**Hospital Management System**

**Actors –** Admin, Hospital, Patients (User)

**Microservices:**

1. **Patient Microservice**
   1. **Actors involved –** Patient and Admin
   2. **Services:**
      * Register patient
      * Update patient information
      * View patient information
      * Search for available beds
      * Request a bed reservation
      * Check bed reservation status
      * Cancel bed reservation
2. **Hospital Microservice:**
   1. **Actors involved –** Hospital and Admin
   2. **Services:**
      * Register patient
      * Update patient information
      * View patient information
      * Search for available beds
      * Request a bed reservation
      * Check bed reservation status
      * Cancel bed reservation
3. **Bed Reservation Microservice:**
   1. **Actors involved –** Patient and Admin
   2. **Services:**
      * Create bed reservation
      * Approve/Reject bed reservation requests (by hospital)
      * View reservation history
      * Notify patient and hospital on reservation status
4. **Booking/Billing and Payment Microservice:**
   1. **Actors involved –** Patient and Admin
   2. **Services:**
      * Generate bills for bed reservations
      * Process payments
      * View payment history
      * Send payment reminders
5. **Notification Microservice:**
   1. **Actors involved –** Patient and Hospital
   2. **Services:**
      * Send notifications (e.g., bed availability, reservation updates, payment reminders)
      * Manage notification preferences
6. **Cloud Configuration and API Gateway**
7. **Service Discovery** (Eureka Server Configurations)
8. **Other modules if necessary**

**Project Flow**

1. **Registration:**
   * Patients and hospitals can register with the system.
   * Admin approves/rejects registrations
2. **Patient Reservations:**
   * Patients can search for available beds.
   * Patients request bed reservations.
   * Hospitals can approve or reject reservation requests.
3. **Billing and Payments:**

* When a bed reservation is approved, the billing microservice generates bills.
* Patients make payments.
* The system sends payment reminders if necessary.

1. **Bed Management:**
   * Hospitals can add/update information about available beds.
   * Hospitals update bed occupancy status.
   * Admin can manage hospital staff.
2. **Notifications:**
   * Patients and hospitals receive notifications about reservation updates, bed availability, and payments.
3. **Viewing Information:**
   * Patients can view their reservation history and billing details.
   * Hospitals can view their bed occupancy and manage staff.