

Shifa
International
Hospitals Ltd.



Shifa International HMIS

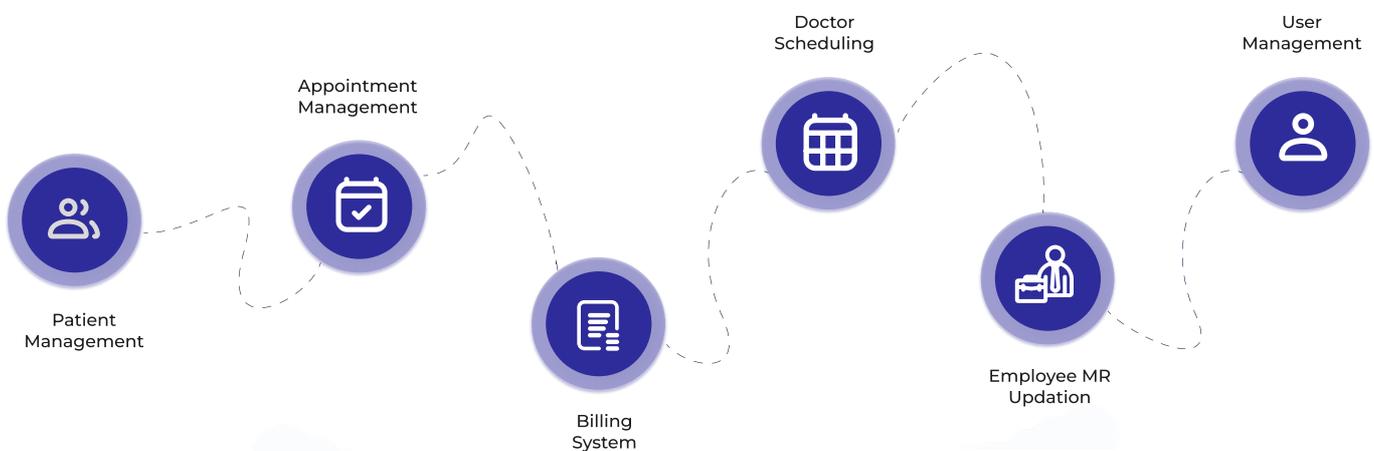
CASE STUDY



OVERVIEW:

Our agency had the exciting opportunity to develop Shifa-HMIS, a state-of-the-art Hospital Management Information System aimed at streamlining key administrative tasks. The system centralizes processes such as patient registration, appointment management, and billing, allowing staff to handle appointments more efficiently, confirm or cancel with ease, and facilitate smooth billing after patient visits. By automating these functions, Shifa-HMIS enhances both operational workflows and the overall patient experience.

The system's design reduces manual workload, improves interdepartmental communication, and minimizes errors, making hospital operations more efficient. It ensures that patients receive timely care, doctors' schedules are optimized, and billing is accurate and transparent. Shifa-HMIS ultimately creates a smarter, more patient-focused environment that benefits everyone involved.





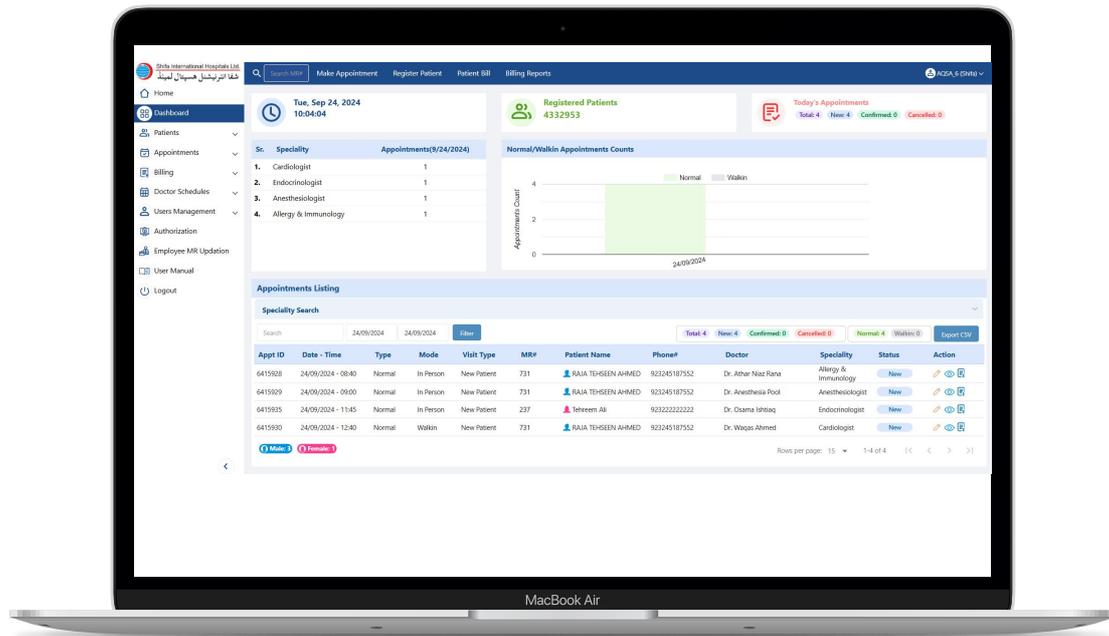
SPECIFICATIONS:

- Performance Specifications
 - Security Specifications
- Scalability and Reliability
 - Integration Capabilities
- Development Specifications
 - Database System
- Multimedia Support
 - Accessibility





NAVIGATION IN HMIS:



1 Dashboard

2 Patients

3 Appointments

4 Billing

5 Doctor Schedule

6 User Management

7 Authorization

8 Employee MR Updation

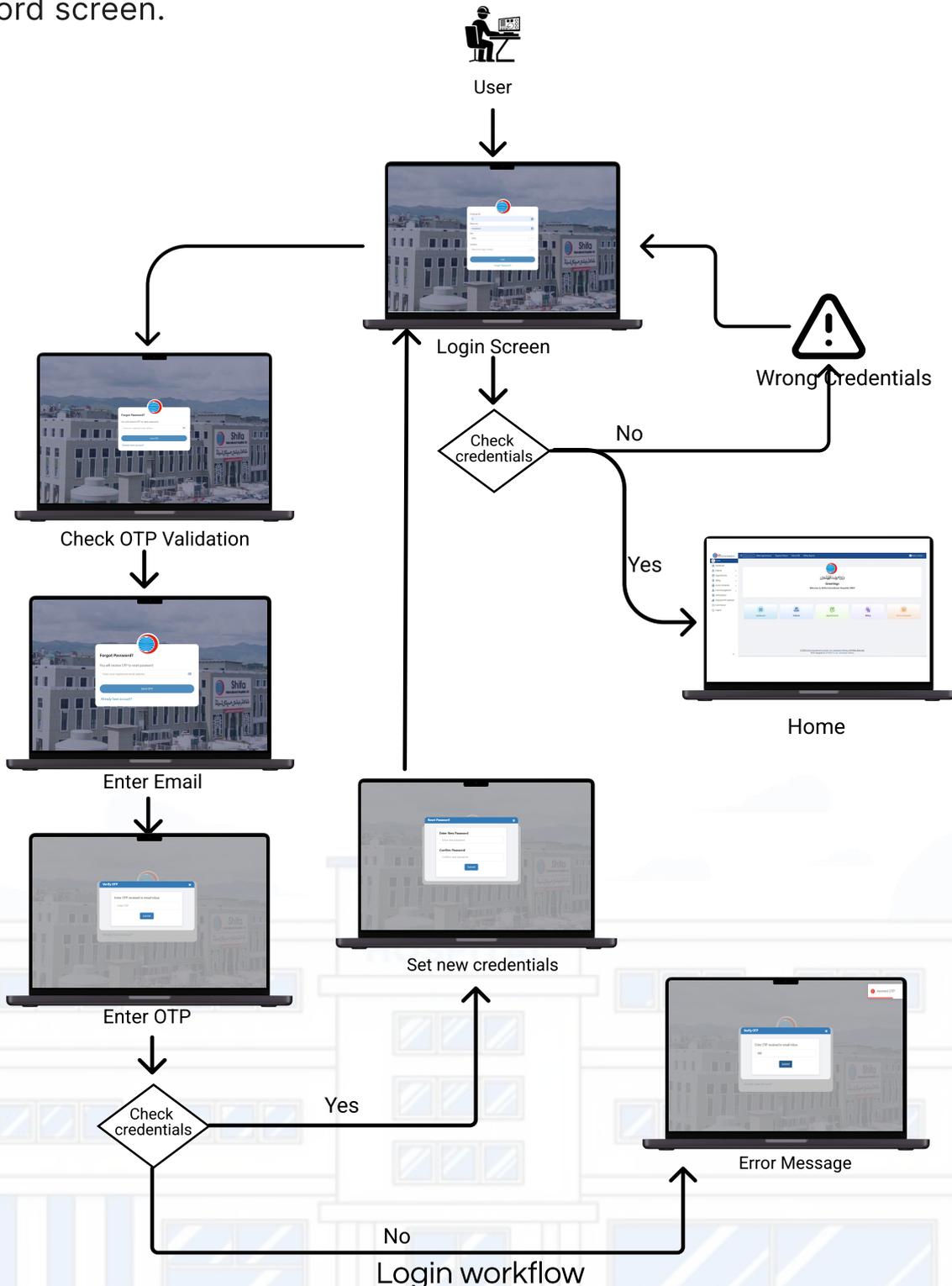


LOG-IN WORKFLOW

Users can access the system by logging in with their provided credentials:

- Employee ID
- Password
- Site

If the login is correct, the user will be navigated to the home screen. If the login is incorrect, an error message will appear via a toaster notification. If the user needs to reset their password, they will be directed to the reset password screen.





PATIENTS WORKFLOW

Admin Accesses Dashboard:

- Admin logs in and selects "Patients" from the home screen.

Start New Registration:

- Admin initiates patient registration.

Enter Demographics & Contact Info:

- Admin fills in patient demographics, contact details, and both permanent and present addresses.

Add Emergency Contacts:

- Admin enters emergency contact information in the designated tab.

Save Registration:

- Admin clicks "Save" to complete registration.

Navigate to Patient Profile:

- System automatically redirects to the patient profile page.

View Profile Details:

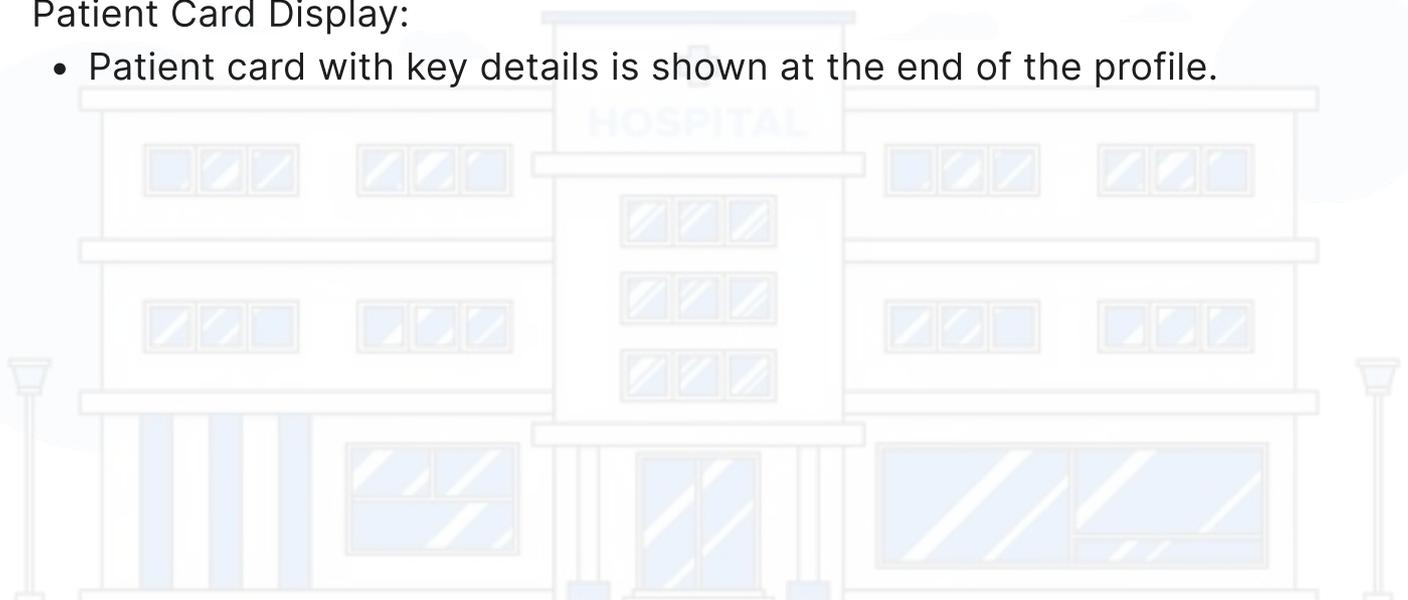
- Admin can see all patient details, including appointments, bills, lab and radiology reports.

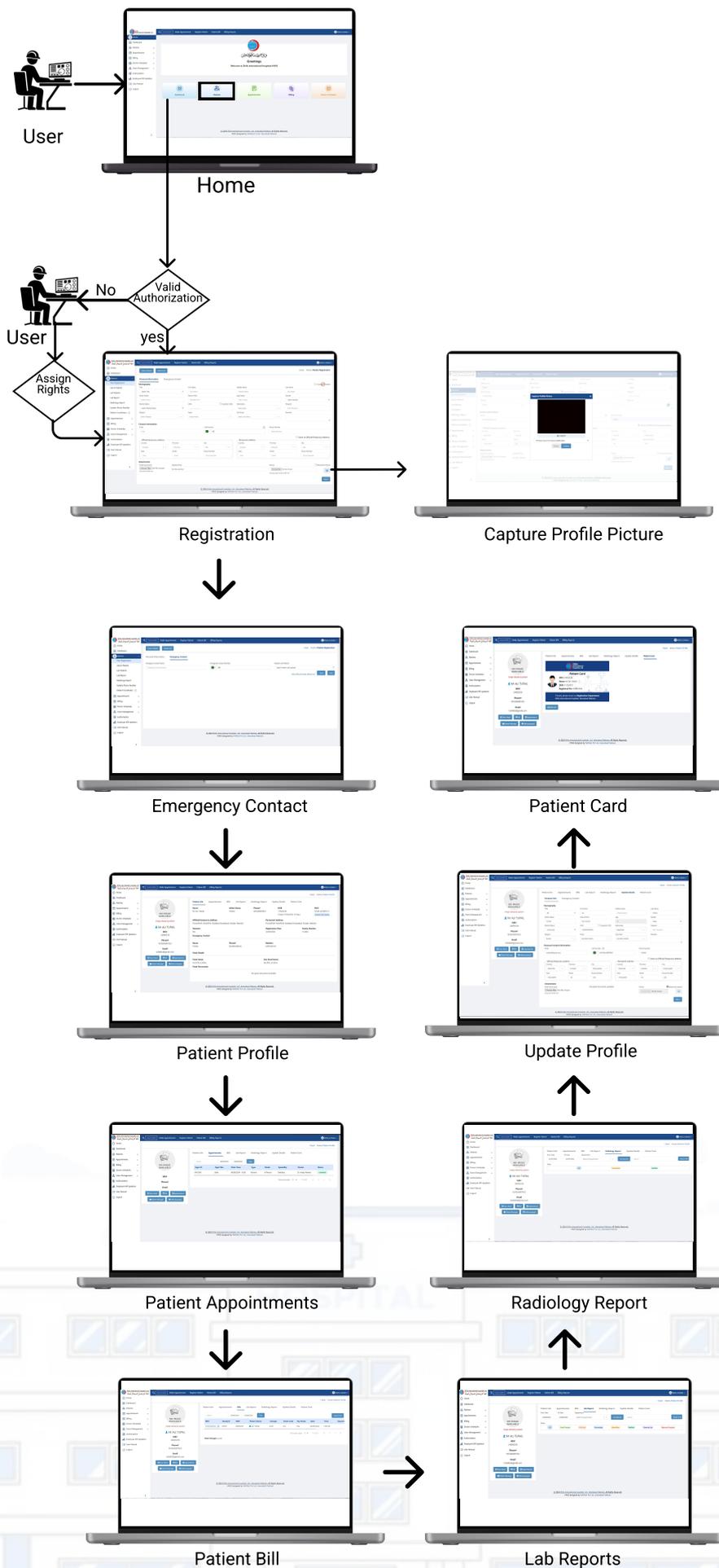
Update Profile:

- Admin can update patient info as needed.

Patient Card Display:

- Patient card with key details is shown at the end of the profile.





Patient Registration Workflow



APPOINTMENTS

1. Default Date:

- Selects today's date but can be changed.

2. Specialty & Doctor

- Admin picks a specialty and doctor, then clicks 'Go.'

3. Slot Management:

- Admins can block/unblock slots.

4. Doctor & Slot Details:

- View doctor info, times, and available slots.

5. Appointment:

- Select a slot, enter details (MR, CNIC, phone). Registered info auto-fills; unregistered requires input.

6. New Patients:

- One slot reserved for new patients, more based on visit type.

7. List Appointment:

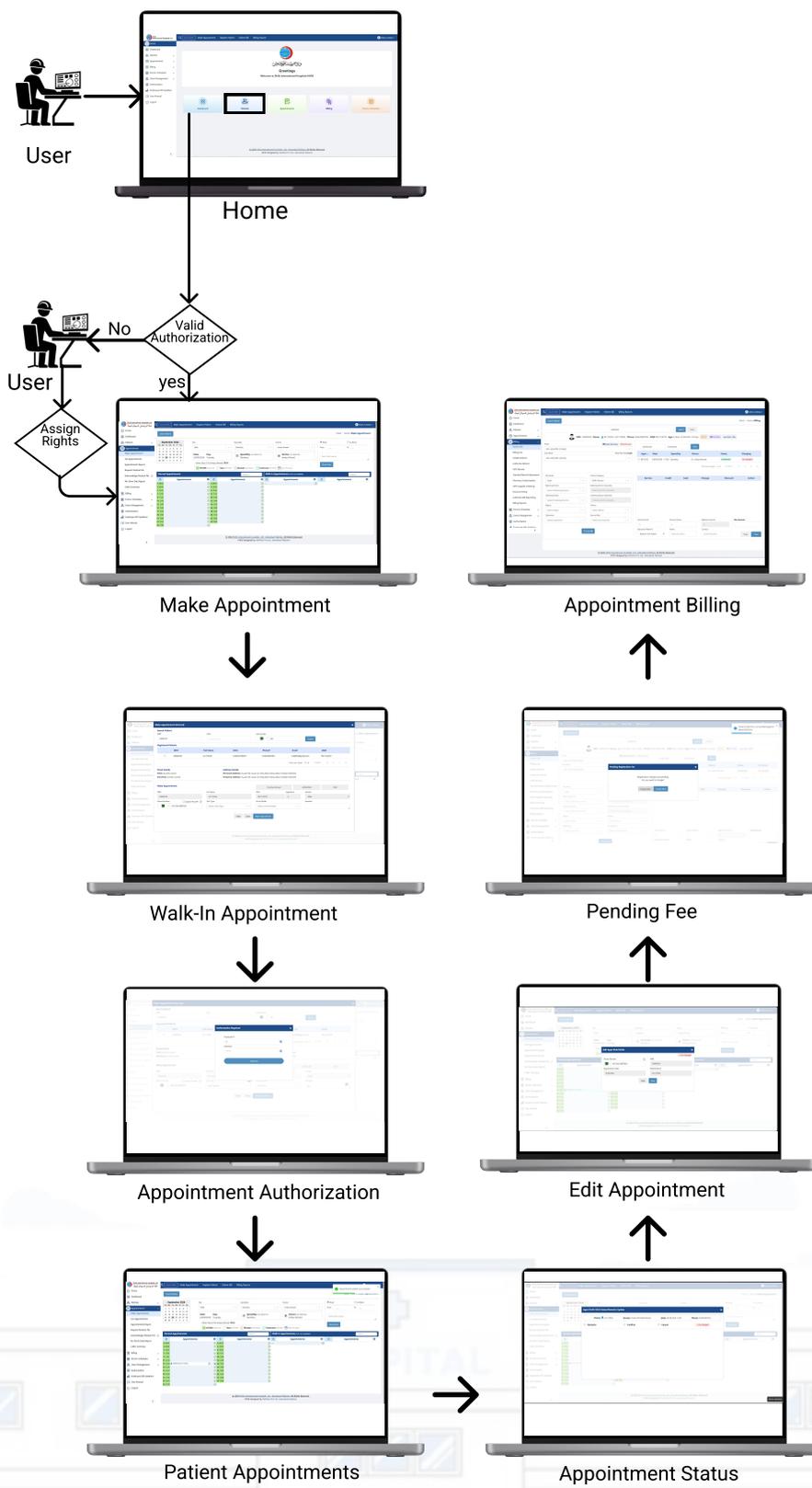
8. Filter & Export:

- Filter by specialty/doctor or export via CSV.

9. Manage Appointments:

- Edit, confirm, or cancel appointments, and navigate to billing if needed.





Appointment Workflow



BILLING:

1. Enter MR Number:

Cashier inputs the MR (Medical Record) number.

2. Auto-Populate Patient Details:

Information such as MR#, full name, phone number, gender, DOB, age, last visit, and appointment (if scheduled) fills in automatically.

3. Select Appointment:

Choose the relevant appointment from the populated data.

4. Choose Services:

Select the major and minor services tied to the appointment.

5. Apply Discount:

If a discount is available, it will be applied to the bill.

6. Enter Payment:

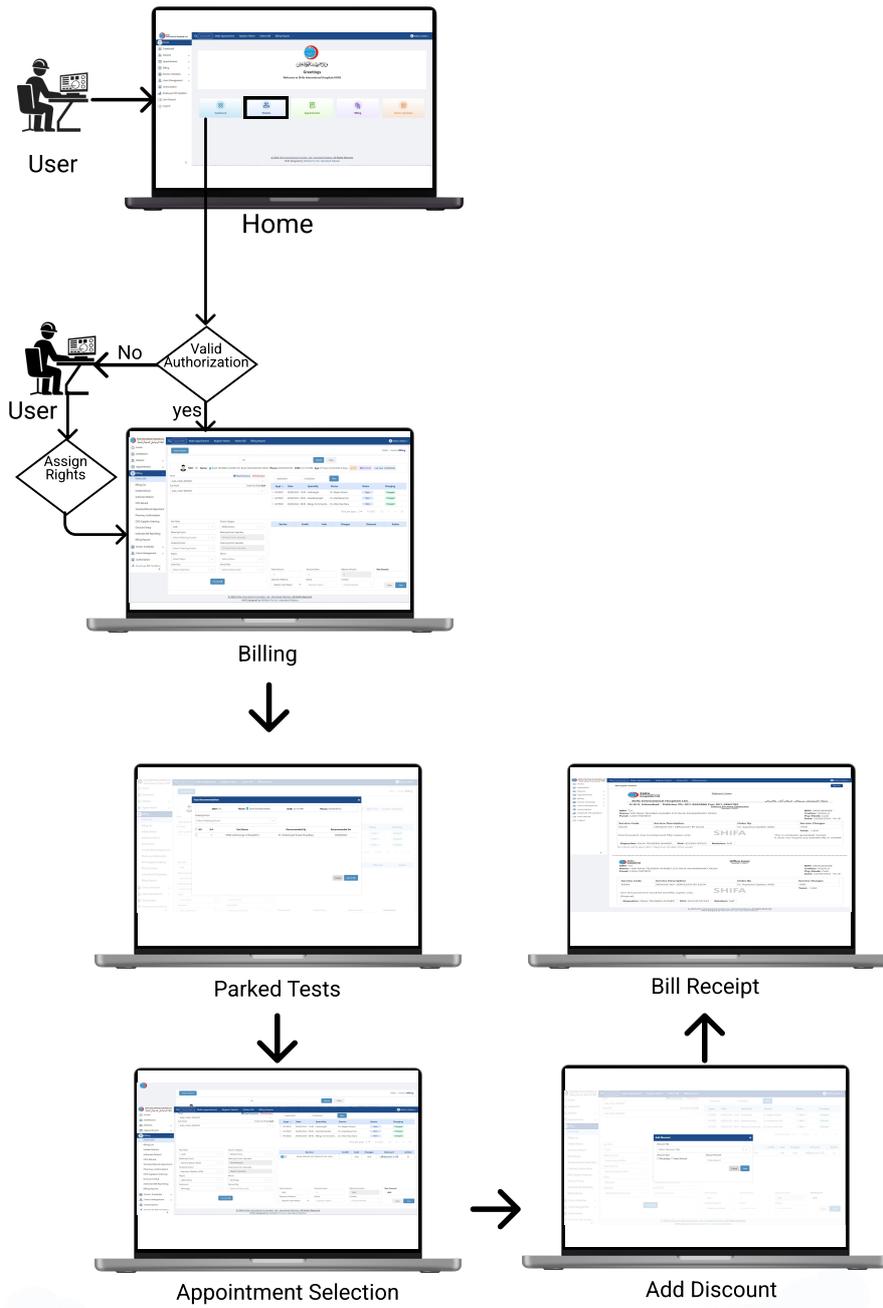
Cashier inputs the amount received from the patient.

7. Display Remaining Balance:

If there's any remaining amount, it will be shown.

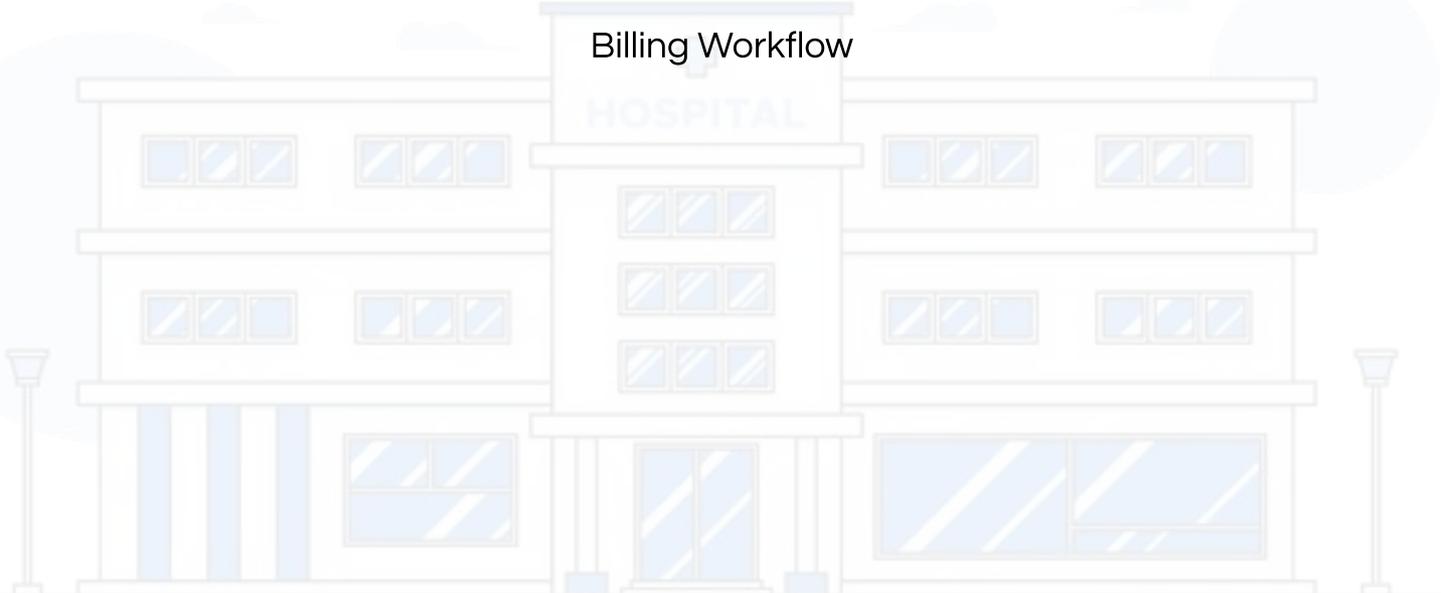
1. Generate Bill: The bill is finalized and generated.





Billing Workflow

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CHALLENGES:

1. Inefficient Manual Processes:

- Manual administrative tasks led to frequent errors, causing delays and frustration for staff and patients.

2. Appointment Management Issues:

- Coordinating appointments was cumbersome, resulting in scheduling conflicts and miscommunication.

3. Fragmented Systems:

- Disjointed systems hindered data access and collaboration, impacting patient care.

4. Outdated Technology:

- A cluttered, outdated interface made navigation difficult, leading to inefficiencies among staff.



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TECHNOLOGY:

To develop Shifa HMIS, we utilized a robust technology stack for reliability and performance:

1. Frontend:

React JS for an intuitive, responsive user interface, enhancing interactions across devices.

2. Back-End:

Express JS for strong performance and quick API responses, efficiently handling multiple requests.

3. Database Interaction:

Sequelize ORM for seamless communication with the Oracle Database, ensuring efficient data management.

4. Database:

Oracle Database for secure, scalable storage of critical hospital data, protecting sensitive information.

