after 0.056 seconds

Runs: 2/2   Errors: 0   Failures: 2

▼ servlets.WeatherTempTest [Runner: JUnit 4] (0.001 s)   Failure Trace
    test (0.000 s)   java.lang.AssertionError: Not yet implemented
    testkelvintofahrnht (0.001 s)   at servlets.WeatherTempTest.test(WeatherTempTest.java:11)

Markers   Properties   Servers   Data Source Explorer   Snippets   Console

<terminated> WeatherTempTest [JUnit] /Library/Java/JavaVirtualMachines/jdk1.7.0_80.jdk/Contents/Home/bin/java (02-Mar-2016, 10:58:06 pm)
-416.86383999999987
-1210.0249119999999

Writable   Smart Insert   20 : 31