CS589_Project_FeatureTestingOn511.org

By Ying Zhang, 10167

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Instructed by Dr. L. Chang

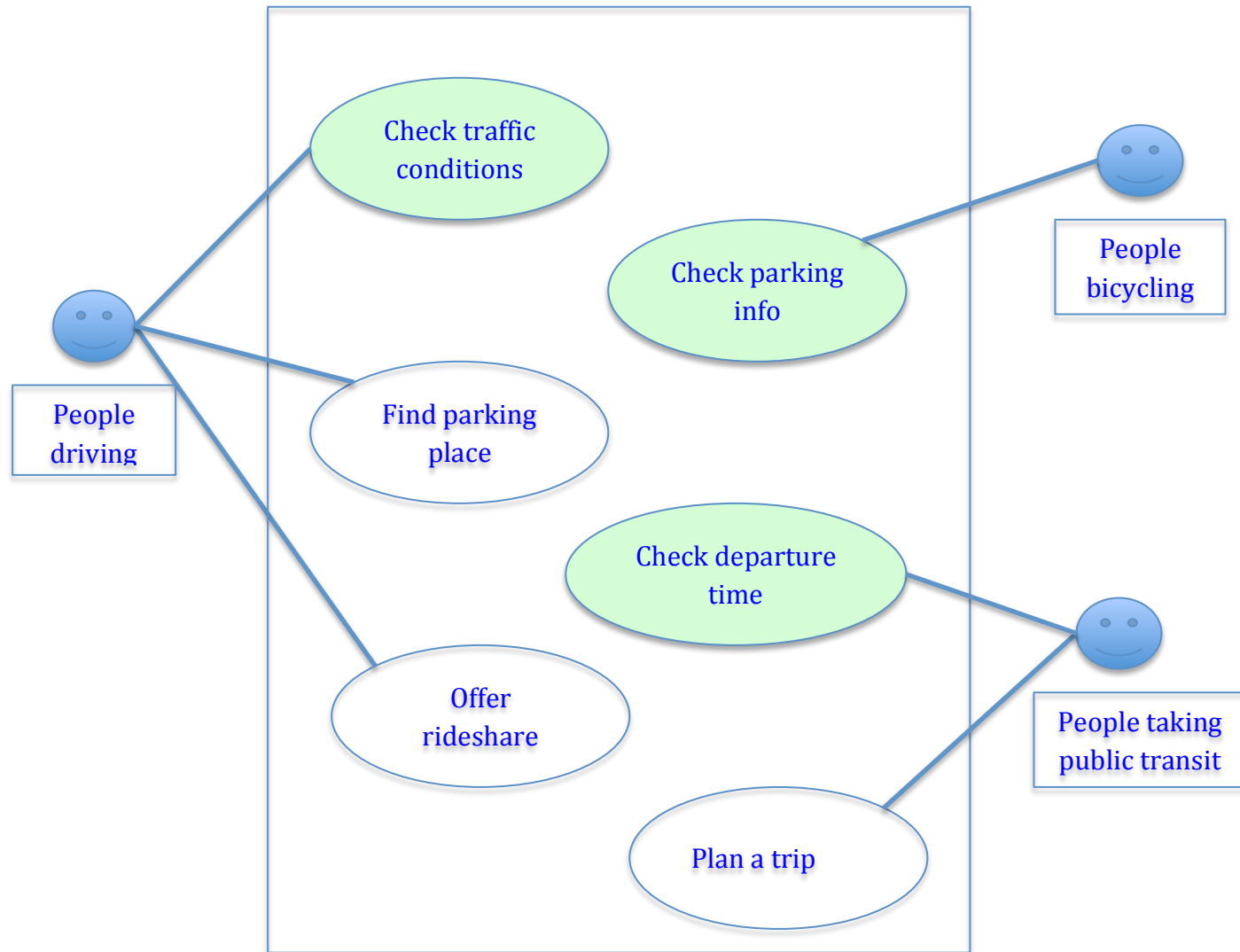# Contents

Project Target: Automated testing of a web application 511.org

Objective: To automate test cases developed by using various testing techniques for testing different usage scenarios of a website

Step 1: Use Case Analysis (Partial Features ONLY)

Step 2: Test Case Design (Partial Use Case Coverage: cover above use cases filled in green color ONLY)

Test case ID, Objective	Test steps and data	Expected results
Testcase ID: UC01_S01 Objective: check if user could get bike parking information in cities from 511.org	1. Start up Internet Explorer web browser. 2. Go to www.511.org. 3. Click "BICYCLING" from top navigation menu 4. Click "Parking" under "Infrastructure" menu 5. Click "Bicycle Parking In Cities" 6. Verify text "San Francisco" appeared on result page.	1. IE starts up. 2. 511.org home page opens. 3. "Bicycling Home" page is displayed 4. The "Infrastructure – Parking" page is displayed 5. The bicycle parking information for cities displayed under the menu 6. "San Francisco" exists on result page.
Testcase ID: UC01_S02 Objective: check if user could get bike parking information in transit station from 511.org	1. Start up Internet Explorer web browser. 2. Go to www.511.org. 3. Click "BICYCLING" from top navigation menu 4. Click "Commuting by Bike" under "Bike to Work" menu 5. Click "Know in advance where you'll park. " and then click "click here" 6. Verify text "BART Fremont" appeared on result page.	1. IE starts up. 2. 511.org home page opens. 3. "Bicycling Home" page is displayed 4. The "Bike to Work - Commuting by Bike" page is displayed 5. The "Infrastructure – Stations" page is displayed 6. "BART Fremont" exists on result page.
Testcase ID: UC02_S01 Objective: check if user could get departure times	1. Start up Internet Explorer web browser. 2. Go to www.511.org. 3. Click "TRANSIT" from top navigation menu 4. Click "Departure Times Predictions" under	1. IE starts up. 2. 511.org home page opens. 3. "TRANSIT" page is displayed 4. The "Real-Time Departures" page is displayed

information by selecting agency, routes and stop from 511.org	"Real-Time Departures" menu 5. Select "BART" as transit agency, select "FREMONT/RICH" as route, select "BART FREMONT" as stop and then click button "Get Times" 6. Verify text "Next departures at Fremont, BART" appeared on result page.	5. The result page is displayed 6. "Next departures at Fremont, BART" exists on result page.
Testcase ID: UC02_S02 Objective: check if user could get departure times information by providing stop ID from 511.org	1. Start up Internet Explorer web browser. 2. Go to www.511.org. 3. Click "TRANSIT" from top navigation menu 4. Click "Departure Times Predictions" under "Real-Time Departures" menu 5. Choose query by "Stop ID" 6. Input 24 as the stop ID and then click button "Get Times" 7. Verify text "Next departures at Union City, BART" appeared on result page.	1. IE starts up. 2. 511.org home page opens. 3. "TRANSIT" page is displayed 4. The "Real-Time Departures" page is displayed 5. The query input field changed to "Stop ID" only 6. The result page is displayed 7. "Next departures at Union City, BART" exists on result page.
Testcase ID: UC03_S01 Objective: Check if user could get current traffic conditions from 511.org	1. Start up Internet Explorer web browser. 2. Go to www.511.org. 3. Click "TRAFFIC" from top navigation menu 4. Verify text "Current Traffic Conditions" appeared on result page.	1. IE starts up. 2. 511.org home page opens. 3. "Traffic Home" page is displayed 4. "Current Traffic Conditions" exists on result page.
Testcase ID: UC03_S02	1. Start up Internet Explorer web browser. 2. Go to www.511.org.	1. IE starts up. 2. 511.org home page opens.

| Objective: Check if user could get current Incidents, Construction, & Events from 511.org | 3. Click "TRAFFIC" from top navigation menu
4. Click "Current Incidents, Construction, & Events" link under "Latest News & Traffic Info" menu
5. Verify text "construction" appeared on result page. | 3. "Traffic Home" page is displayed
4. The "Current Incidents, Construction, & Events" page is displayed
5. "Construction" exists on result page. |

Step 3: Test Case Implementation (Using Selenium 1.0 Remote Control for Java with JUnit)

TestCaseFor_UC01_S01.java

```java
package com.example.tests;

import com.thoughtworks.selenium.*;
import org.junit.After;
import org.junit.Before;
import org.junit.Test;
import static org.junit.Assert.*;
import java.util.regex.Pattern;


import junit.framework.TestCase;

public class TestCaseFor_UC01_S01 extends TestCase {
    private Selenium selenium;

    @Before
    public void setUp() throws Exception {
        selenium = new DefaultSelenium("localhost", 4444, "*chrome", "http://www.google.com/");
        selenium.start();
    }
```

```java
    @Test
    public void testCaseFor_UC01_S01() throws Exception {
        selenium.open("http://www.511.org/");
        selenium.click("link=Bicycling");
        selenium.waitForPageToLoad("30000");
        selenium.click("xpath=(//a[contains(text(),'Parking')])[2]");
        selenium.waitForPageToLoad("30000");
        selenium.click("link=Bicycle Parking In Cities");
        assertTrue(selenium.isTextPresent("San Francisco"));
    }

    @After
    public void tearDown() throws Exception {
        selenium.stop();
    }
}
```

TestCaseFor_UC01_S02.java

```java
package com.example.tests;

import com.thoughtworks.selenium.*;
```

```java
import org.junit.After;
import org.junit.Before;
import org.junit.Test;
import static org.junit.Assert.*;
import java.util.regex.Pattern;

import junit.framework.TestCase;

public class TestCaseFor_UC01_S02 extends TestCase {
    private Selenium selenium;

    @Before
    public void setUp() throws Exception {
        selenium = new DefaultSelenium("localhost", 4444, "*chrome", "http://www.google.com/");
        selenium.start();
    }

    @Test
    public void testCaseFor_UC01_S02() throws Exception {
        selenium.open("http://www.511.org/");
        selenium.click("link=Bicycling");
        selenium.waitForPageToLoad("30000");
        selenium.click("link=Commuting by Bike");
        selenium.waitForPageToLoad("30000");
        selenium.click("css=#menu6 > p > a");
```

```
        selenium.waitForPageToLoad("30000");
        selenium.click("link=BART");
        assertTrue(selenium.isTextPresent("BART Fremont"));
    }


    @After
    public void tearDown() throws Exception {
        selenium.stop();
    }
}
```

TestCaseFor_UC02_S01.java

```
package com.example.tests;

import com.thoughtworks.selenium.*;
import org.junit.After;
import org.junit.Before;
import org.junit.Test;
import static org.junit.Assert.*;
import java.util.regex.Pattern;

import junit.framework.TestCase;
```

```java
public class TestCaseFor_UC02_S01 extends TestCase{
    private Selenium selenium;

    @Before
    public void setUp() throws Exception {
        selenium = new DefaultSelenium("localhost", 4444, "*chrome", "http://www.google.com/");
        selenium.start();
    }

    @Test
    public void testCaseFor_UC02_S01_replaceBart() throws Exception {
        selenium.open("http://511.org/");
        selenium.click("link=Transit");
        selenium.waitForPageToLoad("30000");
        selenium.click("link=Departure Times Predictions");
        selenium.waitForPageToLoad("30000");
        selenium.click("id=Agencies");
        selenium.select("id=Agencies", "label=AC Transit");
        selenium.click("css=option[value=\"AC\"]");
        selenium.click("id=RoutesByAgencies");
        selenium.setSpeed("2000");
        selenium.select("id=RoutesByAgencies", "label=BSD");
        //selenium.click("css=option[title=\"BSD\"]");
        //selenium.click("id=Directions");
```

```java
        selenium.select("id=Directions", "label=North");
        //selenium.click("css=option[value=\"N \"]");
        //selenium.click("id=Stops");
        selenium.select("id=Stops", "label=BROADWAY & 17TH ST");
        //selenium.click("css=option[value=\"53335~12013463\"]");
        selenium.click("id=btn_departuretimes");
        assertTrue(selenium.isTextPresent("Next departures at Broadway and 17th St, AC Transit"));
    }


    @After
    public void tearDown() throws Exception {
        selenium.stop();
    }
}
```

TestCaseFor_UC02_S02.java

```java
package com.example.tests;

import com.thoughtworks.selenium.*;
import org.junit.After;
import org.junit.Before;
```

```java
import org.junit.Ignore;
import org.junit.Test;
import static org.junit.Assert.*;
import java.util.regex.Pattern;

import junit.framework.TestCase;

public class TestCaseFor_UC02_S02 extends TestCase {
    private Selenium selenium;

    @Before
    public void setUp() throws Exception {
        selenium = new DefaultSelenium("localhost", 4444, "*chrome", "http://www.google.com/");
        selenium.start();
    }

    @Test
    public void testCaseFor_UC02_S02_replaceBart() throws Exception {
        selenium.open("http://www.511.org/");
        selenium.click("link=Transit");
        selenium.waitForPageToLoad("30000");
        selenium.click("link=Departure Times Predictions");
        selenium.waitForPageToLoad("30000");
        selenium.click("id=rdstopid");
        selenium.click("id=txtStopID");
```

```java
        selenium.type("id=txtStopID", "59995");
        selenium.click("id=btn_departuretimes");
        selenium.setSpeed("2000");
        assertTrue(selenium.isTextPresent("Next departures at 12th St and Broadway, AC Transit"));
    }


    @After
    public void tearDown() throws Exception {
        selenium.stop();
    }
}
```

TestCaseFor_UC03_S01.java

```java
package com.example.tests;

import com.thoughtworks.selenium.*;
import org.junit.After;
import org.junit.Before;
import org.junit.Test;
import static org.junit.Assert.*;
import java.util.regex.Pattern;


import junit.framework.TestCase;
```

```java
public class TestCaseFor_UC03_S01 extends TestCase{
    private Selenium selenium;

    @Before
    public void setUp() throws Exception {
        selenium = new DefaultSelenium("localhost", 4444, "*chrome", "http://www.google.com/");
        selenium.start();
    }

    @Test
    public void testCaseFor_UC03_S01() throws Exception {
        selenium.open("http://www.511.org/");
        selenium.click("link=Traffic");
        selenium.waitForPageToLoad("30000");
        assertTrue(selenium.isTextPresent("Current Traffic Conditions"));
    }

    @After
    public void tearDown() throws Exception {
        selenium.stop();
    }
}
```

TestCaseFor_UC03_S02.java

```java
package com.example.tests;

import com.thoughtworks.selenium.*;
import org.junit.After;
import org.junit.Before;
import org.junit.Test;
import static org.junit.Assert.*;
import java.util.regex.Pattern;

import junit.framework.TestCase;

public class TestCaseFor_UC03_S02 extends TestCase {
    private Selenium selenium;

    @Before
    public void setUp() throws Exception {
        selenium = new DefaultSelenium("localhost", 4444, "*chrome", "http://www.google.com/");
        selenium.start();
    }

    @Test
    public void testCaseFor_UC03_S02() throws Exception {
```

```
        selenium.open("http://www.511.org/");
        selenium.click("link=Traffic");
        selenium.setSpeed("3000");
        selenium.click("link=Current Incidents, Construction, & Events");
        //selenium.waitForPageToLoad("30000");
        assertTrue(selenium.isTextPresent("Construction"));
    }


    @After
    public void tearDown() throws Exception {
        selenium.stop();
    }
}
```

TestSuiteFor511.java

```
package com.example.tests;


import junit.framework.Test;
import junit.framework.TestSuite;


public class TestSuiteFor511 {
```

```java
public static Test suite() {
    TestSuite suite = new TestSuite();
    suite.addTestSuite(TestCaseFor_UC01_S01.class);
    suite.addTestSuite(TestCaseFor_UC01_S02.class);
    suite.addTestSuite(TestCaseFor_UC02_S01.class);
    suite.addTestSuite(TestCaseFor_UC02_S02.class);
    suite.addTestSuite(TestCaseFor_UC03_S01.class);
    suite.addTestSuite(TestCaseFor_UC03_S02.class);
    return suite;
}

public static void main(String[] args) {
    junit.textui.TestRunner.run(suite());
}
}
```

Step 4: Test Case Execution