TestNG Healthcare Use Case: Patient Registration Module & OT Schedule

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# Use Case Specification: UC-PatientRegistration01

# Introduction

This document details the specifications for use cases and guidelines for proper conduct during assessments. It is aimed at ensuring a thorough understanding and compliance with the best practices in automation testing, focusing on the integration of the TestNG tool with Selenium (SE), TestNG, and Java.

# Conduct Guidelines

# Important Notice to All Assessors:

Prior to commencing the assessment, please ensure that you have read and understood the following conduct guidelines. Failure to adhere to these guidelines may result in disqualification from the assessment process.

# Resource Restricted Usage:

Access to resources like GMAIL, Google ChatGPT, Quora, Stack Overflow, official emails, search engines, and AI tools will be restricted or monitored.

# Monitoring and Compliance:

Your activities will be monitored. Accessing blocked sites or using unauthorized tools will be recorded and may lead to disqualification.

# Coding Standards:

Write well-commented code to clearly explain your logic and approach. After each test case, document the outcomes and system state comprehensively.

# Use Case ID:

UC-PatientRegistration01

# Title:

Patient Registration Workflow Automation

# Primary Actor:

Hospital Staff

# Stakeholders and Interests:

Hospital Staff: Streamline patient data management, ensure accuracy and integrity.  
Patients: Smooth, confidential, and secure registration process.  
Hospital Management: Efficient, reliable system for operational efficiency.

# Preconditions:

The patient registration system is fully operational.  
Hospital staff have secure access and are authorized to operate the registration module.

Use the URL – https://healthapp.yaksha.com/

Username: admin / Password: pass123 Success Guarantee

Post Patient Registration a Unique Hospital Number get generated by ‘SASA Health EMR’. Which would be refer as ‘patient id’.

Verify the Set up WebDriver to use the appropriate driver for the specified browser. This could be done manually or by utilizing WebDriverManager.

Add the below code to add the Chrome browser option

@BeforeClass

**public** **void** beforeClass() {

WebDriverManager.*chromedriver*().setup();

ChromeOptions options = **new** ChromeOptions();

options.addArguments("--remote-allow-origins=\*");

options.setPageLoadStrategy(PageLoadStrategy.***NORMAL***);

driver = **new** ChromeDriver(options);

wait = **new** WebDriverWait(driver, Duration.*ofSeconds*(30));

driver.get("https://healthapp.yaksha.com/");

wait = **new** WebDriverWait(driver, Duration.*ofSeconds*(30));

}

POM.XML and Project Folder structure is present in eclipse on the VM

# Main Success Scenario (Basic Flow):

1. Login Workflow

1. The hospital staff member navigates to the HMS login page.
2. They enter their credentials and are granted access to the system.

2. Patient Registration Workflow

1. Access Registration Page: The hospital staff member navigates to the "Register Patient" page.
2. Enter Patient Details: The staff member enters details like Salutation, First Name, Last Name, Date of Birth, Gender, Phone, Country, Address, Employer Info, Marital Status, Email, and Dialysis Patient status.
3. Validate and Save: The system validates the provided details and saves the new patient record.
4. Generate Unique ID: The system generates a unique Hospital Number [Patient ID] for the new record.
5. Confirmation: Search with the unique Hospital Number [Patient ID] generated in the steps ‘c,d’.

3. OT Scheduling Workflow

1. With the patient registered, the staff member navigates to the "OT Scheduling" module.
2. They enter the necessary details for surgery, assign medical personnel, and schedule the OT.
3. The system books the OT and sends pre-surgery instructions to the patient.

Refer the sample test cases in the attached XLS, You can add more test cases as well for writing TestNG Test Automation Framework.



# Post-Conditions:

1. The patient's data is accurately captured and saved in the SASA Health EMR system. Using “http://localhost:5000/Home/Index#/Patient/SearchPatient”
2. A unique Hospital Number [Patient ID] is generated for the new record, which can be used for future reference and retrieval of the patient's record.
3. The hospital staff member receives a confirmation message indicating that the registration was successful, which may include the unique Hospital Number [Patient ID] . The success massage is appear in right side bottom in green color with Unique Hospital Number for 30 sec.
4. The patient's information is verified on the "Search Patient" page to be correct and complete, affirming that the data has been properly stored in the database.
5. The OT schedule is confirmed with the details of the surgery, including date, time, and assigned medical personnel, accurately recorded in the system.
6. Pre-surgery instructions are sent to the patient or made available for the patient to access, ensuring they are informed and prepared for the upcoming procedure.
7. The system's state is updated to reflect the new additions, and any related modules or systems, such as billing, appointment scheduling, or medical records, are synchronized accordingly.
8. All actions taken during this process are logged and can be reviewed or audited if necessary, ensuring accountability and traceability within the EMR system.
9. The patient's information becomes available for scheduling follow-up appointments, tests, or treatments as needed, eliminating the necessity for re-entering their basic details.
10. Post-registration, the hospital staff member can search and verify the OT booking in the "OT Scheduling" module, where the system displays the new OT booking with accurate details.
11. After successful login and completion of tasks, the SASA Health main page provides a summary of information, including the total number of registered patients, total doctors, today's appointments, and department-wise appointment counts for the current day, ensuring the hospital staff member is well-informed of the day's activities and statistics. The patient's data is accurately captured and saved in the SASA Health EMR system.

# Special Requirements, Extensions, Technology and Data Variations List:

Missing Information: System prompts for required fields.  
Duplicate Entry: System checks for existing records to prevent duplicates.

System supports multiple browsers Such as Chrome, Firefox, Safari, Edge using WebDriver Manager. With TestNG, you can use parameters and a data provider to run the same set of tests across different browsers. You can pass the browser type as a parameter and then configure the WebDriver accordingly. Run testNG one by one on each browser not using “Parallel Test Execution with TestNG”

Registrations occur frequently, multiple times daily. Use the @DataProvider to simulate the frequent registrations. Assert the expected outcome after each registration. Prepare Test Data and Pull from XLS . Run the Patient’s Registration 10 times in a 10 Minute.

TestNG XML suite files to achieve parameterized tests is used for testing various data sets.

Post-testing, System cleans up all test data post-execution. Use @AfterMethod or @AfterClass annotations to include cleanup logic that should run after each test method or after all tests in a class have completed.

Setting Up:

Begin by organizing TestNG testing environment and Folder structure.

Data-Driven Testing: Use sample TestNG data providers to input various scenarios into your/given sample tests, making them more robust and comprehensive.

Assertions: Use TestNG assertions like True, False, Equals, NotEquals, Null, NotNull, Same, NotSame etc to verify expected outcomes, ensuring the system behaves as it should under different conditions.

Integration: Ensure your tests are well-integrated with the build and deployment tools like github.

As a part of general requirements we are adding point to save prepared test case to the github link . We will add the details once the VM is ready.

Do we need to integrate the code with GITHUB? Do we have this as part of TOC?

# Test Data:

Included in the scenario outlines and examples.

# Sample Test Data – Patient Registration [For you to build the test data on sample data]

| Salutation | First Name | Last Name | Date of Birth | Gender | Phone Number | Country | Address | Employer Info | Marital Status | Email | Dialysis Patient |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Mr. | John | Doe | 1985-01-23 | Male | 555-1234 | USA | 123 Maple Street, Anytown, USA | ABC Corporation | Single | johndoe@example.com | No |
| Ms. | Emily | Smith | 1992-04-16 | Female | 555-5678 | USA | 456 Oak Avenue, Somewhere, USA | XYZ Enterprises | Married | emilysmith@example.com | No |

# Sample Test Data – OT schedule [For you to build the test data on sample data]

