Topic: **Admit Transfer Discharge System**

Case Study:

HealthSure hospital needs to automate the patient admission, discharge & transfer process (Room Transfer) which is currently depending on huge manual interventions. Based on their customer feedbacks , they want to build a web application which eases these process. The complete system should be automated including the insurance clearance which is raised by the patient. This module will support only cash less based services provided by the insurance agencies

System users:

• Resource Admin

• Patient

• Hospital Third Party Administrator (TPA)

Key High-Level Functional Features:

Some of the key high-level features of the system are:

1) The platform should allow resource admin to perform the following operations:

a) Register himself by providing details

b) Access all the patient request

c) Approve or cancel the room request with proper response

d) Should be able to view the available room details

e) Generate discharge details

f) Communicate with TPA

2) The system should allow the Patient to perform the following operations:

a. Register himself

b. Able to view the availability of Rooms

c. Book for a specific room / Request for Transfer the rooms

d. Get the status of request

e. Notifications on Discharge

f. Follow procedure of cashless services

3) The app should allow the TPA to perform the below task

a. Maintains all discharge details

b. Verifies the clearance of insurance claim for cashless services

4) To implement the features, the following specifications have been laid down to design the application:

a. The design, layout, and navigation of the application should be different for each type of user logs in.

b. Resource Admin operations should be possible after Registration and Login.

c. Patient operations should be possible after register/login

d. TPA transactions should be possible after register / login

e. The data provided by the user must be validated.

Key Non-Functional Features

1) App should be designed using Microservices architecture and implemented with polyglot persistence.

2) App should be responsive to display consistently across multiple device screens.

3) Containerize the entire application – the front-end and the backend (create Docker file, docker- compose.yml and get it executed through docker compose)

4) Use JWT token for Authentication

5) Usability, look and feel should be user friendly

6) Testing must be included for backend as well as front end

7) CI should be implemented with Gitlab CI

8) Implementing Microservices patterns (API gateway, Service Discovery-Eureka Server)

9) Transactional Components should be protected

End Users:

1. Admin
2. Patient
3. TPA

Models :-

For Admin:

* Admin Id
* Password
* email
* Name

End points:

* /register
* /login
* /updateProfile
* /viewAdmins

For Patient:

* patient Id
* password
* Name
* Age
* Problem
* Mobile
* Room no
* email

End points:

* /register
* /login
* /viewPatientbyID
* /updatePatientbyID
* /deletePatientbyID

For TPA:

* TPA Id
* TPA name
* Password
* Hospital ID
* email

End points:

* /Login
* /register
* /updateTPA

For Discharge Model:

* Discharge date
* Room no
* Patient Id
* Transfer date
* Request date
* Status

End points:

* /viewdischargedetailsbyID
* /updateDischargeDetailsbyId
* /deleteDischargeDetailsbyId
* /viewStatus

For Hospital model:

* Hospital Id
* Name
* Location

End points :

* /addhospital
* /viewhospitalbyID
* /deletehospitalbyID
* /updatehospitalbyID

For Room model:

* Room no
* Ward no
* Hospital Id
* Patient Id
* Status

End points:

* /viewRoomDetailsByRoomNo
* /addRoom
* /deleteRoomByRoomNo
* /updateRoomByRoomNo

For Insurance model:

* Discharge ID
* Status
* Patient Id
* Insurance ID
* Remarks
* Updation Date
* TPA Id

End points :

* /request
* /viewStatus
* /viewInsuranceDetailsbyID
* /updateInsuranceDetailsbyID
* /deleteInsuranceDetailsByID

For Admission model:

* Admission ID
* Status
* Patient Id
* Insurance ID
* Hospital ID
* Admission Date
* Discharge Date
* TPA ID

End points :

* /request
* /viewStatus
* /viewAdmissionbyID
* /updateAdmissionbyID
* /deleteAdmissionbyID

------------------------------------------------------------------------------------------------------------------------------------------

Micro Services :

1. Admin Service
2. Patient Service
3. TPA Service
4. Discharge Service
5. Hospital Service
6. Room Service
7. Insurance Service
8. Admission Service

