

# Project Documentation

## Event Management & Ticketing System on Salesforce

---

### Phase 4: Process Automation (Admin)

#### 1. Introduction

In this phase, we implement **automation features** in Salesforce to streamline hospital operations. The goal is to **reduce manual work, improve accuracy, and ensure timely notifications** for users (Doctors, Patients, Hospital Staff, and Admins).

Salesforce automation tools (Validation Rules, Workflow Rules, Process Builder, Approval Processes, and Flows) are applied to **enforce hospital rules, trigger alerts, and guide appointment and treatment lifecycles**.

---

#### 2. Preparation

Before building automation, we must:

- Enable **Email Deliverability (All Email)** in Setup → Deliverability.

- Create **Lightning Email Templates** for Appointment Confirmation, Appointment Reminder, and Prescription Updates.

- Configure **Custom Notification Types** for real-time alerts (e.g., New Appointment Booked, Appointment Cancelled, Report Uploaded).

- Create **Sample Records** for Patients, Doctors, Appointments, and Health Records to test automation.

---

#### 3. Automation Components

##### *A. Validation Rules*

Purpose: Ensure **data accuracy** and prevent incorrect record creation.

##### **Examples for Project:**

- Prevent Appointment Date from being set in the past.

- Ensure a Patient cannot book two overlapping Appointments.

- Doctor Availability must be “Available” to assign an Appointment.

- Prescription record must have Diagnosis filled in before savings.

These rules enforce **clean, consistent data**.

---

### *B. Workflow Rules*

Purpose: Automate simple actions.

#### **Use Cases:**

When a new Appointment is created → send a confirmation email to the Patient.

When Appointment Date/Time is rescheduled → notify the Doctor and Patient.

Helps with routine **notifications and updates**.

---

### *C. Process Builder*

Purpose: Handle **multi-step automation**.

#### **Use Case Example:**

When Appointment Status changes to **Completed**:

Create a new HealthRecord\_\_c linked to Patient.

Send Custom Notification to Patient: “*Your health record has been updated.*”

Assign a follow-up Task for the Doctor.

Provides **conditional and sequential logic**.

---

### *D. Approval Process*

Purpose: Automate approvals for sensitive operations.

#### **Use Case Example:**

When Appointment Type = **Surgery Appointment** → requires approval from Hospital Admin.

Approval Path: Hospital Admin reviews → Approve (Status = Approved) / Reject (Status = Rejected).

Notifications sent to Patient & Doctor.

Ensures **quality control and authorization** for critical appointments.

---

### *E. Flow Builder*

Purpose: Provide powerful automation across the system.

#### **Types used in project:**

**Record-Triggered Flow:** When Appointment is cancelled, free the doctor's schedule automatically.

**Screen Flow:** Guided Patient Appointment Booking Wizard.

**Scheduled Flow:** Send Appointment Reminders (Email/SMS) 1 day before Appointment.

**Auto-Launched Flow:** Triggered when HealthRecord is updated → notify Patient.

Flows streamline **appointment lifecycle and patient engagement**.

---

### *F. Email Alerts*

Purpose: Keep stakeholders informed via email.

#### **Examples:**

On Appointment Booking → send confirmation email to Patient.

On Appointment Reminder → send “*Your appointment is tomorrow*” email.

On HealthRecord Update → send prescription summary to Patient.

Provides **timely communication**.

---

### *G. Field Updates*

Purpose: Automatically maintain accurate statuses.

#### **Examples:**

When Appointment Date passes → update Appointment Status = “Completed.”

When HealthRecord is created → auto-update Patient Status = “Under Treatment.”

Keeps **records current without manual edits**.

---

### *H. Tasks*

Purpose: Assign follow-ups to staff/doctors.

### Examples:

When Appointment is scheduled → create Task for Doctor to review patient history.

When Patient misses Appointment → create Task for staff to reschedule or follow up.

Ensures **no patient case is overlooked**.

---

### 1. Custom Notifications

Purpose: Deliver **real-time in-app alerts**.

### Examples:

Patient receives notification: *“Your Appointment is confirmed.”*

Doctor receives notification: *“You have a new Appointment scheduled.”*

Admin receives notification: *“Surgery Approval Request Pending.”*

Enhances **responsiveness and user experience**.

---

## 4. Benefits of Process Automation

**Reduced manual work** for doctors and staff.

**Timely alerts** for patients about appointments and reports.

**Improved data accuracy** with validation rules.

**Seamless approval process** for critical treatments.

**Higher patient satisfaction** with quick updates.

---

### Phase 4 Deliverable:

Validation rules, workflows, and approval processes implemented.

Configured Process Builder and Flow automation.

Email alerts, notifications, and field updates in place.

Automated task assignments for doctors and staff.

This prepares the system for **Phase 5: Apex Programming (Developer)**