Healthcare Use Case: Patient Registration Module

# Use Case ID:

UC-PatientRegistration01

# Title:

Patient Registration Workflow Automation

# Description: This use case encompasses functionalities related to managing patient registrations in the hospital system. It involves creating and storing new patient records while ensuring data integrity and adherence to privacy standards.

# Primary Actor:

Hospital Staff, Registration System

# 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.

# Success Guarantee (Postconditions):

Patient data is accurately recorded and captured in the system.  
A unique Patient ID is generated for each patient.  
Staff receive a confirmation message validating successful registration.

# Main Success Scenario (Basic Flow):

Access System: Staff logs into 'Register Patient' page.  
Enter Data: Staff inputs patient details.  
Record Creation: System validates data and creates a new record.  
ID Generation: System generates a unique Patient ID.  
Confirmation: System confirms successful recording of patient details.

# Extensions (Alternative Flows):

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

# Special Requirements:

Compliance with health information privacy laws.  
User interface is intuitive and accessible.

# Technology and Data Variations List:

System supports multiple browsers and devices.

# Frequency of Occurrence:

Registrations occur frequently, multiple times daily.

# Miscellaneous:

System logs all registration activities for auditing.

# Data-driven Approach:

Cucumber Scenario Outline is used for testing various data sets.

# Test Data:

Included in the scenario outlines and examples.

# Teardown:

System cleans up all test data post-execution.

# Version Control:

Feature files, step definitions, configurations are in a Git repository.

# Approval:

[Stakeholder Name]  
[Title]  
[Date]

# Enhancements for Assessment Purposes:

Error Handling Scenarios: Simulate real-world scenarios.  
Security Considerations: Verify encryption and access controls.  
Performance Metrics: Benchmark system performance.  
Integration Testing: Test integration with other modules.  
Automated Regression Tests: Ensure new updates do not break functionality.  
Compliance Verification: Verify compliance with standards like HIPAA.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 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 |

# Use Case for Cucumber:

Combined Login, Patient Registration, and OT Scheduling

# Use Case ID:

UC-HMS01

# Title:

Automation of Login, Patient Registration, and OT Scheduling Workflows

# Primary Actor:

Hospital Staff

# Stakeholders and Interests:

Hospital Staff: Efficient operation for login, patient registration, and OT scheduling.  
Patients: Quick and secure registration and surgery scheduling.  
Hospital Management: Integrated system for managing patient data and OT schedules.

# Preconditions:

The Hospital Management System (HMS) is fully operational.  
Hospital staff have the appropriate credentials to access the HMS.

# Success Guarantee (Postconditions):

Staff can log in to the HMS.  
Patient data is accurately entered and stored.  
A unique Patient ID is generated.  
OT is scheduled with confirmation received.

# Main Success Scenario (Basic Flow):

1. Login: Staff logs into HMS.  
2. Patient Registration: Staff enters patient details, and the system creates a record.  
3. OT Scheduling: Staff schedules OT with the necessary details.

# Extensions (Alternative Flows):

a. Login Issues: System prompts for correct credentials.  
b. Missing Patient Information: System prompts for required fields.  
c. Duplicate Patient Entry: System prevents duplicates.

# Special Requirements:

Compliance with HIPAA.  
User-friendly and accessible HMS interface.

# Technology and Data Variations List:

HMS accessible through multiple browsers and devices.

# Frequency of Occurrence:

Routine processes occurring multiple times daily.

# Miscellaneous:

Activities within HMS are logged for auditing.

# Data-driven Approach:

Cucumber Scenario Outlines used for diverse patient data sets.

# Test Data:

Refer to the structured data in the Cucumber scenarios.

# Teardown:

Post-testing, test data is purged from the system.

# Version Control:

Cucumber feature files and scripts in version-controlled repository.

# Approval:

[Stakeholder Name]  
[Title]  
[Date]

# Enhancements for Assessment Purposes:

Error handling for system downtimes or invalid entries.  
Security testing for data encryption and access controls.  
Performance metrics for system load handling.  
Integration testing with hospital ERP modules.  
Automated regression tests for existing functionalities.  
Compliance verification steps with regulatory standards.