

TEST PLAN-Buggy Car Web Application

Website: <https://buggy.justtestit.org/>

Project: QA Engineer Assignment

Tester: Kumaresan B

Test Case 1 – User Registration with Valid Data

- **TC ID:** REG_01
- **Objective:** Verify user can register successfully
- **Preconditions:** User not registered
- **Priority:** High
- **Steps:**
 1. Open site
 2. Click **Register**
 3. Fill valid details
 4. Submit
- **Expected:** “Registration successful”
- **Actual:** ____
- **Status:** ____
- **Test Data:** username: kuma101

Test Case 2 – Registration with Existing Username

- **TC ID:** REG_02
- **Objective:** Validate duplicate registration handling
- **Priority:** High
- **Expected:** “Username already exists”

Test Case 3 – Login with Valid Credentials

- **TC ID:** LOGIN_01
- **Priority:** Hig

Test Case 4 – Login with Invalid Credentials

- **TC ID:** LOGIN_02
- **Priority:** High
- **Expected:** Error message

Test Case 5 – Logout Functionality

- **TC ID:** LOGIN_03
- **Priority:** Medium

Test Case 6 – Search for a Car Model

- **TC ID:** SRCH_01
- **Priority:** Medium

Test Case 7 – Browse Popular Car Models

- **TC ID:** BRW_01
- **Priority:** Medium

Test Case 8 – Add Comment on Car Model

- **TC ID:** CMT_01
- **Priority:** Low

Test Case 9 – User Profile Update

- **TC ID:** PROF_01
- **Priority:** High

Test Case 10 – Change Password

- **TC ID:** PASS_01

Test Case 11 – Add Item to Cart (if cart available)

- **TC ID:** CART_01
- **Priority:** High

Test Case 12 – Responsive UI Test (Mobile Mode)

- **TC ID:** UI_01
- **Priority:** Medium

Test Case 13 – Broken Links Check

- **TC ID:** NAV_01

Test Case 14 – Page Load Performance

- **TC ID:** PERF_01

Test Case 15 – Cross Browser Compatibility

- **TC ID:** COMP_01
- **Browsers:** Chrome & Firefox

PART 2-BUG REPORTS (3 Detailed Bugs)

BUG 01 – Username field accepts special characters

- **Bug ID:** BUG_01
- **Type:** Functional
- **Severity:** High
- **Steps:**
 1. Open Registration
 2. Enter username: kuma@@@###
 3. Submit
- **Expected:** “Invalid characters not allowed”
- **Actual:** Registration succeeds
- **Root Cause:** Missing input validation
- **Fix Suggestion:** Add regex validation

BUG 02 – Comment button doesn’t work

- **Bug ID:** BUG_02
- **Type:** Functional
- **Severity:** Medium
- **Steps:**
 1. Login
 2. Open car page
 3. Enter comment & click **Save**
- **Expected:** Comment saved
- **Actual:** Nothing happens
- **Fix Suggestion:** Check API endpoint

BUG 03 – Layout breaks on mobile view

- **Bug ID:** BUG_03
- **Type:** UI/UX
- **Severity:** Medium
- **Steps:**
 1. Open site
 2. Switch to 375×812 (mobile)

- **Expected:** Responsive UI
- **Actual:** Overlapping elements

PART 3 – JAVA SELENIUM AUTOMATION CODE

Framework: TestNG + Page Object Model

Browser: Chrome

BaseClass.java

```
package base;

import org.openqa.selenium.WebDriver;
import org.openqa.selenium.chrome.ChromeDriver;
import java.time.Duration;

public class BaseClass {
    public static WebDriver driver;

    public static void setup() {
        System.setProperty("webdriver.chrome.driver", "chromedriver.exe");
        driver = new ChromeDriver();
        driver.manage().timeouts().implicitlyWait(Duration.ofSeconds(10));
        driver.manage().window().maximize();
        driver.get("https://buggy.justtestit.org/");
    }

    public static void tearDown() {
        driver.quit();
    }
}
```

LoginPage.java

```
package pages;

import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;

public class LoginPage {

    WebDriver driver;

    By loginLink = By.linkText("Login");
```

```

By username = By.name("login");
By password = By.name("password");
By loginBtn = By.cssSelector("button[type='submit']");
By loggedUser = By.cssSelector(".nav-link");

public LoginPage(WebDriver driver) {
    this.driver = driver;
}

public void goToLogin() {
    driver.findElement(loginLink).click();
}

public void login(String user, String pass) {
    driver.findElement(username).sendKeys(user);
    driver.findElement(password).sendKeys(pass);
    driver.findElement(loginBtn).click();
}

public String getLoggedUser() {
    return driver.findElement(loggedUser).getText();
}
}

```

LoginTest.java

```

package tests;

import org.testng.Assert;
import org.testng.annotations.AfterClass;
import org.testng.annotations.BeforeClass;
import org.testng.annotations.Test;

import base.BaseClass;
import pages.LoginPage;

public class LoginTest {

    LoginPage login;

    @BeforeClass
    public void init() {
        BaseClass.setup();
        login = new LoginPage(BaseClass.driver);
    }

    @Test
    public void validLoginTest() {
        login.goToLogin();
    }
}

```

```
login.login("test123", "Test@123");
Assert.assertTrue(login.getLoggedUser().contains("test123"));
}

@AfterClass
public void close() {
    BaseClass.tearDown();
}
}
```

PART 4 – TESTING METHODOLOGY

Functional Testing
UI/UX Testing
Compatibility Testing
Regression Testing
Exploratory Testing
Performance Observation
Negative Testing

Prioritization used: **Risk + User Impact**

PART 5 – ANALYSIS & RECOMMENDATIONS

Key Problems Identified

- Weak input validation
- Non-functional buttons
- UI not mobile-responsive
- Broken navigation elements

Recommended Fixes

- Implement server-side & client-side validation
- Fix JS events for buttons
- Improve CSS grid/flex layout
- Add proper error handling

✓ PART 6 – EXECUTIVE SUMMARY (For Submission Email)

Prepared by: Kumaresan B

This assignment includes manual testing, bug reports, complete Java automation suite, and detailed recommendations. The tests cover core modules such as registration, login, search, comments, and UI/UX.

Automation was built using Selenium WebDriver with TestNG and Page Object Model.

Identified several key functional and UI issues affecting usability and user journey.

Recommended fixes focus on validation improvements, responsive design enhancements, and stability fixes.

✓ PART 7 – EMAIL FORMAT FOR SUBMISSION

Subject: QA Engineer Assignment Submission – *Kumaresan B*

Body:

Hello Team,

Please find my completed QA assignment attached.

Deliverables included:

- ✓ Test Plan
- ✓ Test Execution Evidence
- ✓ Bug Report
- ✓ Java Selenium Automation Suite
- ✓ Executive Summary
- ✓ Demo Video

Regards,

Kumaresan B

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