



CS 458

Software Verification and Validation

2018-2019 Summer

Homework #2

Introduction to Test Automation (Mobile)

Grup Şurup

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1. Implement the mobile-native occupation survey page. The page can work on both Android and iOS.

We made our android survey page with unity. Therefore its ui is done with hand but its code for the requirements is this:

```
using System.Collections;
using System.Collections.Generic;
using UnityEngine;
using UnityEngine.UI;
public class Survey : MonoBehaviour
{
    private string nameSur;
    private string bday;
    private string city;
    private string gender;
    private string occu;
    [SerializeField]
    private GameObject button;
    [SerializeField]
    private InputField input1;
    [SerializeField]
    private Toggle fem;
    [SerializeField]
    private Toggle male;
    [SerializeField]
    private InputField input5;
    [SerializeField]
    private Dropdown date;
    [SerializeField]
    private Dropdown month;
    [SerializeField]
    private Dropdown year;
    [SerializeField]
    private Dropdown cityName;
    int indexDate, indexMonth, indexYear, indexCity;
    // Update is called once per frame
    void Update()
    {
        indexDate = date.GetComponent<Dropdown>().value;
        List<Dropdown.OptionData> dateOptions = date.GetComponent<Dropdown>().options;
        string day = dateOptions[indexDate].text;
        indexMonth = month.GetComponent<Dropdown>().value;
        List<Dropdown.OptionData> monthOptions = month.GetComponent<Dropdown>().options;
        string ay = monthOptions[indexMonth].text;
        indexYear = year.GetComponent<Dropdown>().value;
        List<Dropdown.OptionData> yearOptions = year.GetComponent<Dropdown>().options;
        string yil = yearOptions[indexYear].text;
        indexCity = month.GetComponent<Dropdown>().value;
        List<Dropdown.OptionData> cityOptions = cityName.GetComponent<Dropdown>().options;
        string sehir = cityOptions[indexCity].text;
        if (input1.text != "" && input5.text != "" && day != "DD" && ay != "MM" && yil != "YYYY" && sehir != "Choose" &&
            ((!fem.isOn && male.isOn) || (fem.isOn && !male.isOn)))
        {
            button.SetActive(true);
            Debug.Log("set activated");
        }
        else
            button.SetActive(false);
    }
}
```

iOS application is developed with swift in XCode:

```
import UIKit
class ViewController: UIViewController, UIPickerViewDelegate, UIPickerViewDataSource {
    @IBOutlet weak var name_surname_label: UILabel!
    @IBOutlet weak var name_surname_textfield: UITextField!
    @IBOutlet weak var birth_date_label: UILabel!
    @IBOutlet weak var birth_date_datepicker: UIDatePicker!
    @IBOutlet weak var city_label: UILabel!
    @IBOutlet weak var city_picker: UIPickerView!
    var city_picker_data: [String] = [String]();
    @IBOutlet weak var gender_label: UILabel!
    @IBOutlet weak var gender_picker: UIPickerView!
    var gender_picker_data:[String] = [String]();
    @IBOutlet weak var occupation_label: UILabel!
    @IBOutlet weak var submit: UIButton!
    @IBOutlet weak var occupation_textarea: UITextView!
    override func viewDidLoad() {
        super.viewDidLoad()
        self.city_picker.delegate = self
        self.city_picker.dataSource = self
        city_picker_data = [ "Adana", "Adiyaman","Afyonkarahisar", "Ağrı", "Amasya", "Ankara", "Antalya", "Artvin", "Aydın",
        "Balıkesir", "Bilecik", "Bingöl", "Bitlis", "Bolu", "Burdur", "Bursa", "Çanakkale", "Çankırı", "Çorum", "Denizli", "Diyarbakır",
        "Edirne", "Elazığ", "Erzincan", "Erzurum", "Eskişehir", "Gaziantep", "Giresun", "Gümüşhane", "Hakkari", "Hatay", "Isparta",
        "Mersin", "İstanbul", "İzmir", "Kars", "Kastamonu","Kayseri", "Kırklareli", "Kırşehir", "Kocaeli", "Konya", "Kütahya", "Malatya",
        "Manisa","Kahramanmaraş", "Mardin", "Muğla", "Muş", "Nevşehir", "Niğde", "Ordu", "Rize", "Sakarya", "Samsun","Siirt",
        "Sinop", "Sivas", "Tekirdağ", "Tokat", "Trabzon", "Tunceli", "Şanlıurfa", "Uşak", "Van", "Yozgat", "Zonguldak", "Aksaray",
        "Bayburt", "Karaman", "Kırıkkale", "Batman", "Şırnak", "Bartın", "Ardahan", "İğdır", "Yalova","Karabük", "Kilis","Osmaniye",
        "Düzce"]
        self.gender_picker.delegate = self
        self.gender_picker.dataSource = self
        gender_picker_data = [ "Female", "Male", "Other"]
    }
    override func didReceiveMemoryWarning() {
        super.didReceiveMemoryWarning()
        // The number of rows of data
        func pickerView(_ pickerView: UIPickerView, numberOfRowsInComponent component: Int) -> Int {
            if pickerView == city_picker{
                return city_picker_data.count
            }
            return gender_picker_data.count;
        }
    }
    func numberOfComponents(in pickerView: UIPickerView) -> Int {
        return 1
    }
    // The data to return for the row and component (column) that's being passed in
    func pickerView(_ pickerView: UIPickerView, titleForRow row: Int, forComponent component: Int) -> String? {
        if pickerView == city_picker{
            return city_picker_data[row]
        }
        return gender_picker_data[row];
    }
}
```

2. Examine Appium which automates mobile applications. List main 10 capabilities.

1. A development tool for visual testing, providing users with features like device reflection and object spy, to aid in the speedier writing of more robust tests.
2. Simple, fast set-up and installation.
3. The execution engine – this adds a robust, stable engine to Appium that is designed with a mobile testing environment in mind, allowing for out-of-application tests as well as parallel execution.

4. Quick Connection to local or remote mobile devices
5. Apple credentials can be quickly provisioned using a simple Appium Studio wizard, which gathers the information once and then provisions it any time it is needed.
6. In the mobile testing space, the variety of devices and frameworks within which an app will be run can quickly multiply the number of tests that require execution. With Appium Studio, this problem is tackled using parallel execution.
7. Supports Selenium which help us to use selenium functions.
8. Both local and remote devices can be used to execute tests from Appium Studio which makes it robust.
9. Because it focuses on mobile testing it is missing from performance testing
10. Using the device reflection to perform your use case is as simple as clicking the record button in the Appium Studio command area and going from there.

3. Write 5 test cases for your occupation survey page.

1. True test case: the name and occupation part is filled, one of gender is checked, the date month and year of the birthday is chosen and city is chosen.
2. Name or Occupation's text areas are left free:
 - a. Name & Surname is left free
 - b. Occupation is left free
3. Date, month, year parts are not chosen:
 - a. date is not chosen
 - b. month is not chosen
 - c. year not chosen
4. City is not chosen
5. Gender part is both checked or both not checked:
 - a. both checked
 - b. both not checked

4. Write test automation code for 5 test cases using Appium for your login page. Attach your code.

We only write the first true case with normal font. For other places we only write the changed part as readable

1. True test case: the name and occupation part is filled, one of gender is checked, the date month and year of the birthday is chosen and city is chosen.

```
package appiumtests.appiumtests;

import java.net.MalformedURLException;
import java.net.URL;

import org.openqa.selenium.By;
import org.openqa.selenium.remote.DesiredCapabilities;

import io.appium.java_client.AppiumDriver;
import io.appium.java_client.MobileElement;
import junit.framework.TestCase;

public class AppTest extends TestCase {
    static AppiumDriver<MobileElement> driver;
    public static void main(String[] args) {
        try {
            HW2();
        } catch (Exception e) {
            // TODO Auto-generated catch block
            e.printStackTrace();
        }
    }
}
```

```

    }
}

public static void HW2() throws MalformedURLException, InterruptedException {

    DesiredCapabilities cap = new DesiredCapabilities();

    cap.setCapability("deviceName", "BENIMKI");
    cap.setCapability("udid", "2acd58ba");
    cap.setCapability("platformName", "Android");
    cap.setCapability("platformVersion", "8.0.0");
    cap.setCapability("appPackage", "com.surup.cs458");
    cap.setCapability("appActivity", "com.unity3d.player.UnityPlayerActivity");
    URL url = new URL("http://127.0.0.1:4723/wd/hub");
    System.out.println("Application Started");
    driver = new AppiumDriver<MobileElement>(url, cap);
    Thread.sleep(5000);
    MobileElement name = driver.findElement(By.name("InputField"));
    name.click();
    Thread.sleep(1000);
    MobileElement x1 = driver.findElement(By.xpath(
"/hierarchy/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.FrameLayout/android
.widget.RelativeLayout/android.widget.EditText"));
    x1.sendKeys("Aynur");
    MobileElement x2 = driver.findElement(By.name(
"/hierarchy/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.FrameLayout/android
.widget.RelativeLayout/android.widget.Button"));
    x2.click();
    Thread.sleep(1000);
    MobileElement date = driver.findElement(By.name("Date"));
    date.click();
    Thread.sleep(1000);
    MobileElement first = driver.findElement(By.name("01"));
    first.click();
    Thread.sleep(1000);
    MobileElement month = driver.findElement(By.name("Month"));
    month.click();
    Thread.sleep(1000);
    MobileElement jan = driver.findElement(By.name("Jan"));
    jan.click();
    Thread.sleep(1000);
    MobileElement year = driver.findElement(By.name("Year"));
    year.click();
    Thread.sleep(1000);
    MobileElement last = driver.findElement(By.name("1969"));
    last.click();
    Thread.sleep(1000);
    MobileElement city = driver.findElement(By.name("cityDrop"));
    city.click();
    Thread.sleep(1000);
    MobileElement il = driver.findElement(By.name("Adana"));
    il.click();
    Thread.sleep(1000);
    MobileElement female = driver.findElement(By.name("Toggle"));
    female.click();
    Thread.sleep(1000);
    MobileElement occ = driver.findElement(By.name("occutext"));
    occ.click();
    Thread.sleep(1000);
    x1 = driver.findElement(By.xpath(
"/hierarchy/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.FrameLayout/android
.widget.RelativeLayout/android.widget.EditText"));

```

```

        x1.sendKeys("Engineer");
        x2 = driver.findElement(By.name(
"/hierarchy/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.FrameLayout/android.
widget.RelativeLayout/android.widget.Button"));
        x2.click();
        Thread.sleep(1000);
        MobileElement button = driver.findElement(By.name("Button"));
        button.click();
        Thread.sleep(1000);
    }

```

2-Name or Occupation's text areas are left free:

a-Name & Surname is left free:

```

package appiumtests.appiumtests;

import java.net.MalformedURLException;
import java.net.URL;
import org.openqa.selenium.By;
import org.openqa.selenium.remote.DesiredCapabilities;

import io.appium.java_client.AppiumDriver;
import io.appium.java_client.MobileElement;
import junit.framework.TestCase;

public class AppTest extends TestCase {
    static AppiumDriver<MobileElement> driver;
    public static void main(String[] args) {
        try {
            HW2();
        } catch (Exception e) {
            // TODO Auto-generated catch block
            e.printStackTrace();
        }
    }

    public static void HW2() throws MalformedURLException, InterruptedException {

        DesiredCapabilities cap = new DesiredCapabilities();

        cap.setCapability("deviceName", "BENIMKI");
        cap.setCapability("udid", "2acd58ba");
        cap.setCapability("platformName", "Android");
        cap.setCapability("platformVersion", "8.0.0");

        cap.setCapability("appPackage", "com.surup.cs458");
        cap.setCapability("appActivity", "com.unity3d.player.UnityPlayerActivity");

        URL url = new URL("http://127.0.0.1:4723/wd/hub");
        System.out.println("Application Started");
        driver = new AppiumDriver<MobileElement>(url, cap);
        Thread.sleep(5000);

        MobileElement name = driver.findElement(By.name("InputField"));
        name.click();
        Thread.sleep(1000);

        MobileElement x1 = driver.findElement(By.xpath(
"/hierarchy/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.RelativeLayout/android.widget.EditText"));
        x1.sendKeys("");

        MobileElement x2 = driver.findElement(By.name(
"/hierarchy/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.RelativeLayout/android.widget.Button"));
        x2.click();
        Thread.sleep(1000);

        MobileElement date = driver.findElement(By.name("Date"));
        date.click();
        Thread.sleep(1000);

        MobileElement first = driver.findElement(By.name("01"));
        first.click();
        Thread.sleep(1000);
        MobileElement month = driver.findElement(By.name("Month"));
        month.click();
        Thread.sleep(1000);
        MobileElement jan = driver.findElement(By.name("Jan"));
        jan.click();
        Thread.sleep(1000);
        MobileElement year = driver.findElement(By.name("Year"));
        year.click();
        Thread.sleep(1000);
        MobileElement last = driver.findElement(By.name("1969"));
        last.click();
        Thread.sleep(1000);
        MobileElement city = driver.findElement(By.name("cityDrop"));
        city.click();
        Thread.sleep(1000);
        MobileElement il = driver.findElement(By.name("Adana"));
        il.click();
        Thread.sleep(1000);
        MobileElement female = driver.findElement(By.name("Toggle"));
        female.click();
    }
}

```

```

        Thread.sleep(1000);
        MobileElement occ = driver.findElement(By.name("occutext"));
        occ.click();
        Thread.sleep(1000);
        x1 = driver.findElement(By.xpath(
"/hierarchy/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.RelativeLayout/android.widget.EditText"));
        x1.sendKeys("Engineer");
        x2 = driver.findElement(By.name(
"/hierarchy/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.RelativeLayout/android.widget.Button"));
        x2.click();
        Thread.sleep(1000);
        MobileElement button = driver.findElement(By.name("Button"));
        button.click();
        Thread.sleep(1000);
    }
}

```

b-Occupation is left free:

```

package appiumtests.appiumtests;
import java.net.MalformedURLException;
import java.net.URL;
import org.openqa.selenium.By;
import org.openqa.selenium.remote.DesiredCapabilities;
import io.appium.java_client.AppiumDriver;
import io.appium.java_client.MobileElement;
import junit.framework.TestCase;
public class AppTest extends TestCase {
    static AppiumDriver<MobileElement> driver;
    public static void main(String[] args) {
        try {
            HW2();
        } catch (Exception e) {
            // TODO Auto-generated catch block
            e.printStackTrace();
        }
    }
    public static void HW2() throws MalformedURLException, InterruptedException {
        DesiredCapabilities cap = new DesiredCapabilities();
        cap.setCapability("deviceName", "BENIMKI");
        cap.setCapability("udid", "2acd58ba");
        cap.setCapability("platformName", "Android");
        cap.setCapability("platformVersion", "8.0.0");
        cap.setCapability("appPackage", "com.surup.cs458");
        cap.setCapability("appActivity", "com.unity3d.player.UnityPlayerActivity");
        URL url = new URL("http://127.0.0.1:4723/wd/hub");
        System.out.println("Application Started");
        driver = new AppiumDriver<MobileElement>(url, cap);
        Thread.sleep(5000);
        MobileElement name = driver.findElement(By.name("InputField"));
        name.click();
        Thread.sleep(1000);
        MobileElement x1 = driver.findElement(By.xpath(
"/hierarchy/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.RelativeLayout/android.widget.EditText"));
        x1.sendKeys("Aynur");
        MobileElement x2 = driver.findElement(By.name(
"/hierarchy/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.RelativeLayout/android.widget.Button"));
        x2.click();
        Thread.sleep(1000);
        MobileElement date = driver.findElement(By.name("Date"));
        date.click();
        Thread.sleep(1000);
        MobileElement first = driver.findElement(By.name("01"));
        first.click();
        Thread.sleep(1000);
        MobileElement month = driver.findElement(By.name("Month"));
        month.click();
        Thread.sleep(1000);
        MobileElement jan = driver.findElement(By.name("Jan"));
        jan.click();
        Thread.sleep(1000);
        MobileElement year = driver.findElement(By.name("Year"));
        year.click();
        Thread.sleep(1000);
        MobileElement last = driver.findElement(By.name("1969"));
        last.click();
        Thread.sleep(1000);
        MobileElement city = driver.findElement(By.name("cityDrop"));
        city.click();
        Thread.sleep(1000);
        MobileElement il = driver.findElement(By.name("Adana"));
        il.click();
        Thread.sleep(1000);

        MobileElement female = driver.findElement(By.name("Toggle"));
        female.click();
        Thread.sleep(1000);
        MobileElement occ = driver.findElement(By.name("occutext"));
        occ.click();
        Thread.sleep(1000);
        x1 = driver.findElement(By.xpath(
"/hierarchy/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.RelativeLayout/android.widget.EditText"));
        x1.sendKeys("");
        x2 = driver.findElement(By.name(
"/hierarchy/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.RelativeLayout/android.widget.Button"));
        x2.click();
        Thread.sleep(1000);
        MobileElement button = driver.findElement(By.name("Button"));
        button.click();
        Thread.sleep(1000);
    }
}

```

3- Date, month, year parts are not chosen:

a-date is not chosen:

```
package appiumtests.appiumtests;

import java.net.MalformedURLException;
import java.net.URL;

import org.openqa.selenium.By;
import org.openqa.selenium.remote.DesiredCapabilities;

import io.appium.java_client.AppiumDriver;
import io.appium.java_client.MobileElement;
import junit.framework.TestCase;

public class AppTest extends TestCase {
    static AppiumDriver<MobileElement> driver;
    public static void main(String[] args) {
        try {
            HW2();
        } catch (Exception e) {
            // TODO Auto-generated catch block
            e.printStackTrace();
        }
    }

    public static void HW2() throws MalformedURLException, InterruptedException {
        DesiredCapabilities cap = new DesiredCapabilities();
        cap.setCapability("deviceName", "BENIMKI");
        cap.setCapability("udid", "2acd58ba");
        cap.setCapability("platformName", "Android");
        cap.setCapability("platformVersion", "8.0.0");
        cap.setCapability("appPackage", "com.surup.cs458");
        cap.setCapability("appActivity", "com.unity3d.player.UnityPlayerActivity");
        URL url = new URL("http://127.0.0.1:4723/wd/hub");
        System.out.println("Application Started");
        driver = new AppiumDriver<MobileElement>(url, cap);
        Thread.sleep(5000);
        MobileElement name = driver.findElement(By.name("InputField"));
        name.click();
        Thread.sleep(1000);
        MobileElement x1 = driver.findElement(By.xpath(
"/hierarchy/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.RelativeLayout/android.widget.EditText"));
        x1.sendKeys("Aynur");
        MobileElement x2 = driver.findElement(By.name(
"/hierarchy/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.RelativeLayout/android.widget.Button"));
        x2.click();
        Thread.sleep(1000);
        MobileElement month = driver.findElement(By.name("Month"));
        month.click();
        Thread.sleep(1000);
        MobileElement jan = driver.findElement(By.name("Jan"));
        jan.click();
        Thread.sleep(1000);
        MobileElement year = driver.findElement(By.name("Year"));
        year.click();
        Thread.sleep(1000);
        MobileElement last = driver.findElement(By.name("1969"));
        last.click();
        Thread.sleep(1000);
        MobileElement city = driver.findElement(By.name("cityDrop"));
        city.click();
        Thread.sleep(1000);
        MobileElement il = driver.findElement(By.name("Adana"));
        il.click();
        Thread.sleep(1000);
        MobileElement female = driver.findElement(By.name("Toggle"));
        female.click();
        Thread.sleep(1000);
        MobileElement occ = driver.findElement(By.name("occutext"));
        occ.click();
        Thread.sleep(1000);
        x1 = driver.findElement(By.xpath(
"/hierarchy/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.RelativeLayout/android.widget.EditText"));
        x1.sendKeys("Engineer");
        x2 = driver.findElement(By.name(
"/hierarchy/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.RelativeLayout/android.widget.Button"));
        x2.click();
        Thread.sleep(1000);
        MobileElement button = driver.findElement(By.name("Button"));
        button.click();
        Thread.sleep(1000);
    }
}
```

b-month is not chosen:

```
package appiumtests.appiumtests;
import java.net.MalformedURLException;
import java.net.URL;
import org.openqa.selenium.By;
import org.openqa.selenium.remote.DesiredCapabilities;
import io.appium.java_client.AppiumDriver;
import io.appium.java_client.MobileElement;
import junit.framework.TestCase;
```



```

public class AppTest extends TestCase {
    static AppiumDriver<MobileElement> driver;
    public static void main(String[] args) {
        try {
            HW2();
        } catch (Exception e) {
            // TODO Auto-generated catch block
            e.printStackTrace();
        }
    }

    public static void HW2() throws MalformedURLException, InterruptedException {
        DesiredCapabilities cap = new DesiredCapabilities();
        cap.setCapability("deviceName", "BENIMKI");
        cap.setCapability("udid", "2acd58ba");
        cap.setCapability("platformName", "Android");
        cap.setCapability("platformVersion", "8.0.0");
        cap.setCapability("appPackage", "com.surup.cs458");
        cap.setCapability("appActivity", "com.unity3d.player.UnityPlayerActivity");
        URL url = new URL("http://127.0.0.1:4723/wd/hub");
        System.out.println("Application Started");
        driver = new AppiumDriver<MobileElement>(url, cap);
        Thread.sleep(5000);
        MobileElement name = driver.findElement(By.name("InputField"));
        name.click();
        Thread.sleep(1000);
        MobileElement x1 = driver.findElement(By.xpath(
"/hierarchy/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.RelativeLayout/android.widget.EditText"));
        x1.sendKeys("Aynur");
        MobileElement x2 = driver.findElement(By.name(
"/hierarchy/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.RelativeLayout/android.widget.Button"));
        x2.click();
        Thread.sleep(1000);
        MobileElement date = driver.findElement(By.name("Date"));
        date.click();
        Thread.sleep(1000);
        MobileElement first = driver.findElement(By.name("01"));
        first.click();
        Thread.sleep(1000);
        MobileElement year = driver.findElement(By.name("Year"));
        year.click();
        Thread.sleep(1000);
        MobileElement last = driver.findElement(By.name("1969"));
        last.click();
        Thread.sleep(1000);
        MobileElement city = driver.findElement(By.name("cityDrop"));
        city.click();
        Thread.sleep(1000);
        MobileElement il = driver.findElement(By.name("Adana"));
        il.click();
        Thread.sleep(1000);
        MobileElement female = driver.findElement(By.name("Toggle"));
        female.click();
        Thread.sleep(1000);
        MobileElement occ = driver.findElement(By.name("occutex"));
        occ.click();
        Thread.sleep(1000);
        x1 = driver.findElement(By.xpath(
"/hierarchy/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.RelativeLayout/android.widget.EditText"));
        x1.sendKeys("Engineer");
        x2 = driver.findElement(By.name(
"/hierarchy/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.RelativeLayout/android.widget.Button"));
        x2.click();
        Thread.sleep(1000);
        MobileElement button = driver.findElement(By.name("Button"));
        button.click();
        Thread.sleep(1000);
    }
}

```

c-year not chosen:

```

package appiumtests.appiumtests;
import java.net.MalformedURLException;
import java.net.URL;
import org.openqa.selenium.By;
import org.openqa.selenium.remote.DesiredCapabilities;
import io.appium.java_client.AppiumDriver;
import io.appium.java_client.MobileElement;
import junit.framework.TestCase;
public class AppTest extends TestCase {
    static AppiumDriver<MobileElement> driver;
    public static void main(String[] args) {
        try {
            HW2();
        } catch (Exception e) {
            // TODO Auto-generated catch block
            e.printStackTrace();
        }
    }

    public static void HW2() throws MalformedURLException, InterruptedException {
        DesiredCapabilities cap = new DesiredCapabilities();
        cap.setCapability("deviceName", "BENIMKI");
        cap.setCapability("udid", "2acd58ba");
        cap.setCapability("platformName", "Android");
        cap.setCapability("platformVersion", "8.0.0");
        cap.setCapability("appPackage", "com.surup.cs458");
    }
}

```

```

        cap.setCapability("appActivity", "com.unity3d.player.UnityPlayerActivity");
        URL url = new URL("http://127.0.0.1:4723/wd/hub");
        System.out.println("Application Started");
        driver = new AppiumDriver<MobileElement>(url, cap);
        Thread.sleep(5000);
        MobileElement name = driver.findElement(By.name("InputField"));
        name.click();
        Thread.sleep(1000);
        MobileElement x1 = driver.findElement(By.xpath(
"/hierarchy/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.RelativeLayout/android.widget.EditText"));
        x1.sendKeys("Aynur");
        MobileElement x2 = driver.findElement(By.name(
"/hierarchy/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.RelativeLayout/android.widget.Button"));
        x2.click();
        Thread.sleep(1000);
        MobileElement date = driver.findElement(By.name("Date"));
        date.click();
        Thread.sleep(1000);
        MobileElement first = driver.findElement(By.name("01"));
        first.click();
        Thread.sleep(1000);
        MobileElement month = driver.findElement(By.name("Month"));
        month.click();
        Thread.sleep(1000);
        MobileElement jan = driver.findElement(By.name("Jan"));
        jan.click();
        Thread.sleep(1000);
        MobileElement city = driver.findElement(By.name("cityDrop"));
        city.click();
        Thread.sleep(1000);
        MobileElement il = driver.findElement(By.name("Adana"));
        il.click();
        Thread.sleep(1000);
        MobileElement female = driver.findElement(By.name("Toggle"));
        female.click();
        Thread.sleep(1000);
        MobileElement occ = driver.findElement(By.name("occutex"));
        occ.click();
        Thread.sleep(1000);
        x1 = driver.findElement(By.xpath(
"/hierarchy/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.RelativeLayout/android.widget.EditText"));
        x1.sendKeys("Engineer");
        x2 = driver.findElement(By.name(
"/hierarchy/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.RelativeLayout/android.widget.Button"));
        x2.click();
        Thread.sleep(1000);
        MobileElement button = driver.findElement(By.name("Button"));
        button.click();
        Thread.sleep(1000);
    }
}

```

4-City is not chosen:

```

package appiumtests.appiumtests;
import java.net.MalformedURLException;
import java.net.URL;
import org.openqa.selenium.By;
import org.openqa.selenium.remote.DesiredCapabilities;
import io.appium.java_client.AppiumDriver;
import io.appium.java_client.MobileElement;
import junit.framework.TestCase;
public class AppTest extends TestCase {
    static AppiumDriver<MobileElement> driver;
    public static void main(String[] args) {
        try {
            HW2();
        } catch (Exception e) {
            // TODO Auto-generated catch block
            e.printStackTrace();
        }
    }
    public static void HW2() throws MalformedURLException, InterruptedException {
        DesiredCapabilities cap = new DesiredCapabilities();
        cap.setCapability("deviceName", "BENIMKI");
        cap.setCapability("udid", "2acd58ba");
        cap.setCapability("platformName", "Android");
        cap.setCapability("platformVersion", "8.0.0");
        cap.setCapability("appPackage", "com.surup.cs458");
        cap.setCapability("appActivity", "com.unity3d.player.UnityPlayerActivity");
        URL url = new URL("http://127.0.0.1:4723/wd/hub");
        System.out.println("Application Started");
        driver = new AppiumDriver<MobileElement>(url, cap);
        Thread.sleep(5000);
        MobileElement name = driver.findElement(By.name("InputField"));
        name.click();
        Thread.sleep(1000);
        MobileElement x1 = driver.findElement(By.xpath(
"/hierarchy/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.RelativeLayout/android.widget.EditText"));
        x1.sendKeys("Aynur");
        MobileElement x2 = driver.findElement(By.name(
"/hierarchy/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.RelativeLayout/android.widget.Button"));
        x2.click();
        Thread.sleep(1000);
        MobileElement date = driver.findElement(By.name("Date"));
        date.click();
    }
}

```

```

        Thread.sleep(1000);
        MobileElement first = driver.findElement(By.name("01"));
        first.click();
        Thread.sleep(1000);
        MobileElement month = driver.findElement(By.name("Month"));
        month.click();
        Thread.sleep(1000);
        MobileElement jan = driver.findElement(By.name("Jan"));
        jan.click();
        Thread.sleep(1000);
        MobileElement year = driver.findElement(By.name("Year"));
        year.click();
        Thread.sleep(1000);
        MobileElement last = driver.findElement(By.name("1969"));
        last.click();
        Thread.sleep(1000);
        MobileElement female = driver.findElement(By.name("Toggle"));
        female.click();
        Thread.sleep(1000);
        MobileElement occ = driver.findElement(By.name("occutext"));
        occ.click();
        Thread.sleep(1000);
        x1 = driver.findElement(By.xpath(
"/hierarchy/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.RelativeLayout/android.widget.EditText"));
        x1.sendKeys("Engineer");
        x2 = driver.findElement(By.name(
"/hierarchy/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.RelativeLayout/android.widget.Button"));
        x2.click();
        Thread.sleep(1000);
        MobileElement button = driver.findElement(By.name("Button"));
        button.click();
        Thread.sleep(1000);
    }
}

```

5-Gender part is both checked or both not checked:

a.both checked:

```

package appiumtests.appiumtests;
import java.net.MalformedURLException;
import java.net.URL;
import org.openqa.selenium.By;
import org.openqa.selenium.remote.DesiredCapabilities;
import io.appium.java_client.AppiumDriver;
import io.appium.java_client.MobileElement;
import junit.framework.TestCase;
public class AppTest extends TestCase {
    static AppiumDriver<MobileElement> driver;
    public static void main(String[] args) {
        try {
            HW2();
        } catch (Exception e) {
            // TODO Auto-generated catch block
            e.printStackTrace();
        }
    }
    public static void HW2() throws MalformedURLException, InterruptedException {
        DesiredCapabilities cap = new DesiredCapabilities();
        cap.setCapability("deviceName", "BENIMKI");
        cap.setCapability("udid", "2acd58ba");
        cap.setCapability("platformName", "Android");
        cap.setCapability("platformVersion", "8.0.0");
        cap.setCapability("appPackage", "com.surup.cs458");
        cap.setCapability("appActivity", "com.unity3d.player.UnityPlayerActivity");
        URL url = new URL("http://127.0.0.1:4723/wd/hub");
        System.out.println("Application Started");
        driver = new AppiumDriver<MobileElement>(url, cap);
        Thread.sleep(5000);
        MobileElement name = driver.findElement(By.name("InputField"));
        name.click();
        Thread.sleep(1000);
        MobileElement x1 = driver.findElement(By.xpath(
"/hierarchy/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.RelativeLayout/android.widget.EditText"));
        x1.sendKeys("Aynur");
        MobileElement x2 = driver.findElement(By.name(
"/hierarchy/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.RelativeLayout/android.widget.Button"));
        x2.click();
        Thread.sleep(1000);
        MobileElement date = driver.findElement(By.name("Date"));
        date.click();
        Thread.sleep(1000);
        MobileElement first = driver.findElement(By.name("01"));
        first.click();
        Thread.sleep(1000);
        MobileElement month = driver.findElement(By.name("Month"));
        month.click();
        Thread.sleep(1000);
        MobileElement jan = driver.findElement(By.name("Jan"));
        jan.click();
        Thread.sleep(1000);
        MobileElement year = driver.findElement(By.name("Year"));
        year.click();
        Thread.sleep(1000);
        MobileElement last = driver.findElement(By.name("1969"));
        last.click();
        Thread.sleep(1000);
        MobileElement city = driver.findElement(By.name("cityDrop"));
        city.click();
        Thread.sleep(1000);
        MobileElement il = driver.findElement(By.name("Adana"));
        il.click();
        Thread.sleep(1000);
        MobileElement female = driver.findElement(By.name("Toggle"));
    }
}

```

```

        female.click();
        Thread.sleep(1000);
        MobileElement male = driver.findElement(By.name("male"));
        male.click();
        Thread.sleep(1000);
        MobileElement occ = driver.findElement(By.name("occutext"));
        occ.click();
        Thread.sleep(1000);
        x1 = driver.findElement(By.xpath(
"/hierarchy/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.RelativeLayout/android.widget.EditText"));
        x1.sendKeys("Engineer");
        x2 = driver.findElement(By.name(
"/hierarchy/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.RelativeLayout/android.widget.Button"));
        x2.click();
        Thread.sleep(1000);
        MobileElement button = driver.findElement(By.name("Button"));
        button.click();
        Thread.sleep(1000);
    }
}

```

b.both not checked:

```

package appiumtests.appiumtests;
import java.net.MalformedURLException;
import java.net.URL;
import org.openqa.selenium.By;
import org.openqa.selenium.remote.DesiredCapabilities;
import io.appium.java_client.AppiumDriver;
import io.appium.java_client.MobileElement;
import junit.framework.TestCase;
public class AppTest extends TestCase {
    static AppiumDriver<MobileElement> driver;
    public static void main(String[] args) {
        try {
            HW2();
        } catch (Exception e) {
            // TODO Auto-generated catch block
            e.printStackTrace();
        }
    }
    public static void HW2() throws MalformedURLException, InterruptedException {
        DesiredCapabilities cap = new DesiredCapabilities();
        cap.setCapability("deviceName", "BENIMKI");
        cap.setCapability("udid", "2acd58ba");
        cap.setCapability("platformName", "Android");
        cap.setCapability("platformVersion", "8.0.0");
        cap.setCapability("appPackage", "com.surup.cs458");
        cap.setCapability("appActivity", "com.unity3d.player.UnityPlayerActivity");
        URL url = new URL("http://127.0.0.1:4723/wd/hub");
        System.out.println("Application Started");
        driver = new AppiumDriver<MobileElement>(url, cap);
        Thread.sleep(5000);
        MobileElement name = driver.findElement(By.name("InputField"));
        name.click();
        Thread.sleep(1000);
        MobileElement x1 = driver.findElement(By.xpath(
"/hierarchy/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.RelativeLayout/android.widget.EditText"));
        x1.sendKeys("Aynur");
        MobileElement x2 = driver.findElement(By.name(
"/hierarchy/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.RelativeLayout/android.widget.Button"));
        x2.click();
        Thread.sleep(1000);
        MobileElement date = driver.findElement(By.name("Date"));
        date.click();
        Thread.sleep(1000);
        MobileElement first = driver.findElement(By.name("01"));
        first.click();
        Thread.sleep(1000);
        MobileElement month = driver.findElement(By.name("Month"));
        month.click();
        Thread.sleep(1000);
        MobileElement jan = driver.findElement(By.name("Jan"));
        jan.click();
        Thread.sleep(1000);
        MobileElement year = driver.findElement(By.name("Year"));
        year.click();
        Thread.sleep(1000);
        MobileElement last = driver.findElement(By.name("1969"));
        last.click();
        Thread.sleep(1000);
        MobileElement city = driver.findElement(By.name("cityDrop"));
        city.click();
        Thread.sleep(1000);
        MobileElement il = driver.findElement(By.name("Adana"));
        il.click();
        Thread.sleep(1000);
        MobileElement occ = driver.findElement(By.name("occutext"));
        occ.click();
        Thread.sleep(1000);
        x1 = driver.findElement(By.xpath(
"/hierarchy/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.RelativeLayout/android.widget.EditText"));
        x1.sendKeys("Engineer");
        x2 = driver.findElement(By.name(
"/hierarchy/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.FrameLayout/android.widget.RelativeLayout/android.widget.Button"));
        x2.click();
        Thread.sleep(1000);
        MobileElement button = driver.findElement(By.name("Button"));
        button.click();
        Thread.sleep(1000);
    }
}

```

```

    }
}

```

IOS CASE

1. True test case: the name and occupation part is filled, one of genders is checked, the date month and year of the birthday is chosen and city is chosen.

```

package appiumtests.appiumtests;
import java.net.MalformedURLException;
import java.net.URL;
import java.util.List;
import org.openqa.selenium.By;
import org.openqa.selenium.JavascriptExecutor;
import org.openqa.selenium.Keys;
import org.openqa.selenium.remote.DesiredCapabilities;
import io.appium.java_client.AppiumDriver;
import io.appium.java_client.MobileElement;
import junit.framework.TestCase;
public class AppTest extends TestCase {
    static AppiumDriver<MobileElement> driver;
    public static void main(String[] args) {
        try {
            HW2();
        } catch (Exception e) {
            // TODO Auto-generated catch block
            e.printStackTrace();
        }
    }
    @SuppressWarnings("deprecation")
    public static void HW2() throws MalformedURLException, InterruptedException {
        DesiredCapabilities cap = new DesiredCapabilities();
        cap.setCapability("deviceName", "BENIMKI");
        cap.setCapability("udid", "iPhone 8 Plus");
        cap.setCapability("platformName", "iOS");
        cap.setCapability("platformVersion", "11.0");
        cap.setCapability("appPackage", "org.identifier.CS458-HW2");
        URL url = new URL("http://127.0.0.1:4723/wd/hub");
        System.out.println("Application Started");
        driver = new AppiumDriver<MobileElement>(url, cap);
        Thread.sleep(5000);
        MobileElement name = driver.findElement(By.xpath("//XCUITextField"));
        name.click();
        Thread.sleep(1000);
        name.sendKeys("Aynur");
        driver.getKeyboard().pressKey(Keys.ENTER);
        MobileElement date_picker =
        driver.findElement(By.xpath("//XCUIElementTypeDatePicker"));
        List<MobileElement> dates =
        date_picker.findElements(By.xpath("//XCUIElementTypePickerWheel"));
        JavascriptExecutor js =(JavascriptExecutor)driver;
        dates.get(1).sendKeys("01");
        dates.get(2).sendKeys("01");
        dates.get(3).sendKeys("1981");
        MobileElement city = driver.findElement(By.xpath("//XCUIPickerView"));
        List<MobileElement> cities = city.findElements(By.xpath("//XCUIPickerWheel"));
        JavascriptExecutor js1 =(JavascriptExecutor)driver;
        dates.get(1).sendKeys("Ankara");
        Thread.sleep(1000);
        MobileElement gender = driver.findElement(By.xpath("//XCUIPickerView"));
        List<MobileElement> genders = gender.findElements(By.xpath("//XCUIPickerWheel"));
        JavascriptExecutor js2 =(JavascriptExecutor)driver;
        dates.get(1).sendKeys("Female");
        Thread.sleep(1000);
        MobileElement occ = driver.findElement(By.xpath("//XCUITextView"));

```

```

        occ.click();
        Thread.sleep(1000);
        occ.sendKeys("");
        driver.getKeyboard().pressKey(Keys.ENTER);
        Thread.sleep(1000);
        MobileElement button = driver.findElement(By.xpath("//XCUIButton"));
        button.click();
        Thread.sleep(1000);
    }
}

```

2- Name or Occupation's text areas are left free:

a- Name & Surname is left free:

```

package appiumtests.appiumtests;
package appiumtests.appiumtests;
import java.net.MalformedURLException;
import java.net.URL;
import java.util.List;
import org.openqa.selenium.By;
import org.openqa.selenium.JavascriptExecutor;
import org.openqa.selenium.Keys;
import org.openqa.selenium.remote.DesiredCapabilities;
import io.appium.java_client.AppiumDriver;
import io.appium.java_client.MobileElement;
import junit.framework.TestCase;
public class AppTest extends TestCase {
    static AppiumDriver<MobileElement> driver;
    public static void main(String[] args) {
        try {
            HW2();
        } catch (Exception e) {
            // TODO Auto-generated catch block
            e.printStackTrace();
        }
    }
    @SuppressWarnings("deprecation")
    public static void HW2() throws MalformedURLException, InterruptedException {
        DesiredCapabilities cap = new DesiredCapabilities();
        cap.setCapability("deviceName", "BENIMKI");
        cap.setCapability("udid", "iPhone 8 Plus");
        cap.setCapability("platformName", "iOS");
        cap.setCapability("platformVersion", "11.0");
        cap.setCapability("appPackage", "org.identifier.CS458-HW2");
        URL url = new URL("http://127.0.0.1:4723/wd/hub");
        System.out.println("Application Started");
        driver = new AppiumDriver<MobileElement>(url, cap);
        Thread.sleep(5000);
        MobileElement name = driver.findElement(By.xpath("//XCUITextField"));
        name.click();
        Thread.sleep(1000);
        name.sendKeys("");
        driver.getKeyboard().pressKey(Keys.ENTER);
        MobileElement date_picker = driver.findElement(By.xpath("//XCUIElementTypeDatePicker"));
        List<MobileElement> dates = date_picker.findElements(By.xpath("//XCUIElementTypePickerWheel"));
        JavascriptExecutor js = (JavascriptExecutor)driver;
        dates.get(1).sendKeys("01");
        dates.get(2).sendKeys("01");
        dates.get(3).sendKeys("1981");
        MobileElement city = driver.findElement(By.xpath("//XCUIPickerView"));
        List<MobileElement> cities = city.findElements(By.xpath("//XCUIPickerWheel"));
        JavascriptExecutor js1 = (JavascriptExecutor)driver;
        dates.get(1).sendKeys("Ankara");
        Thread.sleep(1000);
        MobileElement gender = driver.findElement(By.xpath("//XCUIPickerView"));
        List<MobileElement> genders = gender.findElements(By.xpath("//XCUIPickerWheel"));
        JavascriptExecutor js2 = (JavascriptExecutor)driver;
        dates.get(1).sendKeys("Female");
        Thread.sleep(1000);
        MobileElement occ = driver.findElement(By.xpath("//XCUITextView"));
        occ.click();
        Thread.sleep(1000);
        occ.sendKeys("");
        driver.getKeyboard().pressKey(Keys.ENTER);
        Thread.sleep(1000);
        MobileElement button = driver.findElement(By.xpath("//XCUIButton"));
        button.click();
        Thread.sleep(1000);
    }
}

```

b- Occupation is left free:

```

package appiumtests.appiumtests;
import java.net.MalformedURLException;
import java.net.URL;
import java.util.List;
import org.openqa.selenium.By;
import org.openqa.selenium.JavascriptExecutor;
import org.openqa.selenium.Keys;
import org.openqa.selenium.remote.DesiredCapabilities;
import io.appium.java_client.AppiumDriver;
import io.appium.java_client.MobileElement;
import junit.framework.TestCase;
public class AppTest extends TestCase {
    static AppiumDriver<MobileElement> driver;
    public static void main(String[] args) {

```

```

        try {
            HW2();
        } catch (Exception e) {
            // TODO Auto-generated catch block
            e.printStackTrace();
        }
    }
}
@SuppressWarnings("deprecation")
public static void HW2() throws MalformedURLException, InterruptedException {
    DesiredCapabilities cap = new DesiredCapabilities();
    cap.setCapability("deviceName", "BENIMKI");
    cap.setCapability("udid", "iPhone 8 Plus");
    cap.setCapability("platformName", "iOS");
    cap.setCapability("platformVersion", "11.0");
    cap.setCapability("appPackage", "orgidentifier.CS458-HW2");
    URL url = new URL("http://127.0.0.1:4723/wd/hub");
    System.out.println("Application Started");
    driver = new AppiumDriver<MobileElement>(url, cap);
    Thread.sleep(5000);
    MobileElement name = driver.findElement(By.xpath("//XCUITextField"));
    name.click();
    Thread.sleep(1000);
    name.sendKeys("Aynur");
    driver.getKeyboard().pressKey(Keys.ENTER);
    MobileElement date_picker = driver.findElement(By.xpath("//XCUIElementTypeDatePicker"));
    List<MobileElement> dates = date_picker.findElements(By.xpath("//XCUIElementTypePickerWheel"));
    JavascriptExecutor js = (JavascriptExecutor)driver;
    dates.get(1).sendKeys("01");
    dates.get(2).sendKeys("01");
    dates.get(3).sendKeys("1981");
    MobileElement city = driver.findElement(By.xpath("//XCUIPickerView"));
    List<MobileElement> cities = city.findElements(By.xpath("//XCUIPickerWheel"));
    JavascriptExecutor js1 = (JavascriptExecutor)driver;
    dates.get(1).sendKeys("Ankara");
    Thread.sleep(1000);
    MobileElement gender = driver.findElement(By.xpath("//XCUIPickerView"));
    List<MobileElement> genders = gender.findElements(By.xpath("//XCUIPickerWheel"));
    JavascriptExecutor js2 = (JavascriptExecutor)driver;
    dates.get(1).sendKeys("Female");
    Thread.sleep(1000);
    MobileElement occ = driver.findElement(By.xpath("//XCUITextView"));
    occ.click();
    Thread.sleep(1000);
    occ.sendKeys("");
    driver.getKeyboard().pressKey(Keys.ENTER);
    Thread.sleep(1000);
    MobileElement button = driver.findElement(By.xpath("//XCUIButton"));
    button.click();
    Thread.sleep(1000);
}
}

```

3- Date, month, year parts are not chosen:

a- date is not chosen:

```

package apiumtests.apiumtests;
import java.net.MalformedURLException;
import java.net.URL;
import java.util.List;
import org.openqa.selenium.By;
import org.openqa.selenium.JavascriptExecutor;
import org.openqa.selenium.Keys;
import org.openqa.selenium.remote.DesiredCapabilities;
import io.appium.java_client.AppiumDriver;
import io.appium.java_client.MobileElement;
import junit.framework.TestCase;
public class AppTest extends TestCase {
    static AppiumDriver<MobileElement> driver;
    public static void main(String[] args) {
        try {
            HW2();
        } catch (Exception e) {
            // TODO Auto-generated catch block
            e.printStackTrace();
        }
    }
}
@SuppressWarnings("deprecation")
public static void HW2() throws MalformedURLException, InterruptedException {
    DesiredCapabilities cap = new DesiredCapabilities();
    cap.setCapability("deviceName", "BENIMKI");
    cap.setCapability("udid", "iPhone 8 Plus");
    cap.setCapability("platformName", "iOS");
    cap.setCapability("platformVersion", "11.0");
    cap.setCapability("appPackage", "orgidentifier.CS458-HW2");
    URL url = new URL("http://127.0.0.1:4723/wd/hub");
    System.out.println("Application Started");
    driver = new AppiumDriver<MobileElement>(url, cap);
    Thread.sleep(5000);
    MobileElement name = driver.findElement(By.xpath("//XCUITextField"));
    name.click();
    Thread.sleep(1000);
    name.sendKeys("Aynur");
    driver.getKeyboard().pressKey(Keys.ENTER);
    MobileElement date_picker = driver.findElement(By.xpath("//XCUIElementTypeDatePicker"));
    List<MobileElement> dates = date_picker.findElements(By.xpath("//XCUIElementTypePickerWheel"));
    JavascriptExecutor js = (JavascriptExecutor)driver;
    dates.get(2).sendKeys("01");
    dates.get(3).sendKeys("1981");
    MobileElement city = driver.findElement(By.xpath("//XCUIPickerView"));
    List<MobileElement> cities = city.findElements(By.xpath("//XCUIPickerWheel"));
    JavascriptExecutor js1 = (JavascriptExecutor)driver;
    dates.get(1).sendKeys("Ankara");
}

```

```

        Thread.sleep(1000);
        MobileElement gender = driver.findElement(By.xpath("//XCUIPickerView"));
        List<MobileElement> genders = gender.findElements(By.xpath("//XCUIPickerWheel"));
        JavascriptExecutor js2 =(JavascriptExecutor)driver;
        dates.get(1).sendKeys("Female");
        Thread.sleep(1000);
        MobileElement occ = driver.findElement(By.xpath("//XCUITextView"));
        occ.click();
        Thread.sleep(1000);
        occ.sendKeys("thats lame");
        driver.getKeyboard().pressKey(Keys.ENTER);
        Thread.sleep(1000);
        MobileElement button = driver.findElement(By.xpath("//XCUIButton"));
        button.click();
        Thread.sleep(1000);
    }
}

```

b-month is not chosen:

```

package appiumtests.appiumtests;
import java.net.MalformedURLException;
import java.net.URL;
import java.util.List;
import org.openqa.selenium.By;
import org.openqa.selenium.JavascriptExecutor;
import org.openqa.selenium.Keys;
import org.openqa.selenium.remote.DesiredCapabilities;
import io.appium.java_client.AppiumDriver;
import io.appium.java_client.MobileElement;
import junit.framework.TestCase;
public class AppTest extends TestCase {
    static AppiumDriver<MobileElement> driver;
    public static void main(String[] args) {
        try {
            HW2();
        } catch (Exception e) {
            // TODO Auto-generated catch block
            e.printStackTrace();
        }
    }
    @SuppressWarnings("deprecation")
    public static void HW2() throws MalformedURLException, InterruptedException {
        DesiredCapabilities cap = new DesiredCapabilities();
        cap.setCapability("deviceName", "BENIMKI");
        cap.setCapability("udid", "iPhone8 Plus");
        cap.setCapability("platformName", "iOS");
        cap.setCapability("platformVersion", "11.0");
        cap.setCapability("appPackage", "orgidentifier.CS458-HW2");
        URL url = new URL("http://127.0.0.1:4723/wd/hub");
        System.out.println("Application Started");
        driver = new AppiumDriver<MobileElement>(url, cap);
        Thread.sleep(5000);
        MobileElement name = driver.findElement(By.xpath("//XCUITextField"));
        name.click();
        Thread.sleep(1000);
        name.sendKeys("Aynur");
        driver.getKeyboard().pressKey(Keys.ENTER);
        MobileElement date_picker = driver.findElement(By.xpath("//XCUIElementTypeDatePicker"));
        List<MobileElement> dates = date_picker.findElements(By.xpath("//XCUIElementTypePickerWheel"));
        JavascriptExecutor js =(JavascriptExecutor)driver;
        dates.get(1).sendKeys("01");
        dates.get(3).sendKeys("1981");
        MobileElement city = driver.findElement(By.xpath("//XCUIPickerView"));
        List<MobileElement> cities = city.findElements(By.xpath("//XCUIPickerWheel"));
        JavascriptExecutor js1 =(JavascriptExecutor)driver;
        dates.get(1).sendKeys("Ankara");
        Thread.sleep(1000);
        MobileElement gender = driver.findElement(By.xpath("//XCUIPickerView"));
        List<MobileElement> genders = gender.findElements(By.xpath("//XCUIPickerWheel"));
        JavascriptExecutor js2 =(JavascriptExecutor)driver;
        dates.get(1).sendKeys("Female");
        Thread.sleep(1000);
        MobileElement occ = driver.findElement(By.xpath("//XCUITextView"));
        occ.click();
        Thread.sleep(1000);
        occ.sendKeys("");
        driver.getKeyboard().pressKey(Keys.ENTER);
        Thread.sleep(1000);
        MobileElement button = driver.findElement(By.xpath("//XCUIButton"));
        button.click();
        Thread.sleep(1000);
    }
}

```

c- year not chosen:

```

package appiumtests.appiumtests;
import java.net.MalformedURLException;
import java.net.URL;
import java.util.List;
import org.openqa.selenium.By;
import org.openqa.selenium.JavascriptExecutor;
import org.openqa.selenium.Keys;
import org.openqa.selenium.remote.DesiredCapabilities;
import io.appium.java_client.AppiumDriver;
import io.appium.java_client.MobileElement;
import junit.framework.TestCase;
public class AppTest extends TestCase {
    static AppiumDriver<MobileElement> driver;
    public static void main(String[] args) {
        try {
            HW2();

```



```

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

    @SuppressWarnings("deprecation")
    public static void HW2() throws MalformedURLException, InterruptedException {
        DesiredCapabilities cap = new DesiredCapabilities();
        cap.setCapability("deviceName", "BENIMKI");
        cap.setCapability("udid", "iPhone 8 Plus");
        cap.setCapability("platformName", "iOS");
        cap.setCapability("platformVersion", "11.0");
        cap.setCapability("appPackage", "org.identifier.CS458-HW2");
        URL url = new URL("http://127.0.0.1:4723/wd/hub");
        System.out.println("Application Started");
        driver = new AppiumDriver<MobileElement>(url, cap);
        Thread.sleep(5000);
        MobileElement name = driver.findElement(By.xpath("//XCUITextField"));
        name.click();
        Thread.sleep(1000);
        name.sendKeys("Aynur");
        driver.getKeyboard().pressKey(Keys.ENTER);
        MobileElement date_picker = driver.findElement(By.xpath("//XCUIElementTypeDatePicker"));
        List<MobileElement> dates = date_picker.findElements(By.xpath("//XCUIElementTypePickerWheel"));
        JavascriptExecutor js =(JavascriptExecutor)driver;
        dates.get(1).sendKeys("01");
        dates.get(2).sendKeys("01");
        MobileElement city = driver.findElement(By.xpath("//XCUIPickerView"));
        List<MobileElement> cities = city.findElements(By.xpath("//XCUIPickerWheel"));
        JavascriptExecutor js1 =(JavascriptExecutor)driver;
        dates.get(1).sendKeys("Ankara");
        Thread.sleep(1000);
        MobileElement gender = driver.findElement(By.xpath("//XCUIPickerView"));
        List<MobileElement> genders = gender.findElements(By.xpath("//XCUIPickerWheel"));
        JavascriptExecutor js2 =(JavascriptExecutor)driver;
        dates.get(1).sendKeys("Female");
        Thread.sleep(1000);
        MobileElement occ = driver.findElement(By.xpath("//XCUITextView"));
        occ.click();
        Thread.sleep(1000);
        occ.sendKeys("");
        driver.getKeyboard().pressKey(Keys.ENTER);
        Thread.sleep(1000);
        MobileElement button = driver.findElement(By.xpath("//XCUIButton"));
        button.click();
        Thread.sleep(1000);
    }
}

```

4- City is not chosen:

```

package appiumtests.appiumtests;
import java.net.MalformedURLException;
import java.net.URL;
import java.util.List;
import org.openqa.selenium.By;
import org.openqa.selenium.JavascriptExecutor;
import org.openqa.selenium.Keys;
import org.openqa.selenium.remote.DesiredCapabilities;
import io.appium.java_client.AppiumDriver;
import io.appium.java_client.MobileElement;
import junit.framework.TestCase;
public class AppTest extends TestCase {
    static AppiumDriver<MobileElement> driver;
    public static void main(String[] args) {
        try {
            HW2();
        } catch (Exception e) {
            // TODO Auto-generated catch block
            e.printStackTrace();
        }
    }

    @SuppressWarnings("deprecation")
    public static void HW2() throws MalformedURLException, InterruptedException {
        DesiredCapabilities cap = new DesiredCapabilities();
        cap.setCapability("deviceName", "BENIMKI");
        cap.setCapability("udid", "iPhone 8 Plus");
        cap.setCapability("platformName", "iOS");
        cap.setCapability("platformVersion", "11.0");
        cap.setCapability("appPackage", "org.identifier.CS458-HW2");
        URL url = new URL("http://127.0.0.1:4723/wd/hub");
        System.out.println("Application Started");
        driver = new AppiumDriver<MobileElement>(url, cap);
        Thread.sleep(5000);
        MobileElement name = driver.findElement(By.xpath("//XCUITextField"));
        name.click();
        Thread.sleep(1000);
        name.sendKeys("Aynur");
        driver.getKeyboard().pressKey(Keys.ENTER);
        MobileElement date_picker = driver.findElement(By.xpath("//XCUIElementTypeDatePicker"));
        List<MobileElement> dates = date_picker.findElements(By.xpath("//XCUIElementTypePickerWheel"));
        JavascriptExecutor js =(JavascriptExecutor)driver;
        dates.get(1).sendKeys("01");
        dates.get(2).sendKeys("01");
        dates.get(3).sendKeys("1981");
        MobileElement gender = driver.findElement(By.xpath("//XCUIPickerView"));
        List<MobileElement> genders = gender.findElements(By.xpath("//XCUIPickerWheel"));
        JavascriptExecutor js2 =(JavascriptExecutor)driver;
        dates.get(1).sendKeys("Female");
        Thread.sleep(1000);
        MobileElement occ = driver.findElement(By.xpath("//XCUITextView"));
        occ.click();
        Thread.sleep(1000);
    }
}

```

```

        occ.sendKeys("");
        driver.getKeyboard().pressKey(Keys.ENTER);
        Thread.sleep(1000);
        MobileElement button = driver.findElement(By.xpath("//XCUIButton"));
        button.click();
        Thread.sleep(1000);
    }
}

```

5- Gender part is not checked

```

package appiumtests.appiumtests;
import java.net.MalformedURLException;
import java.net.URL;
import java.util.List;
import org.openqa.selenium.By;
import org.openqa.selenium.JavascriptExecutor;
import org.openqa.selenium.Keys;
import org.openqa.selenium.remote.DesiredCapabilities;
import io.appium.java_client.AppiumDriver;
import io.appium.java_client.MobileElement;
import junit.framework.TestCase;
public class AppTest extends TestCase {
    static AppiumDriver<MobileElement> driver;
    public static void main(String[] args) {
        try {
            HW2();
        } catch (Exception e) {
            // TODO Auto-generated catch block
            e.printStackTrace();
        }
    }
    @SuppressWarnings("deprecation")
    public static void HW2() throws MalformedURLException, InterruptedException {
        DesiredCapabilities cap = new DesiredCapabilities();
        cap.setCapability("deviceName", "BENIMKI");
        cap.setCapability("udid", "iPhone8 Plus");
        cap.setCapability("platformName", "iOS");
        cap.setCapability("platformVersion", "11.0");
        cap.setCapability("appPackage", "org.identifier.CS458-HW2");
        URL url = new URL("http://127.0.0.1:4723/wd/hub");
        System.out.println("Application Started");
        driver = new AppiumDriver<MobileElement>(url, cap);
        Thread.sleep(5000);
        MobileElement name = driver.findElement(By.xpath("//XCUITextField"));
        name.click();
        Thread.sleep(1000);
        name.sendKeys("Aynur");
        driver.getKeyboard().pressKey(Keys.ENTER);
        MobileElement date_picker = driver.findElement(By.xpath("//XCUIElementTypeDatePicker"));
        List<MobileElement> dates = date_picker.findElements(By.xpath("//XCUIElementTypePickerWheel"));
        JavascriptExecutor js = (JavascriptExecutor)driver;
        dates.get(1).sendKeys("01");
        dates.get(2).sendKeys("01");
        dates.get(3).sendKeys("1981");
        MobileElement city = driver.findElement(By.xpath("//XCUIPickerView"));
        List<MobileElement> cities = city.findElements(By.xpath("//XCUIPickerWheel"));
        JavascriptExecutor js1 = (JavascriptExecutor)driver;
        dates.get(1).sendKeys("Ankara");
        Thread.sleep(1000);
        JavascriptExecutor js2 = (JavascriptExecutor)driver;
        dates.get(1).sendKeys("Female");
        Thread.sleep(1000);
        MobileElement occ = driver.findElement(By.xpath("//XCUITextView"));
        occ.click();
        Thread.sleep(1000);
        occ.sendKeys("");
        driver.getKeyboard().pressKey(Keys.ENTER);
        Thread.sleep(1000);
        MobileElement button = driver.findElement(By.xpath("//XCUIButton"));
        button.click();
        Thread.sleep(1000);
    }
}

```

5. Evaluate your mobile automation experience.

Our mobile automation is a little harder for us than the expected. Since we have minor knowledge about developing an iOS application, we had such difficulties in finding capable environment for our application and the conflicts between xcode-appium versioning took time. For Android application, we lost time for some errors because appium was not good at error specification even we set special desired capabilities to get more specific error messages.

6. Compare Appium and Selenium from your test automation experience.

Appium has benefits such as giving opportunity to test mobile applications through the real physical machines or phone simulators. Also, as we investigated, appium supports all programming languages with Selenium Client Library.