Worldline Testing Task – 1

Dhineshwaran C
WDGET2024090

Case Study: 3

GitHub Link: https://github.com/Dhineshwaran-C/WorldlineTask1.git

Introduction:

This documentation outlines a Selenium WebDriver test suite developed to automate tasks on the Edureka platform. The test suite interacts with web elements to perform actions such as logging in, updating personal and career profiles, exploring blog content, and logging out. The suite is designed to validate the functionality of key features on the platform.

Code Explanation:

AppTest Class:

Dependencies: This class uses TestNG for test management and Apache POI for reading data from Excel files.

WebDriver Initialization: ChromeDriver is used to instantiate the WebDriver for Chrome browser.
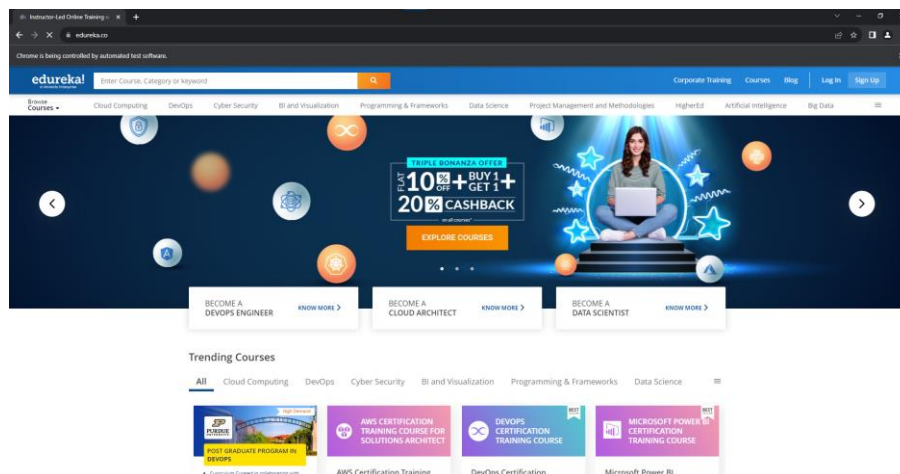
Test Methods:

open_browser():

The 'open_browser()' method initializes the WebDriver for Chrome by setting the system property to the path where the ChromeDriver executable is located. This ensures that Selenium can interact with the Chrome browser. After initialization, the browser window is maximized to ensure consistent testing environments.

```java
@Test(priority=1)
Run | Debug
public void open_browser() {
    System.setProperty("webdriver.chrome.driver","G:\\worldline\\chromedriver-win64\\chromedriver-win64\\chromedriver.exe");
    driver = new ChromeDriver();
    wait = new WebDriverWait(driver, 5);
    driver.manage().window().maximize();
    driver.get("https://www.edureka.co/");
    System.out.println("Start Browser Executed");
    Reporter.log("Start Browser Executed");
}
```

When executing this function, it displays

login():

The 'login()' method, Selenium locates the login button on the Edureka website using an XPath expression. Once found, it simulates a click action to initiate the login process. It then locates the email and

password input fields, enters predefined credentials, and clicks the login button to authenticate the user.

```java
@Test(dependsOnMethods = {"open_browser"})
Run | Debug
public void login() {
    WebElement login_page_button = driver.findElement(By.xpath("/html[1]/body[1]/header[1]/nav[1]/ul[1]/li[4]/span[1]"));
    login_page_button.click();
    WebElement email_input = driver.findElement(By.xpath("/html[1]/body[1]/div[6]/div[1]/div[1]/div[2]/div[3]/form[1]/div[1]/input[1]"));
    wait.until(ExpectedConditions.visibilityOf(email_input));
    email_input.sendKeys("worldlinetestingassignment@gmail.com");
    WebElement password_input = driver.findElement(By.xpath("/html[1]/body[1]/div[6]/div[1]/div[1]/div[2]/div[3]/form[1]/div[2]/input[1]"));
    password_input.sendKeys("Worldline@01");
    WebElement login_button = driver.findElement(By.xpath("/html[1]/body[1]/div[6]/div[1]/div[1]/div[2]/div[3]/form[1]/button[1]"));
    login_button.click();
    System.out.println("Login Executed");
    Reporter.log("Login Executed");
}
```

When executing this function, it displays
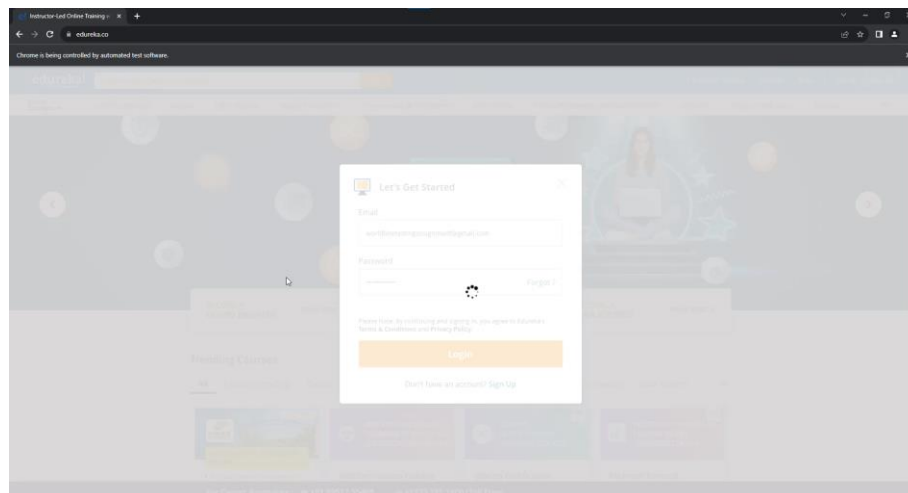
personal_profile():

The 'personal_profile()' method is responsible for navigating to the personal profile page on Edureka's platform. It interacts with the profile dropdown menu and selects the appropriate option to access the personal profile page. After navigation, it verifies that the URL matches the expected URL for the personal profile page, ensuring that the correct page is loaded.

```
@Test(dependsOnMethods = {"login"})
Run | Debug
public void personal_profile() throws InterruptedException  {
    Thread.sleep(2000);
    WebElement profileopen = driver.findElement(By.xpath("/html[1]/body[1]/header[1]/nav[1]/div[4]/ul[1]/li[6]"));
    profileopen.click();
    WebElement profileclick = driver.findElement(By.xpath("/html[1]/body[1]/header[1]/nav[1]/div[4]/ul[1]/li[6]/ul[1]/li[4]/a[1]"));
    profileclick.click();

    String expectedURL = "https://learning.edureka.co/my-profile";
    String actualURL = driver.getCurrentUrl();
    Assert.assertEquals(expectedURL,actualURL);

    System.out.println("Go to profile Executed");
    Reporter.log("Go to profile Executed");
}
```

When executing this function, it displays
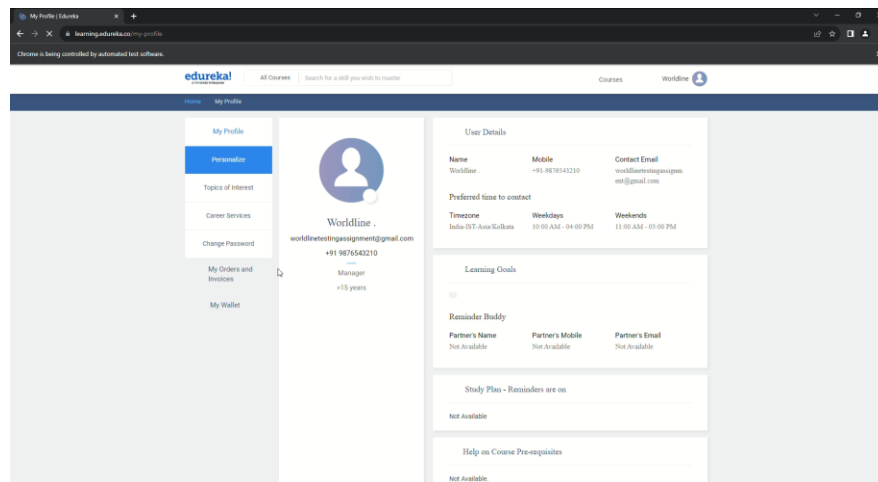
personal_profile_change():

The 'personal_profile_change()' method simulates the process of changing personal profile details. It locates the "Edit" button on the personal profile page and clicks it to enable editing. If a notification popup appears, it handles it by attempting to dismiss it. Then, it updates the name, years of experience, role, and designation fields with provided data. After making changes, it clicks the "Save and Continue" button and verifies that the URL changes to the personal profile page URL, ensuring that the changes are successfully saved. Data is fetched from the 'DataProvider' method.

```java
@Test(dependsOnMethods = {"personal_profile"},dataProvider="testingdata")

public void personal_profile_change(String name,String years,String role,String designations) throws InterruptedException {
    WebElement user_details_edit = driver.findElement(By.id("other_details"));
    user_details_edit.click();
    System.out.println("Click Edit Personal Profile Executed");


    if(i==0) {
        try {
            WebElement deny_updates = driver.findElement(By.id("wzrk-cancel"));
            wait.until(ExpectedConditions.visibilityOf(deny_updates));
            deny_updates.click();
            i=1;
        }
        catch(NoSuchElementException e) {
            // Notification element not found or not visible
        }
    }

    String expectedURL = "https://learning.edureka.co/new-onboarding/userdetails?fromProfile=true&tab=userDetails";
    String actualURL = driver.getCurrentUrl();
    Assert.assertEquals(expectedURL,actualURL);

    WebElement change_name = driver.findElement(By.id("fullName"));
    change_name.clear();
    change_name.sendKeys(name);

    WebElement year_dropdown_icon_click = driver.findElement(By.xpath("(//button[@type='button'])[5]"));
    year_dropdown_icon_click.click();
    WebElement yearSelect = driver.findElement(By.xpath("//ul[@class='available-items']//li[contains(text(), '"+years+"')]"));
    yearSelect.click();

    WebElement role_icon_click = driver.findElement(By.xpath("(//button[@type='button'])[6]"));
    role_icon_click.click();
    WebElement roleSelect = driver.findElement(By.xpath("//ul[@class='available-items']//li[contains(text(), '"+role+"')]"));
    roleSelect.click();

    WebElement designation = driver.findElement(By.id("designation"));
    designation.clear();
    designation.sendKeys(designations);

    WebElement save_button = driver.findElement(By.xpath("(//button[normalize-space()='Save and Continue'])[1]"));
    save_button.click();

    Thread.sleep(2000);
    String expectedURL2 = "https://learning.edureka.co/my-profile";
    String actualURL2 = driver.getCurrentUrl();
    Assert.assertEquals(expectedURL2,actualURL2);

    System.out.println("Personal Profile details Change Executed");
    Reporter.log("Personal Profile details Change Executed");
}
```

When executing this function, it displays

After changing the data, it displays

carrier_profile_change():

   Similar to personal profile modification, the 'carrier_profile_change()' method updates career profile details. It navigates to the career profile editing page, updates fields such as company name, current job, and interested job using provided data. It handles any notification popups that may appear and ensures that changes are saved by verifying the URL transition.

When executing this function, it changes the data and displays
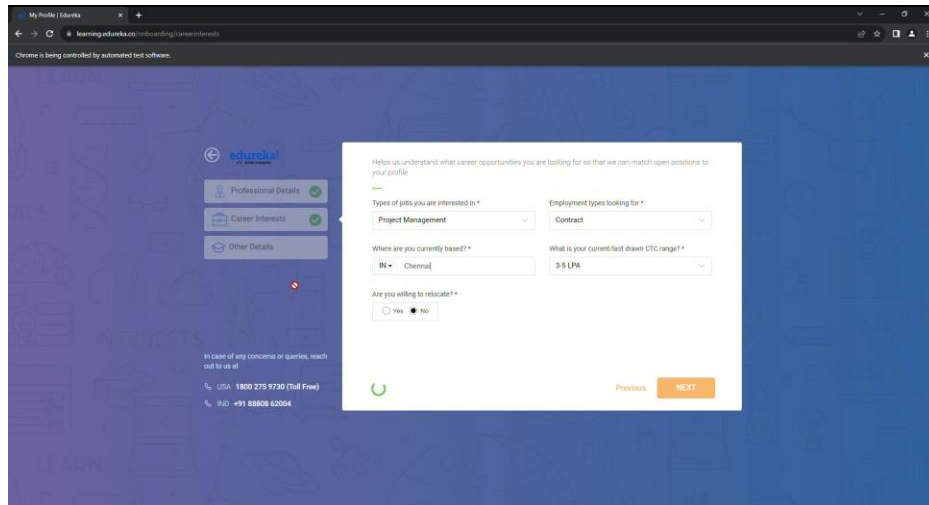
goHome():

The 'goHome()' method navigates back to the homepage by clicking on the Edureka logo in the navigation bar. It verifies that the URL matches the expected homepage URL, confirming successful navigation.

```
@Test(dependsOnMethods = {"carrier_profile_change"})
Run | Debug
public void goHome() throws InterruptedException {
    Thread.sleep(2000);
    driver.findElement(By.cssSelector("div[class='navbar-header edu_logo'] a")).click();
    String expectedURL = "https://www.edureka.co/";
    String actualURL = driver.getCurrentUrl();
    Assert.assertEquals(expectedURL,actualURL);
}
```

When executing this function, it displays
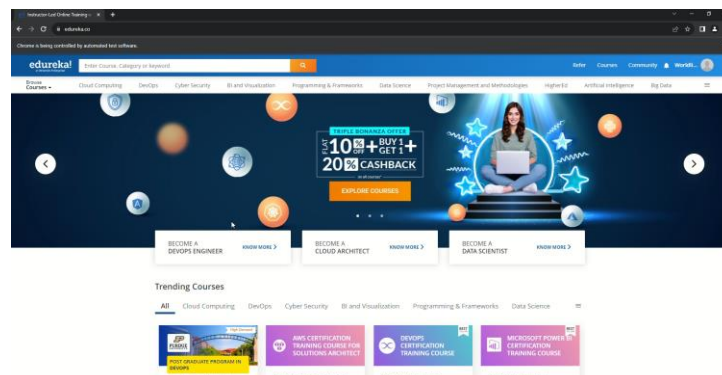
exploreBlog():

The 'exploreBlog()' simulates user behavior by exploring a specific blog section related to cloud computing. It clicks through relevant links to reach the AWS certification training page and verifies the URL, ensuring that the correct blog content is accessed.

```java
@Test(dependsOnMethods = {"goHome"})
Run | Debug
public void exploreBlog() throws InterruptedException {
    Thread.sleep(2000);
    WebElement cloud_computing = driver.findElement(By.linkText("Cloud Computing"));
    cloud_computing.click();
    WebElement aws = driver.findElement(By.xpath("(//a[@aria-label='course_info'])[1]"));
    aws.click();

    Thread.sleep(2000);
    String expectedURL = "https://www.edureka.co/aws-certification-training";
    String actualURL = driver.getCurrentUrl();
    Assert.assertEquals(expectedURL,actualURL);
    System.out.println("Exploring Blog");
    driver.findElement(By.cssSelector("a[aria-label='Go to Edureka Home Page']")).click();
}
```

When executing this function, it displays
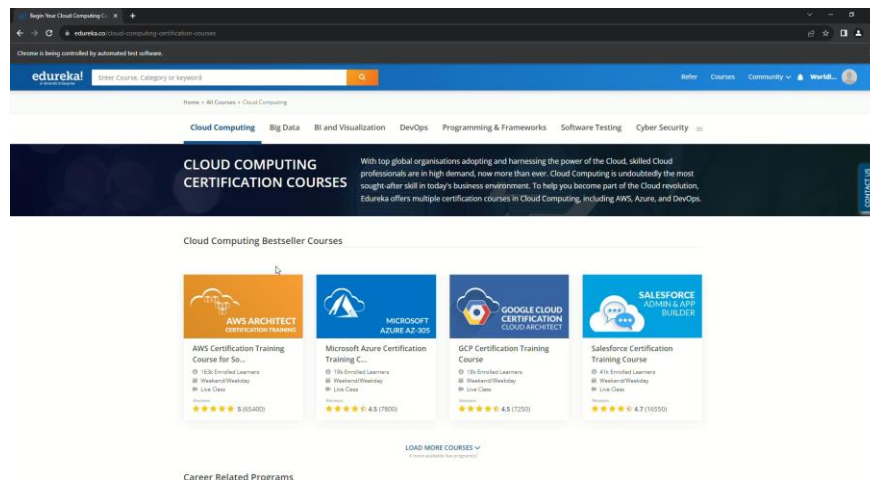
After it clicks the AWS course, it displays
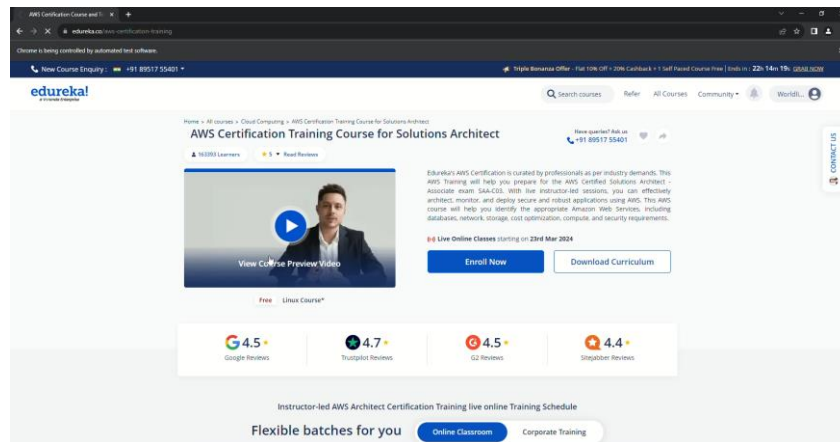
logout():

The 'logout()' completes the test scenario by logging out of the Edureka platform. It clicks on the profile dropdown menu, selects the "Log Out" option, and verifies the successful logout by checking the URL redirection to the homepage.

```java
@Test(dependsOnMethods = {"exploreBlog"})
Run | Debug
public void logout() throws InterruptedException {
    Thread.sleep(2000);
    WebElement profileopen = driver.findElement(By.xpath("/html[1]/body[1]/header[1]/nav[1]/div[4]/ul[1]/li[6]"));
    profileopen.click();
    WebElement profileclick = driver.findElement(By.linkText("Log Out"));
    profileclick.click();
    System.out.println("Log Out Executed");
    Reporter.log("Log Out Executed");
}
```

When executing this function, it displays
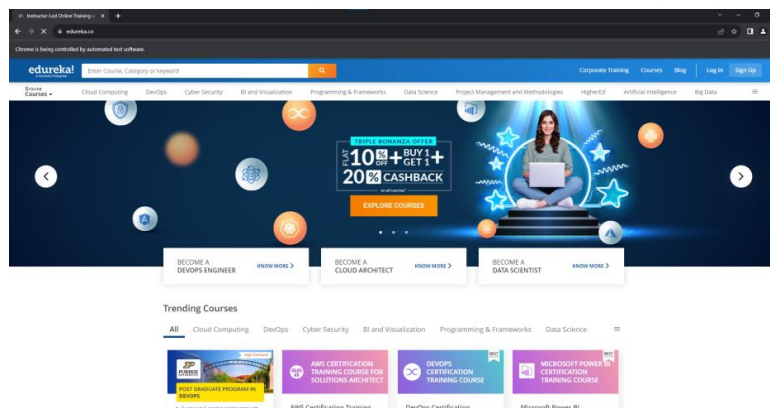
DataProviders:

The @DataProvider methods, testingData() and testingData2(), extract test data from Excel files for personal and career profile modification tests. They organize data into two-dimensional arrays, aligning rows with test cases and columns with parameters. These methods streamline test data management, enabling parameterized testing and enhancing test suite maintainability.

```java
@DataProvider(name="testingdata")
public Object[][] testingData(){
    ReadExcelFile config = new ReadExcelFile("G:\\worldline\\taskSample.xlsx");

    int rows = config.getRowCount(0);
    int col = config.getColCount(0);

    Object[][] credentials = new Object[rows][col];

    for(int i=0;i<rows;i++) {
        for(int j=0;j<col;j++) {
            credentials[i][j] = config.getData(0, i+1, j);
        }
    }

    return credentials;
}

@DataProvider(name="testingdata2")
public Object[][] testingData2(){
    ReadExcelFile config = new ReadExcelFile("G:\\worldline\\taskSample.xlsx");

    int rows = config.getRowCount(1);
    int col = config.getColCount(1);

    Object[][] credentials = new Object[rows][col];

    for(int i=0;i<rows;i++) {
        for(int j=0;j<col;j++) {
            credentials[i][j] = config.getData(1, i+1, j);
        }
    }

    return credentials;
}
```

ReadExcelFile Class:

Constructor:

The constructor initializes the XSSFWorkbook object by loading the Excel file specified by the path provided as a parameter. This allows the class to read data from the Excel file during test execution.

Data Retrieval:

The getData(int sheetnumber, int row, int column) method retrieves data from a specific cell in the Excel sheet identified by the sheet number, row, and column indices. It reads the cell value as a string and returns it.

getRowCount(int sheetnumber) returns the total number of rows in the specified sheet, facilitating iteration over rows during data retrieval.

getColCount(int sheetnumber) returns the total number of columns in the specified sheet, aiding in iterating over columns during data retrieval.

```java
public class ReadExcelFile {
    XSSFWorkbook wb;
    XSSFSheet sheet;

    public ReadExcelFile(String excelPath) {
        try {
            File src = new File(excelPath);
            FileInputStream inp = new FileInputStream(src);
            wb = new XSSFWorkbook(inp);
        }
        catch(Exception e){
            System.out.println(e.getMessage());
        }
    }

    public String getData(int sheetnumber, int row, int column) {
        sheet = wb.getSheetAt(sheetnumber);
        String data = sheet.getRow(row).getCell(column).getStringCellValue();
        return data;
    }

    public int getRowCount(int sheetnumber) {
        int rows = wb.getSheetAt(sheetnumber).getLastRowNum();
        return rows;
    }

    public int getColCount(int sheetnumber) {
        Row row = wb.getSheetAt(sheetnumber).getRow(0);
        int columns = 0;

        if (row != null) {
            int physicalNumberOfCells = row.getPhysicalNumberOfCells();
            for (int i = 0; i < physicalNumberOfCells; i++) {
                Cell cell = row.getCell(i);
                if (cell != null && cell.getCellType() != CellType.BLANK) {
                    columns++;
                }
            }
        }
        return columns;
    }
}
```

Test Data:

Personal Details data in Sheet 1:

Name	Years	Role	Designation
Worldlinetraining	2-4 years	BPO / Call Centre / ITES	Manager
World	4-7 years	Advertising / PR / MR / Event Management	Assistant Manager
line	7-10 years	Automobile / Auto Anciliary / Auto Components	CEO
training	10-15 years	Banking / Financial Services / Broking	Engineer
Worldline	>15 years	Consulting	Manager

Professional Details data in Sheet 2:

CompanyName	CurrentJob	CurrentIndustry	UserSkill	InterestedJob	JobType	LastDrawnSalary	CurrentCity
Worldlinetraining	Entry Level	BPO / Call Centre / ITES	Manager	Project Management	Contract	3-5 LPA	Chennai
Worldline	Mid Management	Advertising / PR / MR / Event Management	Assistance Manager	Business Intelligence and Visualization	Permanent	5-10 LPA	Bangalore
World	Senior Management	Automobile / Auto Anciliary / Auto Components	CEO	Project Management	Both	10-15 LPA	Pune
Line	Top/Executive Management	Banking / Financial Services / Broking	Engineer	Blockchain	Contract	15-25 LPA	Mumbai
Training	Not Applicable - Fresher	Consulting	Consulting	Data Warehousing and ETL	Permanent	25-40 LPA	Delhi

Console Output:

```
Start Browser Executed
Login Executed
Go to profile Executed
ERROR StatusLogger Log4j2 could not find a logging implementation. Please add log4j-core to the classpath. Using SimpleLogger to log to the console...
Click Edit Personal Profile Executed
Personal Profile details Change Executed
Click Edit Personal Profile Executed
Personal Profile details Change Executed
Click Edit Personal Profile Executed
Personal Profile details Change Executed
Click Edit Personal Profile Executed
Personal Profile details Change Executed
Click Edit Personal Profile Executed
Personal Profile details Change Executed
Go to Carrier Profile Executed
Professional details Change Executed
Go to Carrier Profile Executed
Professional details Change Executed
Go to Carrier Profile Executed
Professional details Change Executed
Go to Carrier Profile Executed
Professional details Change Executed
Go to Carrier Profile Executed
Professional details Change Executed
Exploring Blog
Log Out Executed
PASSED: Task1.Task1.AppTest.logout
PASSED: Task1.Task1.AppTest.exploreBlog
PASSED: Task1.Task1.AppTest.personal_profile
PASSED: Task1.Task1.AppTest.personal_profile_change("World", "4-7 years", "Advertising / PR / MR / Event Management", "Assistant Manager")
PASSED: Task1.Task1.AppTest.carrier_profile_change("Worldlinetraining", "Entry Level", "BPO / Call Centre / ITES", "Manager", "Project Management", "Contract", "3-5 LPA", "Chennai")
PASSED: Task1.Task1.AppTest.personal_profile_change("Worldlinetraining", "2-4 years", "BPO / Call Centre / ITES", "Manager")
PASSED: Task1.Task1.AppTest.personal_profile_change("line", "7-10 years", "Automobile / Auto Anciliary / Auto Components", "CEO")
PASSED: Task1.Task1.AppTest.carrier_profile_change("World", "Senior Management", "Automobile / Auto Anciliary / Auto Components", "CEO", "Project Management", "Both", "10-15 LPA", "Pune")
PASSED: Task1.Task1.AppTest.personal_profile_change("training", "10-15 years", "Banking / Financial Services / Broking", "Engineer")
PASSED: Task1.Task1.AppTest.open_browser
PASSED: Task1.Task1.AppTest.login
PASSED: Task1.Task1.AppTest.goHome
PASSED: Task1.Task1.AppTest.carrier_profile_change("Line", "Top/Executive Management", "Banking / Financial Services / Broking", "Engineer", "Blockchain", "Contract", "15-25 LPA", "Mumbai")
PASSED: Task1.Task1.AppTest.carrier_profile_change("Training", "Not Applicable - Fresher", "Consulting", "Consulting", "Data Warehousing and ETL", "Permanent", "25-40 LPA", "Delhi")
PASSED: Task1.Task1.AppTest.personal_profile_change("Worldline", "Mid Management", "Advertising / PR / MR / Event Management", "Assistance Manager", "Business Intelligence and Visualization", "Permanen
PASSED: Task1.Task1.AppTest.personal_profile_change("Worldline", ">15 years", "Consulting", "Manager")

===============================================
    Default test
    Tests run: 8, Failures: 0, Skips: 0
===============================================


===============================================
Default suite
Total tests run: 16, Passes: 16, Failures: 0, Skips: 0
```

Default test

Tests passed/Failed/Skipped:	16/0/0
Started on:	Thu Mar 21 00:02:11 IST 2024
Total time:	264 seconds (264948 ms)
Included groups:	
Excluded groups:	

(Hover the method name to see the test class name)

PASSED TESTS				
Test method	**Attribute(s)**	**Exception**	**Time (seconds)**	**Instance**
logout Test class: Task1.Task1.AppTest Show output Show all outputs Log Out Executed		6	Task1.Task1.AppTest@8f4ea7c	
exploreBlog Test class: Task1.Task1.AppTest		10	Task1.Task1.AppTest@8f4ea7c	
personal_profile Test class: Task1.Task1.AppTest Show output Show all outputs Go to profile Executed		9	Task1.Task1.AppTest@8f4ea7c	
personal_profile_change Test class: Task1.Task1.AppTest Parameters: World, 4-7 years, Advertising / PR / MR / Event Management, Assistant Manager Show output Show all outputs Personal Profile details Change Executed		23	Task1.Task1.AppTest@8f4ea7c	
carrier_profile_change Test class: Task1.Task1.AppTest Parameters: Worldlinetraining, Entry Level, BPO / Call Centre / ITES, Manager, Project Management, Contract, 3-5 LPA, Chennai Show output Show all outputs		21	Task1.Task1.AppTest@8f4ea7c	

Go to Carrier Profile Executed Professional details Change Executed			
personal_profile_change Test class: Task1.Task1.AppTest Parameters: Worldlinetraining, 2-4 years, BPO / Call Centre / ITES, Manager Show output Show all outputs Personal Profile details Change Executed		24	Task1.Task1.AppTest@8f4ea7c
personal_profile_change Test class: Task1.Task1.AppTest Parameters: line, 7-10 years, Automobile / Auto Anciliary / Auto Components, CEO Show output Show all outputs Personal Profile details Change Executed		23	Task1.Task1.AppTest@8f4ea7c
carrier_profile_change Test class: Task1.Task1.AppTest Parameters: World, Senior Management, Automobile / Auto Anciliary / Auto Components, CEO, Project Management, Both, 10-15 LPA, Pune Show output Show all outputs Go to Carrier Profile Executed Professional details Change Executed		21	Task1.Task1.AppTest@8f4ea7c
personal_profile_change Test class: Task1.Task1.AppTest Parameters: training, 10-15 years, Banking / Financial Services / Broking, Engineer Show output Show all outputs Personal Profile details Change Executed		23	Task1.Task1.AppTest@8f4ea7c

open_browser Test class: Task1.Task1.AppTest Show output Show all outputs Start Browser Executed		4	Task1.Task1.AppTest@8f4ea7c
login Test class: Task1.Task1.AppTest Show output Show all outputs Login Executed		2	Task1.Task1.AppTest@8f4ea7c
goHome Test class: Task1.Task1.AppTest		4	Task1.Task1.AppTest@8f4ea7c
carrier_profile_change Test class: Task1.Task1.AppTest Parameters: Line, Top/Executive Management, Banking / Financial Services / Broking, Engineer, Blockchain, Contract, 15- 25 LPA, Mumbai Show output Show all outputs Go to Carrier Profile Executed Professional details Change Executed		21	Task1.Task1.AppTest@8f4ea7c
carrier_profile_change Test class: Task1.Task1.AppTest Parameters: Training, Not Applicable - Fresher, Consulting, Consulting, Data Warehousing and ETL, Permanent, 25-40 LPA, Delhi Show output Show all outputs Go to Carrier Profile Executed Professional details Change Executed		21	Task1.Task1.AppTest@8f4ea7c
carrier_profile_change Test class: Task1.Task1.AppTest Parameters: Worldline, Mid Management, Advertising / PR / MR /		21	Task1.Task1.AppTest@8f4ea7c

Event Management, Assistance Manager, Business Intelligence and Visualization, Permanent, 5-10 LPA, Bangalore Show output Show all outputs Go to Carrier Profile Executed Professional details Change Executed			
personal_profile_change Test class: Task1.Task1.AppTest Parameters: Worldline, >15 years, Consulting, Manager Show output Show all outputs Personal Profile details Change Executed	23		Task1.Task1.AppTest@8f4ea7c