# **GlowUpNow**

#### **Overview**

- [System Name] GlowUpNow
- [What it is] A full-stack web application for at-home salon and spa service discovery, booking, and admin operations (service management, analytics, and user oversight).
- [Primary Users]
  - Customers: Browse services, filter/search, view featured items, and create bookings.
  - Admins: Manage services (CRUD + image uploads), monitor bookings via analytics, and view registered users.

#### **Core Capabilities**

- [Public landing] Category browsing, search and price filters, featured services, testimonials. See frontend/src/pages/Home.jsx.
- [Authentication] Secure login, role-based navigation, session handling.
- [Service Management (Admin)] Create/update/delete services, upload images, filter by category/price/duration, paginate. See frontend/src/pages/ServiceManagement.jsx.
- [Admin Analytics] Summary KPIs (bookings, revenue, averages), service coverage (bookings per service), bookings overview with search, status filters, pagination, and quick-view modal. See frontend/src/pages/Dashboard.jsx.
- [Admin Users] Read-only user directory with search and pagination. See frontend/src/pages/AdminUsers.jsx.

#### **Architecture & Tech Stack**

- [Frontend] React (Vite) SPA with Bootstrap styling and custom hooks (frontend/src/hooks/).
- [Backend] PHP 8 MVC with controllers/models/core under backend/app/, routes in backend/routes/api.php.
- [Database] MySQL/MariaDB. Schema and seed in database/glowupnow.sql.
- [APIs] JSON over HTTP (REST-ish) via backend/public/ (e.g., /api/services, /api/bookings, /api/analytics/\*).
- [Hosting/Local] Designed for XAMPP/Apache; frontend served by Vite dev or static build.

#### **Data Model (High Level)**

- [users] Accounts with roles (admin/customer).
- [categories] Normalized service categories.
- [services] Service catalog with price, duration, image, active flag.
   Includes category\_id (normalized); a legacy category string may remain until normalization is completed.
- **[bookings]** Customer bookings linked to users and services; status lifecycle.
- **[booking\_status\_history]** Audit trail for status changes (who/when).
- [audit\_logs] Optional event logging with JSON metadata.

#### **Security & Quality**

- **[Security]** Password hashing; prepared statements with PDO; role-based route protection (auth/admin middlewares).
- [Performance] Composite indexes on bookings by date/status/service/user; service/category indexes for filters.
- **[UX]** Responsive layout, collapsible admin sidebar with tooltips, focus/blur validation feedback, image skeleton loaders, dbl-click quick view modals.

# **Entity-Relationship Diagram (ERD)**

This diagram shows the core entities and their relationships. The system records users, services, and bookings, with a status history audit.

```
users | |--o{ bookings : makes
users | |--o{ booking_status_history : changes
services | |--o{ bookings : is_booked
bookings | |--o{ booking_status_history : has
categories | |--o{ services : classifies
users {
int id PK
varchar name
varchar email UNIQUE
varchar role
varchar phone
datetime created_at
}
categories {
int id PK
varchar name UNIQUE
datetime created_at
}
services {
int id PK
varchar name
```

```
// legacy text field (to remove during normalization)
varchar category
                     // normalized foreign key
int category_id FK
decimal price
int duration_minutes
varchar image_path
tinyint is_featured
tinyint active
datetime created_at
}
bookings {
int id PK
int user_id FK
int service_id FK
date date
time start_time
time end_time
enum status
varchar notes
datetime created_at
}
booking_status_history {
int id PK
int booking_id FK
enum old_status
enum new_status
int changed_by_user_id FK
datetime changed_at
}
```

# **Database Schema Summary**

- users: id PK, email UNIQUE, role, phone, created\_at.
- categories: id PK, name UNIQUE.
- services: id PK, name, price, duration\_minutes, image\_path, is\_featured, active, category\_id FK → categories.id; legacy `category` string retained (see normalization plan).
- bookings: id PK, user\_id FK → users.id (CASCADE), service\_id FK → services.id; date/time, status enum, notes; indexes on (date, status), (status, date), (service\_id, date), (user\_id, date).
- booking\_status\_history: id PK, booking\_id FK (CASCADE), changed\_by\_user\_id FK (SET NULL), old\_status → new\_status, changed\_at.
- audit\_logs: id PK, user\_id FK (SET NULL), action, entity, entity\_id, metadata JSON CHECK, created\_at.

# **Key SQL Queries and Explanations**

This document lists key queries used by the analytics and management features and briefly explains each, with sample outputs.

# **Summary Metrics (Admin Analytics)** Location: `backend/app/controllers/DashboardController.php::summary()` ```sql -- Status counts per date range SELECT b.status, COUNT(\*) AS cnt FROM bookings b WHERE b.date BETWEEN :from AND :to GROUP BY b.status; -- Revenue per category (via services join) SELECT s.category AS category, COALESCE(SUM(s.price), 0) AS revenue FROM bookings b INNER JOIN services s ON s.id = b.service\_id WHERE b.date BETWEEN :from AND :to **GROUP BY s.category** ORDER BY revenue DESC; ... Sample output: status cnt pending 10

```
confirmed 20
canceled 5
completed 7
***
category revenue
Massage 12000.00
Facial 8000.00
Service Coverage
Location: `backend/app/controllers/DashboardController.php::serviceCoverage()`
```sql
SELECT s.id, s.name, COALESCE(COUNT(b.id),0) AS bookings
FROM bookings b
RIGHT JOIN services s ON s.id = b.service_id
WHERE (b.date BETWEEN :from AND :to OR b.id IS NULL)
GROUP BY s.id, s.name
ORDER BY bookings DESC, s.name ASC;
Sample output:
id name
                  bookings
5 Swedish Full Body Massage 12
2 Deep Tissue Massage 8
```

```
Bookings List (Filters + Pagination)
Location: `backend/app/controllers/DashboardController.php::bookingsList()`
```sql
SELECT b.id, b.date, b.start_time, b.end_time, b.status, b.notes, b.created_at,
s.name AS service_name, s.price, u.name AS customer_name
FROM bookings b
INNER JOIN services s ON s.id=b.service_id
INNER JOIN users u ON u.id=b.user_id
WHERE b.date BETWEEN :from AND :to
AND (:status = " OR b.status = :status)
AND (
:q = " OR
b.id = :idq OR
u.name LIKE :uq OR
s.name LIKE :sq
ORDER BY b.date DESC, b.start_time DESC
LIMIT :limit OFFSET :offset;
Sample output:
id date
         start end status customer_name service_name
                                                                   price
```

10 2025-11-05 14:05 15:05 pending Allexia Papa Pedicure (Spa)

650.00

14 Classic Eyelash Extensions 0

9 2025-10-31 09:00 10:15 confirmed Allexia Papa Deep Tissue Massage 1400.00 ...

# **Indexes Supporting Queries**

- `bookings`: `idx\_b\_date\_status`, `idx\_b\_status\_date`, `idx\_b\_service\_date`, `idx\_b\_user\_date`.
- `services`: `idx\_services\_active`, `idx\_services\_price`, `idx\_services\_category`, `idx\_services\_category\_id`.
- `users`: `email` unique.
- `categories`: `name` unique.

# **Hooks and Events Integration**

This document summarizes the event handlers and custom hooks implemented across the app for rubric alignment.

#### **Custom Hooks (10 implemented)**

#### • useToggle -

frontend/src/hooks/useToggle.js

Boolean toggle state. Used for Dense view in AdminUsers.jsx.

#### useForm —

frontend/src/hooks/useForm.js

Controlled form state with validation and submit helper. Candidate to migrate ServiceManagement.jsx.

#### useFetch —

frontend/src/hooks/useFetch.js

Async lifecycle wrapper (data, loading, error, reload). Used in AdminUsers.jsx.

#### • useInterval —

frontend/src/hooks/useInterval.js

Interval effect with cleanup. Ready for periodic analytics refresh.

#### useModal —

frontend/src/hooks/useModal.js

Modal open/close with Escape handling and focus management. Used in ServiceManagement.jsx (delete confirm) and Dashboard.jsx (bookings quick-view).

#### • useEventSource —

frontend/src/hooks/useEventSource.js

SSE wrapper with connect/close and event handlers. Available for real-time features.

#### useAuthHook —

frontend/src/hooks/useAuthHook.js

Derived auth flags (isLoggedIn, isAdmin) from AuthContext. Optional helper.

- useClickOutside frontend/src/hooks/useClickOutside.js
   Detects clicks outside a ref to close popovers/menus/modals. Used in ServiceManagement.jsx.
- useDebounce frontend/src/hooks/useDebounce.js
   Debounces a value or callback; helpful for search inputs and typing delays. Used in ServiceManagement.jsx.

• useLocalStorage — frontend/src/hooks/useLocalStorage.js
State persisted to localStorage. Used in AdminLayout.jsx to remember sidebar collapsed state.

#### **Event Handlers**

#### onClick

Buttons across dashboards/forms; Edit/Delete actions; Search/Clear controls.

#### onChange

All form inputs and filters (search, selects, date ranges, per-page).

#### onSubmit

Forms like Service Management create/update.

#### onKeyDown / onKeyPress

Enter-to-apply patterns in Service Management and Dashboard filters.

#### • onFocus / onBlur

- Service Management: Name, Price, Duration show validation feedback after blur; Search highlights on focus.
- Admin Analytics (Dashboard): From/To date inputs and Bookings search highlight on focus.

#### onDoubleClick

- Service rows in Service Management open edit.
- Bookings rows in Admin Analytics open a read-only quick-view modal.

#### onload

• ServiceCard images: skeleton shown until image loads.

#### **File References**

#### • Service Management —

frontend/src/pages/ServiceManagement.jsx

- Focus/blur validation on Name/Price/Duration, focus highlight on Search.
- useModal for delete confirm with Escape and outside-click close.
- useClickOutside and useDebounce integrated for UX.
- Double-click on a service row opens edit.

#### • Admin Analytics —

frontend/src/pages/Dashboard.jsx

- Focus/blur highlight on From/To date inputs and Bookings search.
- Quick-view modal (

useModal) opened via double-click on bookings row.

#### • Admin Users —

frontend/src/pages/AdminUsers.jsx

- useFetch for data loading.
- useToggle for Dense table view toggle.

#### • Admin Sidebar —

frontend/src/components/AdminSidebar.jsx

- Title tooltips added to NavLink items for better collapsed UX.
- Admin Layout —

frontend/src/components/AdminLayout.jsx

- useLocalStorage persists sidebar collapsed state.
- Service Card —

frontend/src/components/ServiceCard.jsx

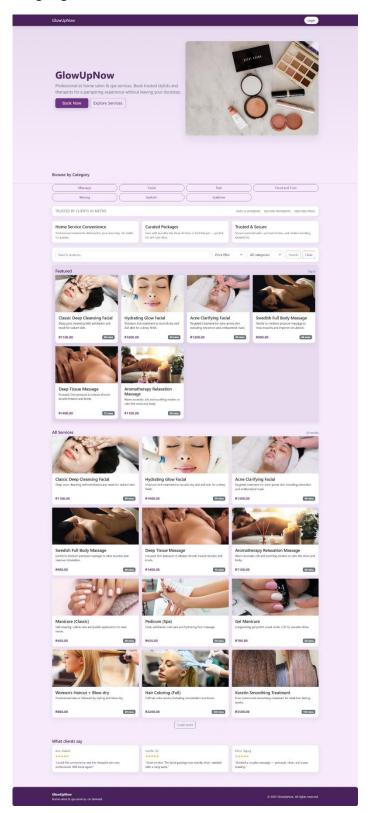
- onLoad skeleton handling for images; optional Book action.
- Hooks Index —

frontend/src/hooks/index.js

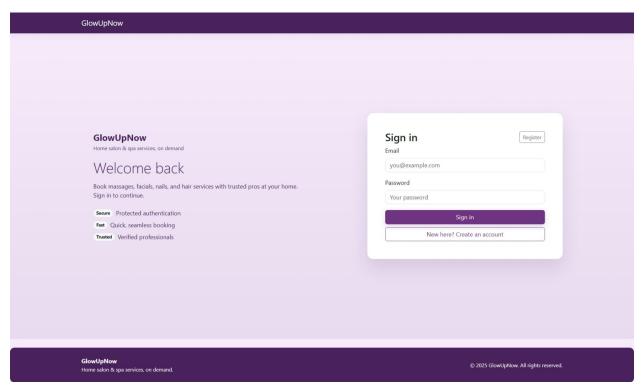
• Central exports for all custom hooks.

#### **Screenshots**

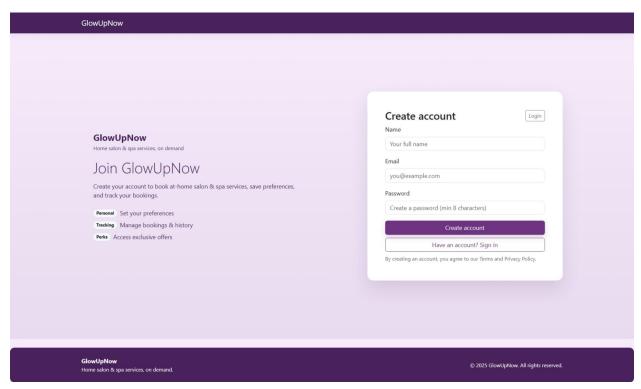
# **Landing Page**



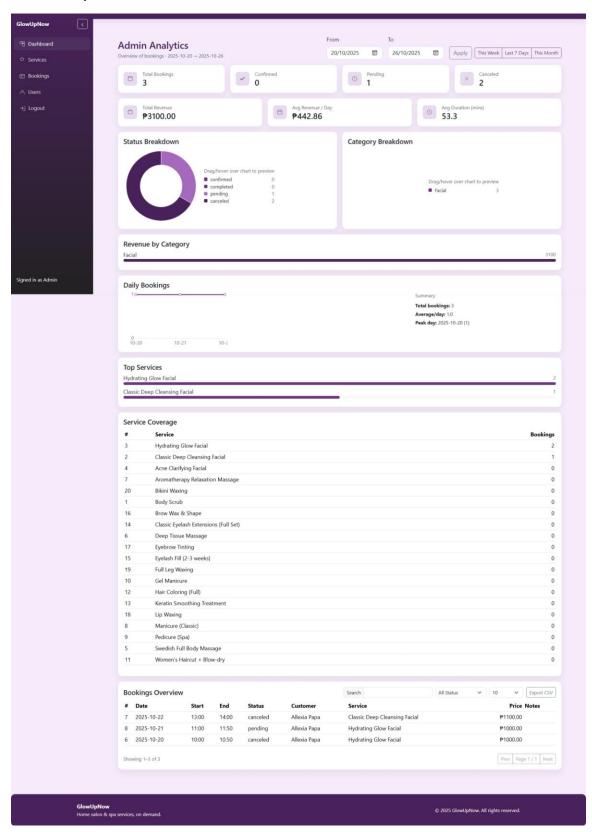
# **Login Page**



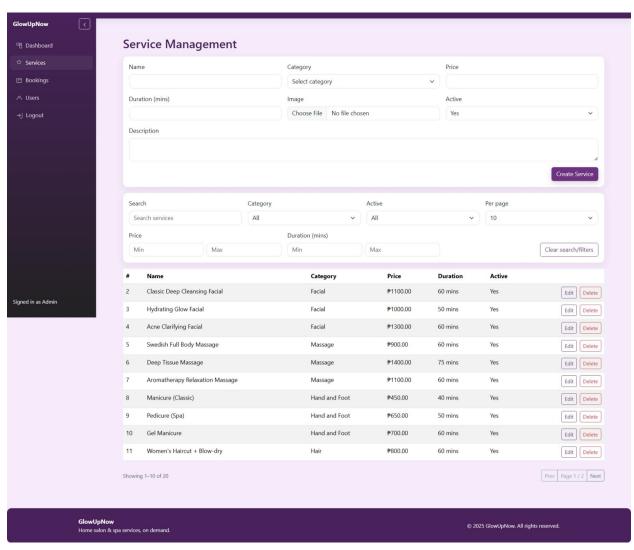
# **Register Page**



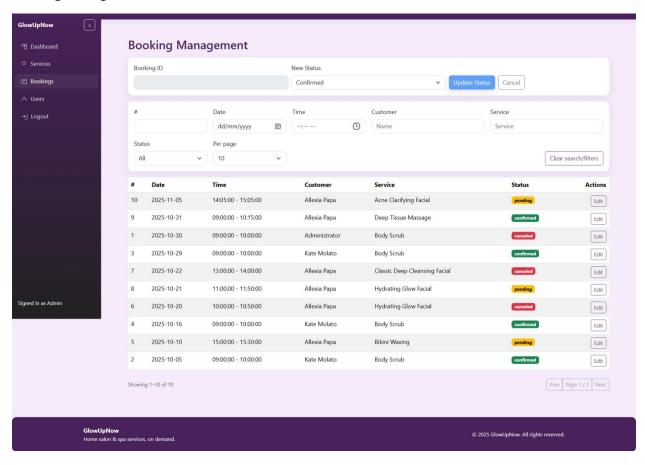
#### **Admin Analytics**



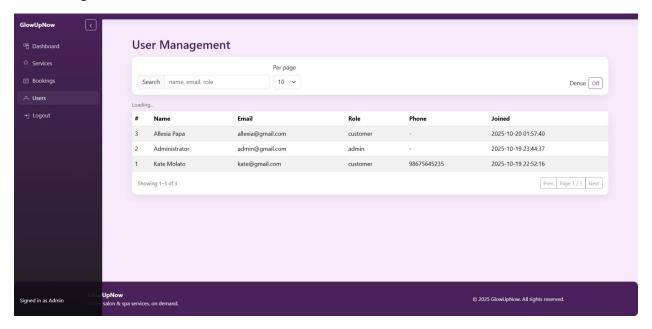
#### **Service Management**



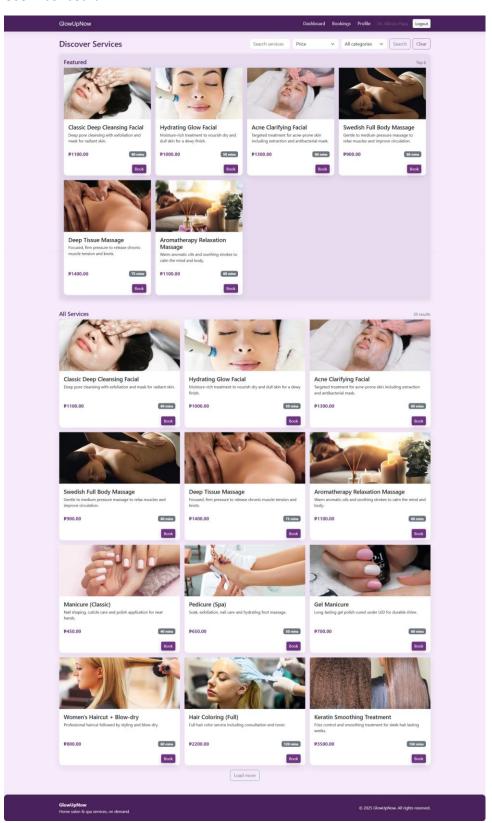
# **Booking Management**



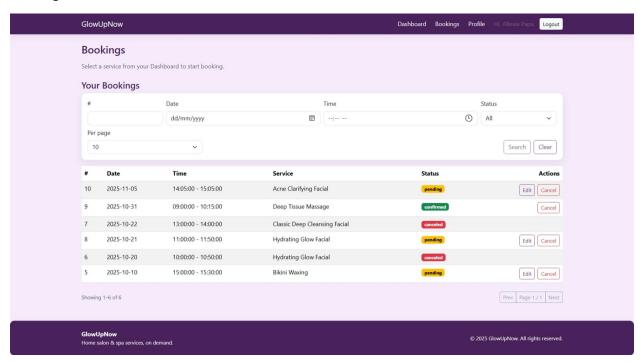
# **User Management**



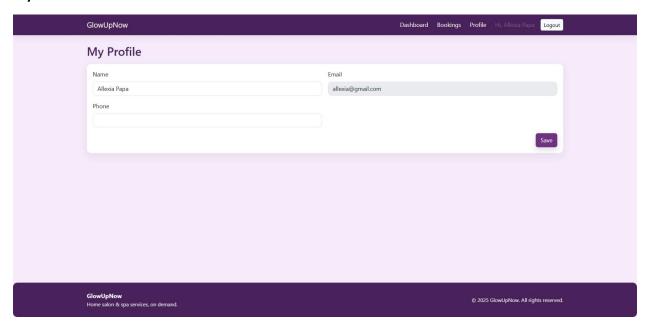
#### **User Dashboard**



# **Bookings**



# My Profile



# **Setup Guide**

#### Requirements

- Node.js 18+
- npm
- XAMPP (Apache + MariaDB/MySQL)
- PHP 8+

#### **Project structure**

- Frontend (React): `frontend/`
- Backend (PHP MVC): `backend/`
- Database SQL: `database/glowupnow.sql`
- Docs: `docs/`

### Backend (Apache)

- 1. Ensure Apache serves 'backend/public/' under a URL. With XAMPP htdocs, you can place the project so that this URL works:
- `http://localhost/glowupnow/backend/public`
- 2. Confirm by opening: `http://localhost/glowupnow/backend/public/api/health`

#### **Database**

- 1. Open phpMyAdmin: `http://localhost/phpmyadmin`
- 2. Create database 'glowupnow' if missing.
- 3. Import `database/glowupnow.sql`.
- 4. Verify tables, indexes and foreign keys are present (see `database/glowupnow.sql`).

#### **Frontend**

- 1. Open a terminal in `frontend/`.
- 2. Install dependencies: npm install

- 3. Set API base URL if needed:
- Create `.env` in `frontend/` with: VITE\_API\_BASE\_URL=http://localhost/glowupnow/backend/public
- 4. Run dev server: npm run dev
- 5. Visit the site (as configured by Vite output, usually `http://localhost:5173`).

#### **Admin login**

- Default admin user from SQL seed (see `database/glowupnow.sql`):
- Email: `admin@gmail.com`
- Password: (the hash exists in seed; set/update via app if needed) /admin123

#### File uploads

- Service images are stored under `backend/public/uploads/services/`.
- When creating/updating a service with an image, the backend saves to this folder and sets 'image\_path' (e.g. '/uploads/services/<file>.jpg').

# Normalization Plan: `services.category` → `services.category\_id`

Goal: enforce strict 3NF by using a foreign key to `categories.id` and dropping the legacy `services.category` (varchar) column after data migration.

#### Steps

```
1) Ensure all service categories exist in `categories`
INSERT INTO categories (name, created at)
SELECT DISTINCT s.category, NOW()
FROM services s
LEFT JOIN categories c ON c.name = s.category
WHERE s.category IS NOT NULL AND s.category <> " AND c.id IS NULL;
2) Map services to 'category_id' via name
UPDATE services s
INNER JOIN categories c ON c.name = s.category
SET s.category_id = c.id
WHERE s.category IS NOT NULL AND s.category <> ";
3) Verify there are no unmapped categories
SELECT id, name, category, category_id
FROM services
WHERE (category IS NOT NULL AND category <> ")
```

4) Update the application to use `category\_id` exclusively

AND (category\_id IS NULL);

- Frontend: replace string-based category filters with `category\_id` where applicable.

- Backend: service queries should reference `category\_id` and `categories.name` via JOIN.
- 5) Drop legacy column after verification

ALTER TABLE services DROP COLUMN category;

# Rollback (if needed)

ALTER TABLE services ADD COLUMN category VARCHAR(64) NULL AFTER name;

UPDATE services s

INNER JOIN categories c ON c.id = s.category\_id

SET s.category = c.name

WHERE s.category IS NULL;

# **Source Code Compilation**

This document embeds the core application source files (frontend React and backend PHP). It excludes third-party dependencies and binary assets. For very large files, if content is abbreviated, refer to the original path in the repository.

#### Contents

- Frontend (React)
- `frontend/src/App.jsx`
- Components
- `frontend/src/components/AdminLayout.jsx`
- `frontend/src/components/AdminSidebar.jsx`
- `frontend/src/components/BookingForm.jsx`
- `frontend/src/components/BookingList.jsx`
- `frontend/src/components/Navbar.jsx`
- `frontend/src/components/ProtectedRoute.jsx`
- `frontend/src/components/ServiceCard.jsx`
- `frontend/src/components/SiteFooter.jsx`
- Contexts
- `frontend/src/contexts/AuthContext.jsx`
- Hooks
- `frontend/src/hooks/index.js`
- `frontend/src/hooks/useAuthHook.js`
- `frontend/src/hooks/useClickOutside.js`
- `frontend/src/hooks/useDebounce.js`
- `frontend/src/hooks/useEventSource.js`
- `frontend/src/hooks/useFetch.js`
- `frontend/src/hooks/useForm.js`
- `frontend/src/hooks/useInterval.js`

- `frontend/src/hooks/useLocalStorage.js`
- `frontend/src/hooks/useModal.js`
- `frontend/src/hooks/useToggle.js`
- Pages
- `frontend/src/pages/AdminUsers.jsx`
- `frontend/src/pages/BookingManagement.jsx`
- `frontend/src/pages/Bookings.jsx`
- `frontend/src/pages/Dashboard.jsx`
- `frontend/src/pages/Home.jsx`
- `frontend/src/pages/Login.jsx`
- `frontend/src/pages/ServiceManagement.jsx`
- `frontend/src/pages/UserDashboard.jsx`
- `frontend/src/pages/UserProfile.jsx`
- Services
- `frontend/src/services/analyticsService.js`
- `frontend/src/services/authService.js`
- `frontend/src/services/bookingService.js`
- `frontend/src/services/http.js`
- `frontend/src/services/serviceService.js`
- `frontend/src/services/userService.js`
- Backend (PHP)
- Controllers
- `backend/app/controllers/AdminUserController.php`
- `backend/app/controllers/AuthController.php`
- `backend/app/controllers/BookingController.php`
- `backend/app/controllers/DashboardController.php`
- `backend/app/controllers/ServiceController.php`
- `backend/app/controllers/StreamController.php`

- `backend/app/controllers/UserController.php`
- Core
- `backend/app/core/Controller.php`
- `backend/app/core/Database.php`
- `backend/app/core/Request.php`
- `backend/app/core/Response.php`
- `backend/app/core/Router.php`
- Middlewares
- `backend/app/middlewares/AdminMiddleware.php`
- `backend/app/middlewares/AuthMiddleware.php`
- `backend/app/middlewares/CorsMiddleware.php`
- Models
- `backend/app/models/Booking.php`
- `backend/app/models/Service.php`
- `backend/app/models/User.php`
- Services
- `backend/app/services/TimeSlotService.php`
- Bootstrap / Routes / Entry
- `backend/bootstrap.php`
- `backend/public/index.php`
- `backend/routes/api.php`

---

#### Frontend

# frontend/src/App.jsx import React from 'react' import { Routes, Route } from 'react-router-dom' import Navbar from './components/Navbar' import Home from './pages/Home' import Login from './pages/Login' import Dashboard from './pages/Dashboard' import ServiceManagement from './pages/ServiceManagement' import BookingManagement from './pages/BookingManagement' import UserProfile from './pages/UserProfile' import AdminLayout from './components/AdminLayout' import SiteFooter from './components/SiteFooter' import Bookings from './pages/Bookings' import ProtectedRoute from './components/ProtectedRoute' import UserDashboard from './pages/UserDashboard' import AdminUsers from './pages/AdminUsers' function App(){ return ( <div className="app-shell d-flex flex-column min-vh-100"> <Navbar/> <main className="flex-fill"> <Routes> <Route path="/" element={<Home />} /> <Route path="/login" element={<Login />} />

<Route path="/dashboard" element={

<ProtectedRoute role="customer">

```
<UserDashboard />
 </ProtectedRoute>
}/>
<Route path="/bookings" element={
 <ProtectedRoute role="customer">
  <Bookings />
 </ProtectedRoute>
}/>
<Route path="/profile" element={
 <ProtectedRoute>
  <UserProfile />
 </ProtectedRoute>
}/>
<Route path="/admin/dashboard" element={</pre>
 <ProtectedRoute role="admin">
  <AdminLayout>
   <Dashboard />
  </AdminLayout>
 </ProtectedRoute>
}/>
<Route path="/admin/services" element={
 <ProtectedRoute role="admin">
  <AdminLayout>
   <ServiceManagement />
  </AdminLayout>
 </ProtectedRoute>
}/>
<Route path="/admin/bookings" element={
 <ProtectedRoute role="admin">
```

```
<AdminLayout>
       <BookingManagement />
      </AdminLayout>
     </ProtectedRoute>
    }/>
    <Route path="/admin/users" element={
     <ProtectedRoute role="admin">
      <AdminLayout>
       <AdminUsers />
      </AdminLayout>
     </ProtectedRoute>
    }/>
    </Routes>
  </main>
  <SiteFooter />
  </div>
)
}
```

export default App

#### Components

```
frontend/src/components/AdminLayout.jsx

// AdminLayout.jsx — Wraps admin pages with sidebar and main content; handles sidebar collapsed state.

import React from 'react'

import AdminSidebar from './AdminSidebar'

import useLocalStorage from '../hooks/useLocalStorage'

export default function AdminLayout({ children }){

const [collapsed, setCollapsed] = useLocalStorage('admin_sidebar_collapsed', false)

return (

<div className={`admin-layout ${collapsed ? 'admin-collapsed' : "}`}>

<AdminSidebar collapsed={collapsed} onToggle={()=> setCollapsed(v=>!v)} />

<main className="admin-main">

<div className="admin-content container-fluid py-3 py-md-4">{children}</div>
</main>

</div>
)

}
```

```
frontend/src/components/AdminSidebar.jsx
// AdminSidebar.jsx — Left navigation for admin area with collapse toggle and tooltips.
import React from 'react'
import { NavLink, useNavigate } from 'react-router-dom'
import { useAuthContext } from '../contexts/AuthContext'
function IconDashboard(){
return (<svg width="18" height="18" viewBox="0 0 24 24" fill="none"
xmlns="http://www.w3.org/2000/svg"><rect x="3" y="3" width="8" height="8" rx="1"
stroke="currentColor" strokeWidth="1.2"/><rect x="13" y="3" width="8" height="5" rx="1"
stroke="currentColor" strokeWidth="1.2"/><rect x="13" y="10" width="8" height="11" rx="1"
stroke="currentColor" strokeWidth="1.2"/></svg>)
}
function IconServices(){
return (<svg width="18" height="18" viewBox="0 0 24 24" fill="none"
xmlns="http://www.w3.org/2000/svg"><path d="M12 2l2 5h5l-4 3 1 6-5-3-5 3 1-6-4-3h5l2-5z"
stroke="currentColor" strokeWidth="1" fill="none"/></svg>)
}
function IconBookings(){
return (<svg width="18" height="18" viewBox="0 0 24 24" fill="none"
xmlns="http://www.w3.org/2000/svg"><path d="M7 10h10M7 14h4M3 6h18M5 20h14a1 1 0 0 0 1-
1V7a1 1 0 0 0-1-1H4a1 1 0 0 0-1 1v12a1 1 0 0 0 1 1z" stroke="currentColor" strokeWidth="1.2"
strokeLinecap="round" strokeLinejoin="round"/></svg>)
}
function IconUsers(){
return (<svg width="18" height="18" viewBox="0 0 24 24" fill="none"
xmlns="http://www.w3.org/2000/svg"><path d="M16 11a4 4 0 1 0-8 0" stroke="currentColor"
strokeWidth="1.2"/><path d="M3 20a7 7 0 0 1 7-7h4a7 7 0 0 1 7 7" stroke="currentColor"
strokeWidth="1.2" strokeLinecap="round"/></svg>)
}
export default function AdminSidebar({ collapsed=false, onToggle }){
const navigate = useNavigate()
```

```
const { logout } = useAuthContext()
return (
  <aside className="admin-sidebar" aria-label="Admin sidebar">
   <div className="admin-sidebar-inner d-flex flex-column" style={{height: '100vh', padding: '1rem</pre>
0'}}>
    <div className="px-3 mb-4 d-flex align-items-center justify-content-between">
     <div className="d-flex align-items-center gap-2">
      <div className="brand-title text-white fw-bold d-none d-md-block">GlowUpNow</div>
     </div>
     <but><button type="button" className="btn btn-sm btn-outline-light sidebar-toggle"</td>
onClick={onToggle} aria-label="Toggle sidebar">
      {collapsed?(
       <svg width="16" height="16" viewBox="0 0 24 24" fill="none"
xmlns="http://www.w3.org/2000/svg"><path d="M9 6l6 6-6 6" stroke="currentColor"
strokeWidth="1.6" strokeLinecap="round" strokeLinejoin="round"/></svg>
      ):(
       <svg width="16" height="16" viewBox="0 0 24 24" fill="none"
xmlns="http://www.w3.org/2000/svg"><path d="M15 6l-6 6 6 6" stroke="currentColor"
strokeWidth="1.6" strokeLinecap="round" strokeLinejoin="round"/></svg>
      )}
     </button>
    </div>
    <nav className="nav flex-column px-2" style={{gap:8}}>
     <NavLink to="/admin/dashboard" title="Dashboard" className={((isActive})=>`admin-link d-flex
align-items-center gap-2 px-3 py-2 ${isActive ? 'active' : "}`}>
      <IconDashboard />
      <span className="link-label">Dashboard</span>
     </NavLink>
     <NavLink to="/admin/services" title="Services" className={((isActive})=>`admin-link d-flex
align-items-center gap-2 px-3 py-2 ${isActive ? 'active' : "}`}>
      <lr><lconServices />
```

```
<span className="link-label">Services</span>
     </NavLink>
     <NavLink to="/admin/bookings" title="Bookings" className={({isActive})=>`admin-link d-flex
align-items-center gap-2 px-3 py-2 ${isActive ? 'active' : "}`}>
      <IconBookings />
      <span className="link-label">Bookings</span>
     </NavLink>
     <NavLink to="/admin/users" title="Users" className={({isActive})=>`admin-link d-flex align-
items-center gap-2 px-3 py-2 ${isActive ? 'active' : "}`}>
      <lconUsers />
      <span className="link-label">Users</span>
     </NavLink>
     <button className="admin-link d-flex align-items-center gap-2 px-3 py-2 btn btn-link text-start"
onClick={async()=>{ try{ await logout(); navigate('/login', { replace: true }) }catch(e){ navigate('/login', {
replace: true }) } }}>
      <svg width="18" height="18" viewBox="0 0 24 24" fill="none"
xmlns="http://www.w3.org/2000/svg"><path d="M10 17I5-5-5-5" stroke="currentColor"
strokeWidth="1.2" strokeLinecap="round" strokeLinejoin="round"/><path d="M15 12H3"
stroke="currentColor" strokeWidth="1.2" strokeLinecap="round" strokeLinejoin="round"/><path
d="M21 4v16a2 2 0 0 1-2 2h-6" stroke="currentColor" strokeWidth="1.2" strokeLinecap="round"
strokeLinejoin="round"/></svg>
      <span className="link-label">Logout</span>
     </button>
    </nav>
    <div className="mt-auto px-3 pb-3 text-white small">Signed in as Admin</div>
   </div>
  </aside>
)
}
```

```
frontend/src/components/BookingForm.jsx
import React, { useState } from 'react'
import { createBooking } from '../services/bookingService'
export default function BookingForm({ service, onSuccess }){
const [date, setDate] = useState(")
const [start, setStart] = useState('09:00')
const [notes, setNotes] = useState(")
const [error, setError] = useState(")
 const [loading, setLoading] = useState(false)
const WORK_START = '09:00'
const WORK_END = '18:00'
 const duration = Number(service?.duration_minutes | | 60)
 const toSeconds = (hhmm) => {
  const [h,m] = (hhmm || '00:00').split(':').map(Number)
  return (h*3600) + (m*60)
}
 const secondsToHHMM = (secs) => {
  const h = Math.floor(secs/3600).toString().padStart(2,'0')
  const m = Math.floor((secs%3600)/60).toString().padStart(2,'0')
  return `${h}:${m}`
}
const hhmmToHhmmss = (hhmm) => `${hhmm.length===5?hhmm:hhmm.slice(0,5)}:00`
 const maxStartHHMM = () => {
  const endSecs = toSeconds(WORK_END)
  const maxStartSecs = endSecs - (duration*60)
  return secondsToHHMM(Math.max(0, maxStartSecs))
```

```
}
const todayStr = () => new Date().toISOString().slice(0,10)
const submit = async (e)=>{
  e.preventDefault()
  setLoading(true)
  setError(")
  try{
  // Client-side validation for date/time
   if (!date || date < todayStr()) { throw new Error('Please pick today or a future date.') }
   const s = start
   const eSecs = toSeconds(s) + (duration*60)
   if (s < WORK_START || s > maxStartHHMM() || eSecs > toSeconds(WORK_END)) {
    throw new Error(`Please pick a time within working hours (${WORK_START}-${WORK_END}) that
fits the service duration.')
   }
   await createBooking({
    service_id: service.id,
    date,
    start_time: hhmmToHhmmss(s),
    notes
   })
   onSuccess && onSuccess()
  }catch(err){
   setError(err?.data?.error || err?.message || 'Booking failed')
 }finally{ setLoading(false) }
}
```

```
return (
  <form onSubmit={submit} className="card p-3 mt-3">
   <h5 className="mb-3">Book: {service.name}</h5>
   {error && <div className="alert alert-danger">{error}</div>}
   <div className="alert alert-info py-2">Accepting bookings: {WORK_START}—{WORK_END}</div>
   <div className="row g-3">
    <div className="col-md-4">
     <label className="form-label" htmlFor="bf_date">Date</label>
     <input id="bf_date" name="date" type="date" className="form-control" min={todayStr()}
value={date} onChange={e=>setDate(e.target.value)} required />
    </div>
    <div className="col-md-4">
     <label className="form-label" htmlFor="bf_start_time">Start Time</label>
     <input id="bf_start_time" name="start_time" type="time" className="form-control" step="60"
min={WORK_START} max={maxStartHHMM()} value={start}
onChange={e=>setStart(e.target.value.slice(0,5))} required />
    </div>
    <div className="col-12">
     <label className="form-label" htmlFor="bf_notes">Notes</label>
     <textarea id="bf_notes" name="notes" className="form-control" rows="2" value={notes}
onChange={e=>setNotes(e.target.value)} />
    </div>
   </div>
   <div className="mt-3 text-end">
    <button disabled={loading} className="btn btn-primary"</pre>
type="submit">{loading?'Booking...':'Confirm Booking'}</button>
  </div>
  </form>
)
}
```

```
frontend/src/components/BookingList.jsx
import React, { useEffect, useMemo, useState } from 'react'
import { listBookings } from '../services/bookingService'
export default function BookingList({ onSelect, onInteract }){
 const [items,setItems] = useState([])
 const [loading,setLoading] = useState(false)
 const [error,setError] = useState(")
// Filters
 const [fld, setFld] = useState(")
 const [fDate, setFDate] = useState(")
 const [fTime, setFTime] = useState(")
 const [fCustomer, setFCustomer] = useState(")
 const [fService, setFService] = useState(")
 const [fStatus, setFStatus] = useState(")
// Pagination
 const [page, setPage] = useState(1)
 const [perPage, setPerPage] = useState(10)
 const load = async ()=>{
  setLoading(true); setError(")
  try{
   const res = await listBookings({ status: fStatus })
   const rows = res.data || []
   setItems(rows)
  }catch(e){ setError('Failed to load bookings') }
  finally{ setLoading(false) }
}
 useEffect(()=>{ load() },[fStatus])
```

```
const filtered = useMemo(()=>{
  return items.filter(b => {
   if (fld !== " && String(b.id) !== String(fld)) return false
   if (fDate && String(b.date) !== String(fDate)) return false
   if (fTime &&!(String(b.start_time||").startsWith(fTime) ||
String(b.end_time||").startsWith(fTime))) return false
   if (fCustomer && !String(b.customer_name | | ").toLowerCase().includes(fCustomer.toLowerCase()))
return false
   if (fService && !String(b.service_name||").toLowerCase().includes(fService.toLowerCase())) return
false
   return true
  })
 }, [items, fld, fDate, fTime, fCustomer, fService])
 const totalPages = Math.max(1, Math.ceil(filtered.length / perPage))
 const safePage = Math.min(page, totalPages)
 const startIdx = (safePage - 1) * perPage
 const pageItems = filtered.slice(startIdx, startIdx + perPage)
 const fireInteract = ()=>{ if (onInteract) onInteract() }
 const clearFilters = ()=>{
  setFId("); setFDate("); setFTime("); setFCustomer("); setFService("); setFStatus("); setPerPage(10);
setPage(1); fireInteract(); load()
}
 const onEnter = (e)=>{ if(e.key==='Enter'){ e.preventDefault(); setPage(1); fireInteract() } }
 return (
  <div>
   <div className="card p-3 mb-3" style={{ position:'sticky', top:8, zIndex:10 }}>
```

```
<div className="row g-3 align-items-end">
     {/* Row 1: #, Date, Time, Customer, Service (2+2+2+3+3 = 12 on lg) */}
     <div className="col-6 col-md-3 col-lg-2">
      <label className="form-label">#</label>
      <input type="number" className="form-control" value={fld} onChange={e=>{
setFld(e.target.value); setPage(1); fireInteract() }} onKeyDown={onEnter} />
     </div>
     <div className="col-6 col-md-3 col-lg-2">
      <label className="form-label">Date</label>
      <input type="date" className="form-control" value={fDate} onChange={e=>{
setFDate(e.target.value); setPage(1); fireInteract() }} onKeyDown={onEnter} />
     </div>
     <div className="col-6 col-md-3 col-lg-2">
      <label className="form-label">Time</label>
      <input type="time" className="form-control" value={fTime} onChange={e=>{
setFTime(e.target.value); setPage(1); fireInteract() }} onKeyDown={onEnter} />
     </div>
     <div className="col-12 col-md-6 col-lg-3">
      <label className="form-label">Customer</label>
      <input className="form-control" value={fCustomer} onChange={e=>{
setFCustomer(e.target.value); setPage(1); fireInteract() }} onKeyDown={onEnter} placeholder="Name"
/>
     </div>
     <div className="col-12 col-md-6 col-lg-3">
      <label className="form-label">Service</label>
      <input className="form-control" value={fService} onChange={e=>{ setFService(e.target.value);
setPage(1); fireInteract() }} onKeyDown={onEnter} placeholder="Service" />
     </div>
     {/* Row 2: Status, Per page, Clear (2+2+8) */}
     <div className="col-6 col-md-3 col-lg-2">
      <label className="form-label">Status</label>
```

```
<select className="form-select" value={fStatus} onChange={e=>{ setFStatus(e.target.value);
setPage(1); fireInteract() }} onKeyDown={onEnter}>
       <option value="">All</option>
       <option value="pending">Pending</option>
       <option value="confirmed">Confirmed</option>
       <option value="canceled">Canceled</option>
       <option value="completed">Completed</option>
      </select>
     </div>
     <div className="col-6 col-md-3 col-lg-2">
      <label className="form-label">Per page</label>
      <select className="form-select" value={perPage} onChange={e=>{
setPerPage(Number(e.target.value)); setPage(1); fireInteract() }} onKeyDown={onEnter}>
       <option value={5}>5</option>
       <option value={10}>10</option>
       <option value={20}>20</option>
       <option value={50}>50</option>
      </select>
     </div>
     <div className="col-12 col-lg-8 d-flex justify-content-lg-end align-items-end">
      <button className="btn btn-outline-primary" type="button" onClick={clearFilters}>Clear
search/filters</button>
     </div>
    </div>
   </div>
   {loading && <div className="text-muted small mb-2">Loading...</div>}
   {filtered.length === 0 && !loading?(
    <div className="text-muted">No results matched your filters.</div>
  ):(
```

```
<div className="table-responsive">
  <thead>
   #
    Date
    Time
    Customer
    Service
    Status
    Actions
   </thead>
   {pageItems.map(b=> (
    {b.id}
     {b.date}
     {b.start_time} - {b.end_time}
     {b.customer_name}
     {b.service_name}
     <span className={`badge text-bg-
${b.status==='confirmed'?'success':b.status==='pending'?'warning':b.status==='canceled'?'danger':'sec
ondary'}`}>{b.status}</span>
     <button className="btn btn-sm btn-outline-primary" onClick={()=> onSelect &&
onSelect(b)}>Edit</button>
     ))}
```

```
</div>
   )}
   <div className="d-flex justify-content-between align-items-center mt-2">
    <div className="small text-muted">Showing {filtered.length === 0 ? 0 : (startIdx+1)}—
{Math.min(startIdx+perPage, filtered.length)} of {filtered.length}</div>
    <div className="btn-group" role="group" aria-label="Pagination">
     <button type="button" className="btn btn-outline-secondary btn-sm" disabled={safePage<=1}
onClick={()=>{ fireInteract(); setPage(p=>Math.max(1, p-1)) }}>Prev</button>
     <span className="btn btn-outline-secondary btn-sm disabled">Page {safePage} /
{totalPages}</span>
     <button type="button" className="btn btn-outline-secondary btn-sm"
disabled={safePage>=totalPages} onClick={()=>{ fireInteract(); setPage(p=>Math.min(totalPages, p+1))
}}>Next</button>
    </div>
   </div>
  </div>
)
}
```

```
frontend/src/components/Navbar.jsx
// Navbar.jsx — Top navigation; hides brand in admin area and shows responsive burger on non-admin
small screens.
import React from 'react'
import { Link, useLocation } from 'react-router-dom'
import { useAuthContext } from '../contexts/AuthContext'
export default function Navbar(){
const { user, logout } = useAuthContext()
const { pathname } = useLocation()
const isHome = pathname === '/'
const inAdminArea = pathname.startsWith('/admin')
return (
  <nav className={`navbar navbar-expand-lg ${isHome ? 'navbar-dark navbar-hero position-absolute</pre>
top-0 start-0 w-100': 'navbar-dark'}`}>
  <div className="container">
   {!(user && user.role === 'admin' && inAdminArea) && (
    <Link className="navbar-brand" to="/">GlowUpNow</Link>
   )}
   {!inAdminArea && (
    <button className="navbar-toggler" type="button" data-bs-toggle="collapse" data-bs-
target="#nav">
     <span className="navbar-toggler-icon"></span>
    </button>
   )}
   <div className="collapse navbar-collapse" id="nav">
    "}`}>
     {!user && pathname !== '/login' && (
```

```
<Link className={`btn btn-login btn-sm`}</pre>
to="/login">Login</Link>
    )}
    {user && (
     <>
      {user.role !== 'admin' && (
        <Link className="nav-link"</pre>
to="/dashboard">Dashboard</Link>
        <Link className="nav-link"</pre>
to="/bookings">Bookings</Link>
        <Link className="nav-link" to="/profile">Profile</Link>
       </>
      )}
      {user.role === 'admin' && inAdminArea && (
       <></>
      )}
      {!(user.role === 'admin' && inAdminArea) && (
       <span className="nav-link disabled">Hi,
{user.name}</span>
      )}
      {!(user.role === 'admin' && inAdminArea) && (
       <button className="btn btn-sm btn-light"</pre>
onClick={logout}>Logout</button>
      )}
     </>
    )}
    </div>
  </div>
```

```
</nav>
)
}
```

```
frontend/src/components/ProtectedRoute.jsx
import React from 'react'
import { Navigate } from 'react-router-dom'
import { useAuthContext } from '../contexts/AuthContext'

export default function ProtectedRoute{{ children, role }}{
    const { user, loading } = useAuthContext()
    if (loading) return <div className="container py-4"><div className="alert alert-info">Loading...</div></div>
    if (!user) return <Navigate to="/" replace />
    if (role && user.role !== role) {
        const target = user.role === 'admin'? '/admin/dashboard' : '/dashboard'
        return <Navigate to={target} replace />
    }
    return children
}
```

```
frontend/src/components/ServiceCard.jsx
// ServiceCard.jsx — Displays a service with image skeleton, details, and optional Book action.
import React, { useState } from 'react'
import { API } from '../services/http'
export default function ServiceCard({ service, onSelect }){
const imgSrc = service.image_path ? (service.image_path.startsWith('http') ? service.image_path :
`${API}${service.image_path}`): null
const [loaded, setLoaded] = useState(false)
return (
  <div className="card h-100">
   <div style={{position:'relative', height:180, overflow:'hidden'}}>
    {!loaded && <div style={{position:'absolute', inset:0, background:'linear-gradient(90deg, var(--gu-
mist), #f3eef6, var(--gu-mist))', animation:'shimmer 1.2s infinite'}} />}
    {imgSrc?(
     <img src={imgSrc} alt={service.name} onLoad={()=>setLoaded(true)} style={{objectFit:'cover',
width: '100%', height: '100%', display: loaded? 'block': 'none'}} />
   ):(
     <div style={{height:'100%', background:'var(--gu-mist)'}} />
   )}
   </div>
   <div className="card-body d-flex flex-column">
    <h5 className="card-title mb-1">{service.name}</h5>
    {service.description}
    <div className="d-flex justify-content-between align-items-center mt-2">
     <span className="service-price fw-bold">\(\Phi\) (Number(service.price).toFixed(2))/span>
     <span className="badge text-bg-secondary">{service.duration_minutes} mins</span>
    </div>
   </div>
   {onSelect && (
```

```
frontend/src/components/SiteFooter.jsx
import React from 'react'
export default function SiteFooter(){
return (
  <footer className="site-footer p-4 mt-4">
   <div className="container">
    <div className="d-flex flex-wrap justify-content-between align-items-center gap-3">
     <div>
      <div className="fw-bold">GlowUpNow</div>
      <div className="small">Home salon & spa services, on demand.</div>
     </div>
     <div className="small">© {new Date().getFullYear()} GlowUpNow. All rights reserved.</div>
    </div>
   </div>
  </footer>
)
}
```

## **Contexts**

```
frontend/src/contexts/AuthContext.jsx
import React, { createContext, useContext, useEffect, useState } from 'react'
import { me as apiMe, login as apiLogin, logout as apiLogout, register as apiRegister } from
'../services/authService'
const AuthContext = createContext(null)
export function AuthProvider({ children }) {
 const [user, setUser] = useState(null)
 const [loading, setLoading] = useState(true)
 useEffect(() => {
  (async () => {
   try {
    const res = await apiMe()
    setUser(res.user || null)
   } catch { /* ignore */ }
   setLoading(false)
  })()
 }, [])
 const login = async (email, password) => {
  const res = await apiLogin(email, password)
  setUser(res.user)
  return res
 }
 const logout = async () => {
```

```
await apiLogout()
  setUser(null)
}
const register = async (name, email, password) => {
  const res = await apiRegister(name, email, password)
  setUser(res.user)
  return res
}
return (
  <AuthContext.Provider value={{ user, loading, login, logout, register }}>
   {children}
  </AuthContext.Provider>
)
}
export function useAuthContext(){
return useContext(AuthContext)
}
```

## Hooks

```
frontend/src/hooks/index.js

// hooks/index — Central exports for custom hooks used across the app.

export { default as useToggle } from './useToggle'

export { default as useForm } from './useForm'

export { default as useFetch } from './useFetch'

export { default as useInterval } from './useInterval'

export { default as useModal } from './useModal'

export { default as useEventSource } from './useEventSource'

export { default as useAuthHook } from './useAuthHook'
```

```
frontend/src/hooks/useAuthHook.js

// useAuthHook — Derived auth state (isLoggedIn, isAdmin) from AuthContext.

import { useMemo } from 'react'

import { useAuthContext } from '../contexts/AuthContext'

export default function useAuthHook(){

const { user, loading, login, logout, register } = useAuthContext()

const isLoggedIn = !!user

const isAdmin = !!user && user.role === 'admin'

return useMemo(()=>({ user, loading, isLoggedIn, isAdmin, login, logout, register }), [user, loading, login, logout, register])

}
```

```
frontend/src/hooks/useClickOutside.js
import { useEffect } from 'react'

export default function useClickOutside(ref, handler){
  useEffect(()=>{
    function onMouseDown(e){
      const el = ref && 'current' in ref ? ref.current : null
      if (!el) return
      if (!el.contains(e.target)) { handler && handler(e) }
    }
    document.addEventListener('mousedown', onMouseDown)
    return ()=> document.removeEventListener('mousedown', onMouseDown)
}, [ref, handler])
}
```

```
frontend/src/hooks/useDebounce.js
import { useEffect, useState } from 'react'

export default function useDebounce(value, delay = 400){
  const [debounced, setDebounced] = useState(value)
  useEffect(()=>{
    const id = setTimeout(()=> setDebounced(value), delay)
    return ()=> clearTimeout(id)
  }, [value, delay])
  return debounced
}
```

```
frontend/src/hooks/useEventSource.js
// useEventSource — SSE wrapper with connect/close and event handlers.
import { useCallback, useEffect, useRef, useState } from 'react'
export default function useEventSource(url, opts={}){
 const { withCredentials=true, events } = opts
 const esRef = useRef(null)
 const [connected, setConnected] = useState(false)
 const [error, setError] = useState(null)
 const open = useCallback((u=url, handlers=events)=>{
  if (!u) return
  if (esRef.current) { try{ esRef.current.close() }catch{} }
  const es = new EventSource(u, { withCredentials })
  esRef.current = es
  setConnected(true)
  setError(null)
  if (handlers) {
   Object.entries(handlers).forEach(([name, fn])=>{ if(typeof fn==='function')
es.addEventListener(name, fn) })
  }
  es.onerror = (e)=>{ setError(e) }
 }, [url, events, withCredentials])
 const close = useCallback(()=>{
  if (esRef.current) { try{ esRef.current.close() }catch{}; esRef.current=null; setConnected(false) }
 }, [])
 useEffect(()=>()=>{ if(esRef.current) { try{ esRef.current.close() }catch{} } }, [])
```

```
return { connected, error, open, close, ref: esRef }
}
```

```
frontend/src/hooks/useFetch.js
// useFetch — Generic async lifecycle (data, loading, error, reload).
import { useCallback, useEffect, useState } from 'react'
export default function useFetch(fn, deps = [], opts = {}){
 const { immediate = true } = opts
 const [data, setData] = useState(null)
 const [error, setError] = useState(null)
 const [loading, setLoading] = useState(false)
 const run = useCallback(async (...args)=>{
  setLoading(true); setError(null)
  try{
   const res = await fn(...args)
   setData(res)
   return res
  }catch(e){ setError(e); throw e }
  finally{ setLoading(false) }
 }, [fn])
 useEffect(()=>{ if(immediate) { run() } }, [immediate, run, ...deps])
 return { data, error, loading, reload: run, setData }
}
```

```
frontend/src/hooks/useForm.js
// useForm — Controlled form state with validation and submit.
import { useCallback, useState } from 'react'
export default function useForm({ initialValues = {}, validate, onSubmit } = {}) {
 const [values, setValues] = useState(initialValues)
 const [errors, setErrors] = useState({})
 const [touched, setTouched] = useState({})
 const handleChange = useCallback((e) => {
  const { name, type, checked, value } = e.target
  const v = type === 'checkbox' ? !!checked : value
  setValues(s => ({ ...s, [name]: v }))
 }, [])
 const handleBlur = useCallback((e) => {
  const { name } = e.target
  setTouched(s => ({ ...s, [name]: true }))
  if (validate) setErrors(validate(values) | | {})
 }, [validate, values])
 const handleSubmit = useCallback(async (e) => {
  if (e && e.preventDefault) e.preventDefault()
  const errs = validate ? (validate(values) | | {}) : {}
  setErrors(errs)
  if (Object.keys(errs).length) return
  if (onSubmit) return onSubmit(values)
 }, [validate, values, onSubmit])
```

```
const reset = useCallback((next = initialValues) => {
   setValues(next)
   setErrors({})
   setTouched({})
}, [initialValues])

return { values, setValues, errors, touched, handleChange, handleBlur, handleSubmit, reset }
}
```

```
frontend/src/hooks/useInterval.js

// useInterval — Runs a callback every given delay with cleanup.
import { useEffect, useRef } from 'react'

export default function useInterval(callback, delay){
  const saved = useRef(callback)

  useEffect(()=>{ saved.current = callback }, [callback])

  useEffect(()=>{
    if (delay === null | | delay === false) return
    const id = setInterval(()=> saved.current(), delay)
    return ()=> clearInterval(id)
  }, [delay])
}
```

```
frontend/src/hooks/useLocalStorage.js
import { useEffect, useState } from 'react'
export default function useLocalStorage(key, initialValue){
 const read = () => {
  if (typeof window === 'undefined') return initialValue
  try{
   const item = window.localStorage.getItem(key)
   return item !== null ? JSON.parse(item) : initialValue
  }catch{ return initialValue }
 }
 const [value, setValue] = useState(read)
 useEffect(()=>{
  try{ window.localStorage.setItem(key, JSON.stringify(value)) }catch{}
 }, [key, value])
 return [value, setValue]
}
```

```
frontend/src/hooks/useModal.js
// useModal — Modal open/close with Escape handling and focus management.
import { useCallback, useEffect, useRef, useState } from 'react'
export default function useModal(initial=false){
 const [open, setOpen] = useState(!!initial)
 const ref = useRef(null)
 const onKeyDown = useCallback((e)=>{ if(e.key==='Escape') setOpen(false) },[])
 const openModal = useCallback(()=> setOpen(true),[])
 const closeModal = useCallback(()=> setOpen(false),[])
 const toggleModal = useCallback(()=> setOpen(v=>!v),[])
 useEffect(()=>{
  if (!open) return
  const el = ref.current
  const prev = document.activeElement
  if (el && el.focus) { try{ el.focus() }catch{} }
  return ()=>{ if(prev && prev.focus) { try{ prev.focus() }catch{} } } }
}, [open])
return { open, openModal, closeModal, toggleModal, onKeyDown, ref, setOpen }
}
```

```
frontend/src/hooks/useToggle.js
// useToggle — Boolean toggle hook.
import { useCallback, useState } from 'react'

export default function useToggle(initial = false) {
  const [value, setValue] = useState(!!initial)
  const toggle = useCallback((next) => {
    if (typeof next === 'boolean') { setValue(next); return }
    setValue(v => !v)
  }, [])
  return [value, toggle, setValue]
}
```

```
frontend/src/pages/AdminUsers.jsx
// AdminUsers.jsx — Admin: read-only list of users with search, pagination, and dense view toggle.
import React, { useMemo, useState } from 'react'
import { listUsers } from '../services/userService'
import { useFetch, useToggle } from '../hooks'
export default function AdminUsers(){
const [page,setPage] = useState(1)
const [perPage,setPerPage] = useState(10)
const [q,setQ] = useState(")
 const [dense, toggleDense] = useToggle(false)
 const { data, loading, error } = useFetch(
  () => listUsers({ q, page, perPage }),
  [q, page, perPage],
 { immediate: true }
)
const rows = data?.rows || []
const total = Number(data?.total || 0)
 const startIdx = (page-1)*perPage
const totalPages = Math.max(1, Math.ceil(total / perPage))
 const safePage = Math.min(page, totalPages)
return (
  <div className="container py-4">
   <h2 className="mb-3">User Management</h2>
```

```
<div className="card p-3 mb-3">
    <div className="d-flex flex-wrap gap-2 align-items-end">
     <div className="input-group" style={{maxWidth:360}}>
      <span className="input-group-text">Search</span>
      <input className="form-control" placeholder="name, email, role" value={q} onChange={e=>{
setPage(1); setQ(e.target.value) }} onKeyDown={e=>{ if(e.key==='Enter'){ e.preventDefault();
setPage(1) } }} />
     </div>
     <div>
      <label className="form-label">Per page</label>
      <select className="form-select" value={perPage} onChange={e=>{ setPage(1);
setPerPage(Number(e.target.value)) }}>
       <option value={10}>10</option>
       <option value={20}>20</option>
       <option value={50}>50</option>
       <option value={100}>100</option>
      </select>
     </div>
     <div className="ms-auto d-flex align-items-center gap-2">
      <label className="form-label mb-0">Dense</label>
      <button className={`btn btn-sm ${dense?'btn-primary':'btn-outline-primary'}`}
onClick={()=>toggleDense()} type="button">{dense?'On':'Off'}</button>
     </div>
    </div>
   </div>
   {loading && <div className="text-muted small mb-2">Loading...</div>}
   {error && <div className="alert alert-danger">{error}</div>}
   <div className="card">
```

```
<div className="table-responsive">
<thead>
 #
 Name
 Email
 Role
 Phone
 Joined
 </thead>
 {rows.length===0?(
 No users found
 ) : rows.map(u => (
  {u.id}
  {u.name}
  {u.email}
  {u.role}
  {u.phone | | '-'}
  {u.created_at}
 ))}
 </div>
<div className="card-body d-flex justify-content-between align-items-center">
```

```
frontend/src/pages/BookingManagement.jsx
import React, { useEffect, useRef, useState } from 'react'
import BookingList from '../components/BookingList'
import { updateBookingStatus } from '../services/bookingService'
export default function BookingManagement(){
const [statusId, setStatusId] = useState(")
const [newStatus, setNewStatus] = useState('confirmed')
 const [msg, setMsg] = useState(")
 const [err, setErr] = useState(")
const formRef = useRef(null)
 const [idEditable, setIdEditable] = useState(false)
const [currentStatus, setCurrentStatus] = useState(")
 const [toast, setToast] = useState({ type:", msg:" })
 const update = async ()=>{
  setMsg("); setErr(")
  if (!statusId) { setErr('Please select a booking to update'); return }
  if (newStatus === currentStatus) {
   setMsg(`No changes. Status is already "${newStatus}".`)
   // clear form as requested when update is clicked without changes
   setStatusId("); setNewStatus('confirmed'); setIdEditable(false)
   return
  }
  try{
   await updateBookingStatus({ id: Number(statusId), status: newStatus })
   setMsg('Status updated')
   setCurrentStatus(newStatus)
   // auto-clear form details after success
```

```
setStatusId("); setNewStatus('confirmed'); setIdEditable(false)
 }catch(e){ setErr(e.data?.error | | 'Update failed') }
}
const scrollToForm = ()=>{
 if (formRef.current) { formRef.current.scrollIntoView({ behavior: 'smooth', block: 'start' }) }
}
const handleSelectForEdit = (booking)=>{
 const id = booking?.id
 const st = booking?.status || 'confirmed'
 setStatusId(String(id || "))
 setNewStatus(st)
 setCurrentStatus(st)
 setIdEditable(true)
 setMsg("); setErr(")
 scrollToForm()
}
const handleInteract = ()=>{ setMsg("); setErr(") }
useEffect(()=>{ if (msg) setToast({ type:'success', msg }) }, [msg])
useEffect(()=>{ if (err) setToast({ type:'error', msg: err }) }, [err])
return (
 <div className="container py-4">
  <h2 className="mb-3">Booking Management</h2>
  <div className="card p-3 mb-3" ref={formRef}>
   <div className="row g-2">
```

```
<div className="col-md-4">
               <label className="form-label" htmlFor="bm_booking_id">Booking ID</label>
                <input id="bm_booking_id" name="booking_id" className="form-control" value={statusId}
disabled={!idEditable} onChange={e=>setStatusId(e.target.value)} onKeyDown={(e)=>{
if(e.key==='Enter'){ e.preventDefault(); update() } }} />
            </div>
            <div className="col-md-4">
               <label className="form-label" htmlFor="bm_new_status">New Status</label>
                <select id="bm_new_status" name="new_status" className="form-select" value={newStatus}
onChange={e=>setNewStatus(e.target.value)}>
                  <option value="pending">Pending</option>
                  <option value="confirmed">Confirmed</option>
                  <option value="canceled">Canceled</option>
                  <option value="completed">Completed</option>
               </select>
            </div>
            <div className="col-md-4 d-flex align-items-end gap-2">
               <button className="btn btn-primary" onClick={update} disabled={!statusId}>Update
Status</button>
               <but/>
<but/>
<br/>
<br/
setNewStatus('confirmed'); setIdEditable(false); setMsg("); setErr(") }}>Cancel</button>
            </div>
          </div>
       </div>
       <BookingList onSelect={handleSelectForEdit} onInteract={() => { handleInteract(); setToast({type:",
msg:"}) }} />
       {/* Toasts */}
       <div style={{position:'fixed', right:16, bottom:16, zIndex:9999}}>
          {toast.msg && (
```

}

```
frontend/src/pages/Bookings.jsx
import React, { useEffect, useState, useMemo, useRef } from 'react'
import { useLocation } from 'react-router-dom'
import { useAuthContext } from '../contexts/AuthContext'
import { listBookings, cancelBooking, rescheduleBooking } from '../services/bookingService'
import BookingForm from '../components/BookingForm'
import { API } from '../services/http'
import useLocalStorage from '../hooks/useLocalStorage'
import useClickOutside from '../hooks/useClickOutside'
export default function Bookings(){
const { user } = useAuthContext()
const location = useLocation()
const [selected, setSelected] = useState(null)
const [successMsg, setSuccessMsg] = useState(")
 const [error, setError] = useState(")
 const [bookings, setBookings] = useState([])
 const [bookingsLoading, setBookingsLoading] = useState(false)
 const [resModalOpen, setResModalOpen] = useState(false)
 const [resid, setResid] = useState(null)
 const [resDate, setResDate] = useState(")
 const [resStart, setResStart] = useState(")
 const [resDuration, setResDuration] = useState(60)
 const [resLoading, setResLoading] = useState(false)
 const [resError, setResError] = useState(")
 const [cancelModalOpen, setCancelModalOpen] = useState(false)
 const [cancelld, setCancelld] = useState(null)
 const [toast, setToast] = useState({ type:", msg:" })
 // Filters + pagination for "Your Bookings"
```

```
const [fld, setFld] = useLocalStorage('bookings fld',")
 const [fDate, setFDate] = useLocalStorage('bookings_fDate',")
 const [fTime, setFTime] = useLocalStorage('bookings_fTime',")
 const [fStatus, setFStatus] = useLocalStorage('bookings_fStatus',")
 const [page, setPage] = useState(1)
 const [perPage, setPerPage] = useLocalStorage('bookings_perPage',10)
// Derived filtering + pagination for user's bookings
 const onInteract = ()=>{ setSuccessMsg("); setError("); setToast({type:",msg:"}) }
 const onEnter = (e)=>{ if(e.key==='Enter'){ e.preventDefault(); setPage(1); onInteract() } }
 const filtered = useMemo(()=>{
  return bookings.filter(b => {
   if (fld!==" && String(b.id)!==String(fld)) return false
   if (fDate && String(b.date)!==String(fDate)) return false
   if (fTime && !(String(b.start_time||").startsWith(fTime) ||
String(b.end_time||").startsWith(fTime))) return false
   if (fStatus && String(b.status)!==String(fStatus)) return false
   return true
  })
 }, [bookings, fld, fDate, fTime, fStatus])
 const totalPages = useMemo(()=> Math.max(1, Math.ceil(filtered.length / Number(perPage | | 10))),
[filtered.length, perPage])
 const safePage = Math.min(page, totalPages)
 const startIdx = (safePage - 1) * Number(perPage | | 10)
 const pageItems = useMemo(()=> filtered.slice(startIdx, startIdx + Number(perPage | | 10)), [filtered,
startIdx, perPage])
 const clearFilters = ()=>{ setFId("); setFDate("); setFTime("); setFStatus("); setPerPage(10); setPage(1);
onInteract() }
 const WORK START = '09:00'
```

```
const WORK_END = '18:00'
const toSeconds = (hhmm) => {
 const [h,m] = (hhmm || '00:00').split(':').map(Number)
 return (h*3600) + (m*60)
}
const secondsToHHMM = (secs) => {
 const h = Math.floor(secs/3600).toString().padStart(2,'0')
 const m = Math.floor((secs%3600)/60).toString().padStart(2,'0')
 return `${h}:${m}`
}
const maxStartHHMM = () => {
 const endSecs = toSeconds(WORK_END)
 const maxStartSecs = endSecs - (Number(resDuration | |60)*60)
 return secondsToHHMM(Math.max(0, maxStartSecs))
}
const todayStr = () => new Date().toISOString().slice(0,10)
useEffect(()=>{
 if (location.state && location.state.selected) {
  setSelected(location.state.selected)
 }
}, [location.state])
const loadBookings = async ()=>{
 if (!user) return
 setBookingsLoading(true); setError(")
 try{
  const res = await listBookings({ user_id: user.id })
  const rows = Array.isArray(res) ? res : (res?.data | | [])
```

```
setBookings(rows)
 }catch(e){ setError('Failed to load your bookings') }
 finally{ setBookingsLoading(false) }
}
useEffect(()=>{ loadBookings() }, [user])
// SSE: real-time updates to user's bookings list
useEffect(()=>{
 if (!user) return
 let es
 try{
  const url = `${API}/api/stream/bookings`
  es = new EventSource(url, { withCredentials: true })
 }catch(e){ console.warn('SSE unavailable', e); return }
 const handleUpsertById = async (id)=>{
  try{
   const res = await listBookings({ id })
   const rows = Array.isArray(res) ? res : (res?.data | | [])
   if (rows.length===0) return
   const row = rows[0]
   if (row.user_id !== user.id) return
   setBookings(prev => {
    const idx = prev.findIndex(b => b.id === row.id)
    if (idx \geq 0) {
     const next = prev.slice()
      next[idx] = { ...prev[idx], ...row }
      return next
```

```
}
     return [row, ...prev]
    })
   }catch(err){ /* ignore */ }
  }
  es.addEventListener('status_changed', (ev)=>{
   try{ const payload = JSON.parse(ev.data); if (payload?.id) handleUpsertById(payload.id) }catch{ /*
ignore */ }
 })
  es.addEventListener('created', (ev)=>{
   try{ const payload = JSON.parse(ev.data); if (payload?.id) handleUpsertById(payload.id) }catch{ /*
ignore */ }
  })
  es.addEventListener('ping', ()=>{})
  es.onerror = ()=>{ try{ es && es.close() }catch{} }
  return ()=>{ try{ es && es.close() }catch{} }
}, [user])
return (
  <div className="container py-4">
   <div className="d-flex justify-content-between align-items-center mb-3">
    <h3 className="mb-0">Bookings</h3>
   </div>
   {error && <div className="text-muted small mb-2">{error}</div>}
   {selected?(
    <BookingForm
```

```
service={selected}
     onSuccess={async () => {
      setSelected(null)
      await loadBookings()
      setSuccessMsg('Booking created successfully!')
      setTimeout(()=>setSuccessMsg("), 3000)
     }}
   />
   ):(
    <div className="text-muted">Select a service from your Dashboard to start booking.</div>
   )}
   {successMsg && <div className="text-muted small mt-3">{successMsg}</div>}
   <div className="mt-4">
    <h4>Your Bookings</h4>
    <div className="card p-3 mb-3" style={{ position:'sticky', top:8, zIndex:10 }}>
     <div className="row g-2 align-items-end">
      <div className="col-6 col-md-3 col-lg-2">
       <label className="form-label">#</label>
       <input type="number" className="form-control" value={fld} onChange={e=>{
setFId(e.target.value); setPage(1); onInteract() }} onKeyDown={onEnter} onKeyPress={onEnter} />
      </div>
      <div className="col-6 col-md-3 col-lg-4">
       <label className="form-label">Date</label>
       <input type="date" className="form-control" value={fDate} onChange={e=>{
setFDate(e.target.value); setPage(1); onInteract() }} onKeyDown={onEnter} onKeyPress={onEnter} />
      </div>
      <div className="col-6 col-md-3 col-lg-4">
```

```
<label className="form-label">Time</label>
       <input type="time" className="form-control" value={fTime} onChange={e=>{
setFTime(e.target.value); setPage(1); onInteract() }} onKeyDown={onEnter} onKeyPress={onEnter} />
      </div>
      <div className="col-6 col-md-3 col-lg-2">
       <label className="form-label">Status</label>
       <select className="form-select" value={fStatus} onChange={e=>{ setFStatus(e.target.value);
setPage(1); onInteract() }} onKeyDown={onEnter} onKeyPress={onEnter}>
        <option value="">All</option>
        <option value="pending">Pending</option>
        <option value="confirmed">Confirmed</option>
        <option value="canceled">Canceled</option>
        <option value="completed">Completed</option>
       </select>
      </div>
     </div>
     <div className="row g-2 align-items-end mt-0">
      <div className="col-6 col-md-3 col-lg-3">
       <label className="form-label">Per page</label>
       <select className="form-select" value={perPage} onChange={e=>{
setPerPage(Number(e.target.value)); setPage(1); onInteract() }}>
        <option value={5}>5</option>
        <option value={10}>10</option>
        <option value={20}>20</option>
        <option value={50}>50</option>
       </select>
      </div>
      <div className="col-12 col-lg-9 d-flex justify-content-lg-end gap-2">
       <button className="btn btn-outline-secondary" onClick={()=>{ setPage(1); onInteract()
}}>Search</button>
```

```
<button className="btn btn-outline-primary" onClick={clearFilters}>Clear</button>
     </div>
    </div>
   </div>
   {bookingsLoading && <div className="text-muted small">Loading bookings...</div>}
   {(!bookingsLoading && bookings.length===0) && <div className="text-muted">You have no
bookings yet.</div>}
   {filtered.length===0 &&!bookingsLoading?(
    <div className="text-muted">No results matched your filters.</div>
   ):(
   <div className="table-responsive">
    <thead>
     className="text-end">Actions
     </thead>
     {pageItems.map(b => (
      { setResId(b.id); setResDate(b.date);
setResStart((b.start_time||").slice(0,5)); setResDuration(Number(b.duration_minutes||60));
setResError("); setResModalOpen(true) }}>
       {b.id}
       {b.date}
       {b.start_time} - {b.end_time}
       {b.service_name}
       <span className={`badge text-bg-
${b.status==='confirmed'?'success':b.status==='pending'?'warning':b.status==='canceled'?'danger':'sec
ondary'}`}>{b.status}</span>
       {(b.status==='pending' && (Number(b.reschedule_count | | 0) < 1 | |
Number(b.cancel_count | (0) < 1)) && (
```

```
<>
            {Number(b.reschedule_count||0) < 1 && (
             <button className="btn btn-sm btn-outline-primary me-2" onClick={()=>{
setResId(b.id); setResDate(b.date); setResStart((b.start_time||").slice(0,5));
setResDuration(Number(b.duration_minutes||60)); setResError("); setResModalOpen(true)
}}>Edit</button>
            )}
            {Number(b.cancel\_count | | 0) < 1 \&\& (}
            <button className="btn btn-sm btn-outline-danger" onClick={()=>{ setCancelId(b.id);
setCancelModalOpen(true) }}>Cancel</button>
            )}
           </>
          )}
          {(b.status==='confirmed' && Number(b.cancel_count | | 0) < 1) && (
           <button className="btn btn-sm btn-outline-danger" onClick={()=>{ setCancelId(b.id);
setCancelModalOpen(true) }}>Cancel</button>
          )}
         ))}
      </div>
   )}
    <div className="d-flex justify-content-between align-items-center mt-2">
     <div className="small text-muted">Showing {filtered.length === 0 ? 0 : (startIdx+1)}-
{Math.min(startIdx+perPage, filtered.length)} of {filtered.length}</div>
     <div className="btn-group" role="group" aria-label="Pagination">
      <button type="button" className="btn btn-outline-secondary btn-sm" disabled={safePage<=1}
onClick={()=>{ onInteract(); setPage(p=>Math.max(1, p-1)) }}>Prev</button>
      <span className="btn btn-outline-secondary btn-sm disabled">Page {safePage} /
{totalPages}</span>
```

```
<button type="button" className="btn btn-outline-secondary btn-sm"
disabled={safePage>=totalPages} onClick={()=>{ onInteract(); setPage(p=>Math.min(totalPages, p+1))
}}>Next</button>
     </div>
    </div>
   </div>
  {/* Cancel Modal */}
   {cancelModalOpen && (
    <>
     <div className="modal fade show d-block" tabIndex="-1" role="dialog" aria-modal="true">
      <div className="modal-dialog">
       <div className="modal-content">
        <div className="modal-header">
         <h5 className="modal-title">Cancel booking</h5>
         <button type="button" className="btn-close" aria-label="Close" onClick={()=>{
if(!bookingsLoading){    setCancelModalOpen(false);    setCancelId(null) } }}></button>
        </div>
        <div className="modal-body">
         Are you sure you want to cancel booking #{cancelld}?
        </div>
        <div className="modal-footer">
         <button type="button" className="btn btn-outline-secondary" onClick={()=>{
if(!bookingsLoading){    setCancelModalOpen(false);    setCancelId(null) } }}>Close</button>
         <button type="button" className="btn btn-danger" disabled={bookingsLoading}
onClick={async()=>{
          const id = cancelld
          setCancelModalOpen(false); setCancelId(null)
          try{
           setBookingsLoading(true)
```

```
await cancelBooking(id)
           const res = await listBookings({ user_id: user.id })
           const rows = Array.isArray(res) ? res : (res?.data | | [])
           setBookings(rows)
           setToast({ type:'success', msg:'Booking canceled' })
          }catch(e){ setToast({ type:'error', msg: (e && e.message) | | 'Cancel failed' }) }
          finally{ setBookingsLoading(false) }
         }}>Cancel booking</button>
        </div>
       </div>
      </div>
     </div>
     <div className="modal-backdrop fade show"></div>
    </>
   )}
   {resModalOpen && (
    <div className="modal d-block" tabIndex="-1" role="dialog"
style={{background:'rgba(0,0,0,0.5)'}}>
     <div className="modal-dialog" role="document">
      <div className="modal-content">
       <div className="modal-header">
        <h5 className="modal-title">Reschedule Booking #{resId}</h5>
        <button type="button" className="btn-close" aria-label="Close" onClick={()=>{
if(!resLoading){ setResModalOpen(false) } }} />
       </div>
       <div className="modal-body">
        {resError && <div className="alert alert-danger">{resError}</div>}
        <div className="alert alert-info py-2">Accepting bookings: {WORK_START}—
{WORK_END}</div>
```

```
<div className="mb-3">
         <label className="form-label" htmlFor="res_date">Date</label>
         <input id="res_date" name="date" type="date" className="form-control" min={todayStr()}
value={resDate} onChange={e=>setResDate(e.target.value)} />
        </div>
        <div className="mb-2">
         <label className="form-label" htmlFor="res_start_time">Start Time</label>
         <input id="res_start_time" name="start_time" type="time" className="form-control"</pre>
step="60" min={WORK_START} max={maxStartHHMM()} value={resStart}
onChange={e=>setResStart((e.target.value||").slice(0,5))} />
        </div>
        <div className="text-muted small">Note: Only pending bookings can be rescheduled.</div>
       </div>
       <div className="modal-footer">
        <button type="button" className="btn btn-secondary" onClick={()=>{ if(!resLoading){
setResModalOpen(false) } }}>Close</button>
        <button type="button" className="btn btn-primary" disabled={resLoading}
onClick={async()=>{
         const id = resId; const date = resDate; const s = resStart; const dur =
Number(resDuration | | 60)
         setResModalOpen(false)
         setResLoading(true); setResError(")
         try{
          // Client validation
          if (!date | | date < todayStr()) { throw new Error('Please pick today or a future date.') }
          const eSecs = toSeconds(s) + (dur*60)
          if (s < WORK_START || s > maxStartHHMM() || eSecs > toSeconds(WORK_END)) {
           throw new Error('Please pick a time within working hours (${WORK_START}-
${WORK_END}) that fits the service duration.`)
          }
          await rescheduleBooking({ id, date, start_time: `${s}:00` })
```

```
// refresh list
          const res = await listBookings({ user_id: user.id })
           const rows = Array.isArray(res) ? res : (res?.data | | [])
          setBookings(rows)
          setToast({ type:'success', msg:'Booking rescheduled' })
          }catch(e){ setToast({ type:'error', msg: (e && e.message) || 'Reschedule failed' }) }
         finally{ setResLoading(false) }
        }}>Save</button>
       </div>
      </div>
     </div>
    </div>
   )}
   {/* Toasts */}
   <div style={{position:'fixed', right:16, bottom:16, zIndex:9999}}>
    {toast.msg && (
     <div className={`toast align-items-center text-white ${toast.type==='error'?'bg-danger':'bg-</pre>
success'} show`} role="alert">
      <div className="d-flex">
       <div className="toast-body">{toast.msg}</div>
       <button type="button" className="btn-close btn-close-white me-2 m-auto"
onClick={()=>setToast({type:",msg:"})}></button>
      </div>
     </div>
    )}
   </div>
  </div>
)
```

```
frontend/src/pages/Dashboard.jsx
// Dashboard.jsx — Admin analytics: summary stats, service coverage, bookings overview (filters, CSV,
quick-view modal).
import React, { useEffect, useState } from 'react'
import useModal from '../hooks/useModal'
import { getSummary, getServiceCoverage, getAnalyticsBookings } from '../services/analyticsService'
export default function Dashboard(){
const [data,setData] = useState(null)
const [loading,setLoading] = useState(false)
 const [error,setError] = useState(")
 const [toast, setToast] = useState({ type:", msg:" })
 const [coverage,setCoverage] = useState(null)
 const [covLoading,setCovLoading] = useState(false)
 const [boRows, setBoRows] = useState([])
 const [boTotal, setBoTotal] = useState(0)
const [boPage, setBoPage] = useState(1)
 const [boPerPage, setBoPerPage] = useState(10)
const [boQ, setBoQ] = useState(")
 const [boStatus, setBoStatus] = useState(")
 const [boLoading, setBoLoading] = useState(false)
 const [boQFocus, setBoQFocus] = useState(false)
 const [fromFocus, setFromFocus] = useState(false)
 const [toFocus, setToFocus] = useState(false)
const [selectedBooking, setSelectedBooking] = useState(null)
 const { open: bookingOpen, openModal: openBookingModal, closeModal: closeBookingModal,
onKeyDown: bookingKeyDown, ref: bookingRef } = useModal(false)
```

```
const fmt = (d)=>{
  const y = d.getFullYear();
  const m = String(d.getMonth()+1).padStart(2,'0');
  const day = String(d.getDate()).padStart(2,'0');
  return `${y}-${m}-${day}`
}
 const StatCard = ({ label, value, icon }) => {
  return (
   <div className="card h-100">
    <div className="card-body d-flex align-items-center gap-3">
     <div style={{width:40,height:40,borderRadius:8,background:'var(--gu-
mist)',display:'flex',alignItems:'center',justifyContent:'center',color:'var(--gu-primary-600)'}}>
      {icon}
     </div>
     <div>
      <div className="text-muted small">{label}</div>
      <div className="h4 m-0">{value}</div>
     </div>
    </div>
   </div>
 )
}
// Line chart with markers, tooltips, axes, gridlines, and 7-day moving average
 const LineChart = ({ points, height=160 }) => {
  const m = { top: 8, right: 8, bottom: 24, left: 36 }
  const n = points.length
  const innerH = height - m.top - m.bottom
  const maxVal = points.reduce((mx,p)=> Math.max(mx, Number(p.cnt | | 0)), 0)
```

```
const safeMax = maxVal > 0 ? maxVal : 1
const innerW = Math.max(260, n>1 ? n*22 : 260)
const width = innerW + m.left + m.right
const x = (i) = m.left + (n>1? (i * (innerW / (n-1))) : innerW/2)
const y = (v)=> m.top + (innerH - (Number(v)/safeMax) * innerH)
const polyMain = n ? points.map((p,i)=> `${x(i)},${y(p.cnt||0)}`).join(''):"
// 7-day moving average overlay
const avgPoints = points.map((p,i)=>{
 const start = Math.max(0, i-6)
 const win = points.slice(start, i+1)
 const avg = win.reduce((s,q)=> s + Number(q.cnt||0), 0) / win.length
 return { date: p.date, cnt: avg }
})
const polyAvg = n ? avgPoints.map((p,i)=> `${x(i)},${y(p.cnt)}`).join(' ') : "
// y-axis ticks (5 levels)
const steps = 4
const stepVal = Math.ceil(safeMax / steps)
const yTicks = Array.from({ length: steps + 1 }, (_,i)=> i * stepVal)
// x-axis ticks ~5 labels
const xTickEvery = Math.max(1, Math.ceil(n / 5))
return (
 <svg width={width} height={height} style={{maxWidth:'100%'}}>
  {/* gridlines + y labels */}
  {yTicks.map((t,i)=> (
   <g key={`y${i}`}>
```

```
x1={m.left} x2={width-m.right} y1={y(t)} y2={y(t)} stroke="var(--gu-soft)" />
      <text x={m.left-6} y={y(t)} textAnchor="end" dominantBaseline="middle" className="small"
fill="var(--gu-muted)">{t}</text>
     </g>
    ))}
    {/* x-axis baseline */}
    x1={m.left} x2={width-m.right} y1={height-m.bottom} y2={height-m.bottom} stroke="var(--
gu-soft)" />
    {points.map((p,i)=> (i % xTickEvery === 0 ? (
     <text key={`x${i}`} x={x(i)} y={height-6} textAnchor="middle" className="small" fill="var(--gu-
muted)">{String(p.date||").slice(5)}</text>
    ): null))}
    {/* average overlay */}
    <polyline points={polyAvg} fill="none" stroke="var(--gu-accent)" strokeWidth="2"</pre>
strokeDasharray="4 4" />
    {/* main line */}
    <polyline points={polyMain} fill="none" stroke="var(--gu-primary)" strokeWidth="2.5" />
    {/* markers with native tooltip */}
    {points.map((p,i)=> (}
     <g key={`m${i}`}>
      <circle cx={x(i)} cy={y(p.cnt||0)} r="3.5" fill="#fff" stroke="var(--gu-primary)" />
      <title>{`${p.date}: ${p.cnt}`}</title>
     </g>
    ))}
   </svg>
 )
}
// Simple donut PieChart with legend
```

```
const PieChart = ({ data, size=220, inner=0.6, colors }) => {
  const [active, setActive] = useState(-1)
  const total = data.reduce((s,d)=> s + Number(d.value | | 0), 0)
  const cx = size/2, cy = size/2
  const r = (size/2) - 8
  const ir = r * inner
  const toXY = (angle, radius)=> [cx + radius*Math.cos(angle), cy + radius*Math.sin(angle)]
  const arcs = []
  let start = -Math.PI/2 // start at top
  const palette = ['var(--gu-primary)','var(--gu-accent)','var(--gu-primary-
600)','rgba(73,34,91,.35)','rgba(165,106,189,.35)','rgba(73,34,91,.2)']
  data.forEach((d, i)=>{
   const val = Number(d.value | | 0)
   const slice = total>0 ? (val/total) * Math.PI*2 : 0
   const end = start + slice
   const [sx, sy] = toXY(start, r)
   const [ex, ey] = toXY(end, r)
   const [isx, isy] = toXY(end, ir)
   const [iex, iey] = toXY(start, ir)
   const largeArc = slice > Math.Pl ? 1:0
   const color = (colors && colors[i]) ? colors[i] : palette[i % palette.length]
   const path = [
    `M ${sx} ${sy}`,
    `A ${r} ${r} 0 ${largeArc} 1 ${ex} ${ey}`,
    `L ${isx} ${isy}`,
    `A ${ir} ${ir} 0 ${largeArc} 0 ${iex} ${iey}`,
    'Z'
   ].join(' ')
   arcs.push({ path, color, label: d.label, value: val, start, end })
```

```
start = end
  })
  const handleMove = (e)=>{
   if (total<=0) { setActive(-1); return }</pre>
   const rect = e.currentTarget.getBoundingClientRect()
   const x = e.clientX - rect.left
   const y = e.clientY - rect.top
   const dx = x - cx
   const dy = y - cy
   const dist = Math.sqrt(dx*dx + dy*dy)
   if (dist < ir | | dist > r) { setActive(-1); return }
   let ang = Math.atan2(dy, dx) // [-PI, PI], 0 at +x
   let fromTop = ang - (-Math.PI/2) // rotate so 0 at top
   while (fromTop < 0) fromTop += Math.PI*2
   const frac = fromTop / (Math.PI*2)
   // find slice by cumulative fraction to avoid angle wrap logic
   let acc = 0
   for (let i=0;i<data.length;i++){</pre>
    const val = Number(data[i].value | |0)
    const next = acc + (total>0 ? val/total : 0)
    if (frac >= acc && frac < next){ setActive(i); return }</pre>
    acc = next
   }
   setActive(-1)
  }
  return (
   <div className="d-flex flex-wrap align-items-center gap-3">
    <svg width={size} height={size} viewBox={`0 0 ${size} ${size}`} onMouseMove={handleMove}
onMouseLeave={()=>setActive(-1)}>
```

```
{arcs.map((a,idx)=> (
      <path key={idx} d={a.path} fill={a.color} opacity={active===-1 | | active===idx ? 1 : 0.5}</pre>
stroke="#fff" strokeWidth={active===idx ? 2 : 1} />
     ))}
     {/* center hole to ensure crisp donut if total is 0 */}
     {total===0 && (
      <circle cx={cx} cy={cy} r={r} fill="var(--gu-mist)" />
     )}
    </svg>
    <div className="d-grid small" style={{minWidth: 180}}>
     <div className="mb-1">
      {active>=0 && total>0 ? (
       <strong>{data[active].label}: {Number(data[active].value||0)}
({Math.round((Number(data[active].value||0)/total)*100)}%)</strong>
      ):(
       <span className="text-muted">Drag/hover over chart to preview</span>
      )}
     </div>
     {data.map((d,i)=> (
      <div key={i} className="d-flex align-items-center justify-content-between gap-2">
       <div className="d-flex align-items-center gap-2">
        <span style={{display:'inline-block',width:10,height:10,borderRadius:2,background: ((colors)</p>
&& colors[i])? colors[i]: (['var(--gu-primary)','var(--gu-accent)','var(--gu-primary-
600)','rgba(73,34,91,.35)','rgba(165,106,189,.35)','rgba(73,34,91,.2)'][i % 6]))}} />
        <span style={{fontWeight: active===i ? 600 : 400}}>{d.label}</span>
       </div>
       <span className="text-muted">{Number(d.value||0)}</span>
      </div>
     ))}
    </div>
```

```
</div>
 )
}
const computeThisWeek = ()=>{
 const t = new Date();
 const dow = t.getDay(); // 0 Sun .. 6 Sat
 const diffToMon = (dow===0 ? -6 : 1 - dow);
 const mon = new Date(t); mon.setHours(0,0,0,0); mon.setDate(t.getDate()+diffToMon);
 const sun = new Date(mon); sun.setDate(mon.getDate()+6);
 return { from: fmt(mon), to: fmt(sun) }
}
const initWeek = computeThisWeek()
const [from,setFrom] = useState(initWeek.from)
const [to,setTo] = useState(initWeek.to)
const load = async (opts={}) => {
 const useFrom = opts.from ?? from
 const useTo = opts.to ?? to
 setLoading(true); setError(")
 try{
  const res = await getSummary({ from: useFrom, to: useTo })
  setData(res)
 }catch(e){ setError('Failed to load analytics') }
 finally{ setLoading(false) }
}
useEffect(()=>{ load() },[])
useEffect(()=>{ if (error) setToast({ type:'error', msg:error }) }, [error])
```

```
useEffect(()=>{
  const run = async()=>{
   setCovLoading(true)
   try{
    const res = await getServiceCoverage({ from, to })
    setCoverage(res)
   }catch(e){ /* ignore */ }
   finally{ setCovLoading(false) }
  }
  run()
}, [from, to])
useEffect(()=>{
  const run = async()=>{
   setBoLoading(true)
   try{
    const res = await getAnalyticsBookings({ from, to, q: boQ, status: boStatus, page: boPage,
per_page: boPerPage })
    setBoRows(Array.isArray(res.rows)? res.rows: [])
    setBoTotal(Number(res.total | | 0))
   }catch(e){ /* noop */ }
   finally{ setBoLoading(false) }
  }
  run()
}, [from, to, boQ, boStatus, boPage, boPerPage])
const computeLast7Days = ()=>{
  const end = new Date(); end.setHours(0,0,0,0)
  const start = new Date(end); start.setDate(end.getDate()-6)
```

```
return { from: fmt(start), to: fmt(end) }
}
 const computeThisMonth = ()=>{
  const now = new Date();
  const start = new Date(now.getFullYear(), now.getMonth(), 1)
  const end = new Date(now.getFullYear(), now.getMonth()+1, 0)
  return { from: fmt(start), to: fmt(end) }
}
 const Bar = ({ label, value, max, color='var(--gu-primary)' }) => {
  const pct = max>0 ? Math.round((value/max)*100) : 0
  return (
   <div className="mb-2">
    <div className="d-flex justify-content-between"><span>{label}</span><span className="text-</pre>
muted small">{value}</span></div>
    <div className="bg-light" style={{height:8, borderRadius:4}}>
     <div style={{width:`${pct}%`, height:8, background:color, borderRadius:4}} />
    </div>
   </div>
 )
}
 return (
  <div className="container py-4">
   <div className="d-flex flex-wrap justify-content-between align-items-end gap-2 mb-3">
    <div>
     <h3 className="mb-1">Admin Analytics</h3>
```

```
<div className="text-muted small">Overview of bookings · {from} → {to}
    </div>
    <div className="d-flex gap-3 flex-wrap align-items-end">
     <div>
      <label className="form-label" htmlFor="dash_from">From</label>
      <input id="dash_from" name="from" type="date" className="form-control" value={from}
onChange={e=>setFrom(e.target.value)} onKeyDown={e=>{ if(e.key==='Enter'){ e.preventDefault();
load() } }} onFocus={()=>setFromFocus(true)} onBlur={()=>setFromFocus(false)} style={fromFocus?{
boxShadow:'0 0 0 .2rem rgba(111,66,193,.25)', borderColor:'#6f42c1' }:undefined} />
     </div>
     <div>
      <label className="form-label" htmlFor="dash_to">To</label>
      <input id="dash_to" name="to" type="date" className="form-control" value={to}
onChange={e=>setTo(e.target.value)} onKeyDown={e=>{ if(e.key==='Enter'){ e.preventDefault(); load()
} }} onFocus={()=>setToFocus(true)} onBlur={()=>setToFocus(false)} style={toFocus?{ boxShadow:'0 0 0
.2rem rgba(111,66,193,.25)', borderColor:'#6f42c1' }:undefined} />
     </div>
     <div className="d-flex align-items-center gap-2">
      <button className="btn btn-outline-secondary" onClick={load}>Apply</button>
      <div className="btn-group" role="group" aria-label="Range presets">
       <button type="button" className="btn btn-outline-primary btn-sm" onClick={()=>{ const
r=computeThisWeek(); setFrom(r.from); setTo(r.to); load({ from: r.from, to: r.to }); }}<{'This
Week'}</button>
       <button type="button" className="btn btn-outline-primary btn-sm" onClick={()=>{ const
r=computeLast7Days(); setFrom(r.from); setTo(r.to); load({ from: r.from, to: r.to }); }}>{'Last 7
Days'}</button>
       <button type="button" className="btn btn-outline-primary btn-sm" onClick={()=>{ const
r=computeThisMonth(); setFrom(r.from); setTo(r.to); load({ from: r.from, to: r.to }); }}<['This
Month'}</button>
      </div>
     </div>
    </div>
   </div>
```

```
{loading && <div className="text-muted small mb-2">Loading...</div>}
   {data && (
    <div className="row g-3">
     {(() => {
      const rows = data.by_status || []
      const getCount = (s) => Number((rows.find(r => r.status === s)?.cnt) | | 0)
      const confirmed = getCount('confirmed') + getCount('completed')
      const pending = getCount('pending')
      const canceled = getCount('canceled')
      const total = data.totals?.bookings ?? (confirmed + pending + canceled)
      return (
       <>
        <div className="col-6 col-md-3">
         <StatCard label="Total Bookings" value={total} icon={<svg width="18" height="18"
viewBox="0 0 24 24" fill="none" xmlns="http://www.w3.org/2000/svg"><path d="M4 4h16v14a2 2 0"
0 1-2 2H6a2 2 0 0 1-2-2V4z" stroke="currentColor"/><path d="M4 8h16"
stroke="currentColor"/></svg>}/>
        </div>
        <div className="col-6 col-md-3">
         <StatCard label="Confirmed" value={confirmed} icon={<svg width="18" height="18"
viewBox="0 0 24 24" fill="none" xmlns="http://www.w3.org/2000/svg"><path d="M20 6L9 17I-5-5"
stroke="currentColor" strokeWidth="2"/></svg>} />
        </div>
        <div className="col-6 col-md-3">
         <StatCard label="Pending" value={pending} icon={<svg width="18" height="18" viewBox="0
0 24 24" fill="none" xmlns="http://www.w3.org/2000/svg"><circle cx="12" cy="12" r="9"
stroke="currentColor"/></path d="M12 7v5l3 3" stroke="currentColor"/></svg>} />
        </div>
        <div className="col-6 col-md-3">
         <StatCard label="Canceled" value={canceled} icon={<svg width="18" height="18"
viewBox="0 0 24 24" fill="none" xmlns="http://www.w3.org/2000/svg"><path d="M6 6l12 12M18 6L6
18" stroke="currentColor"/></svg>} />
```

```
</>
     })()}
     {/* Revenue summary cards */}
     {(())=>{
      const rev = data.revenue | | { total:0, avg_per_day:0, avg_duration_minutes:0 }
      return (
       <>
        <div className="col-6 col-md-4">
         <StatCard label="Total Revenue" value={`\psi \number(rev.total||0).toFixed(2)}`} icon={<svg
width="18" height="18" viewBox="0 0 24 24" fill="none"
xmlns="http://www.w3.org/2000/svg"><path d="M4 7h16v10a2 2 0 0 1-2 2H6a2 2 0 0 1-2-2V7z"
stroke="currentColor"/><path d="M4 7l2-3h12l2 3" stroke="currentColor"/></svg>} />
        </div>
        <div className="col-6 col-md-4">
         <StatCard label="Avg Revenue / Day" value={`\psi\number(rev.avg_per_day||0).toFixed(2)}`}
icon={<svg width="18" height="18" viewBox="0 0 24 24" fill="none"
xmlns="http://www.w3.org/2000/svg"><path d="M4 4h16v16H4z" stroke="currentColor"/><path
d="M8 2v4M16 2v4M4 10h16" stroke="currentColor"/></svg>} />
        </div>
        <div className="col-6 col-md-4">
         <StatCard label="Avg Duration (mins)"
value={`${Number(rev.avg_duration_minutes||0).toFixed(1)}`} icon={<svg width="18" height="18"
viewBox="0 0 24 24" fill="none" xmlns="http://www.w3.org/2000/svg"><circle cx="12" cy="12" r="9"
stroke="currentColor"/><path d="M12 7v5l3 3" stroke="currentColor"/></svg>} />
        </div>
       </>
      )
     })()}
```

</div>

```
<div className="col-12 col-md-6">
      <div className="card"><div className="card-body">
       <h5 className="card-title">Status Breakdown</h5>
       {(())=>{
        const rows = data.by_status || []
        const by = Object.fromEntries(rows.map(r=> [r.status, Number(r.cnt | | 0)]))
        const series = [
         { label:'confirmed', value:Number(by['confirmed']||0) },
         { label:'completed', value:Number(by['completed']||0) },
         { label: 'pending', value: Number(by['pending']||0) },
         { label:'canceled', value:Number(by['canceled']||0) },
        1
        const colors = ['var(--gu-primary)','var(--gu-primary)','var(--gu-accent)','var(--gu-primary-
600)']
        const nonZero = series.some(s => s.value>0)
        return !nonZero ? <div className="text-muted">No data</div> : <PieChart data={series}
colors={colors}/>
       })()}
      </div></div>
     </div>
     <div className="col-12 col-md-6">
      <div className="card"><div className="card-body">
       <h5 className="card-title">Category Breakdown</h5>
       {((()=>{
        const rows = data.by_category | | []
        const series = rows.map(r=> ({ label: r.category, value: Number(r.cnt||0) }))
        return series.length===0 ? <div className="text-muted">No data</div> : <PieChart
data={series} />
       })()}
      </div>
```

```
</div>
     {/* Revenue by Category */}
     <div className="col-12">
      <div className="card"><div className="card-body">
       <h5 className="card-title">Revenue by Category</h5>
       {(())=>{
        const rows = data.revenue_by_category || []
        if (rows.length===0) return <div className="text-muted">No data</div>
        const max = rows.reduce((m,r)=> Math.max(m, Number(r.total_rev||0)), 0)
        return rows.map((r,i)=> (
         <Bar key={i} label={r.category} value={Number(r.total_rev||0)} max={max} color="var(--gu-
primary-600)" />
        ))
       })()}
      </div></div>
     </div>
     <div className="col-12">
      <div className="card"><div className="card-body">
       <h5 className="card-title">Daily Bookings</h5>
       {(())=>{
        const pts = data.daily || []
        const total = pts.reduce((s,p)=> s + Number(p.cnt | | 0), 0)
        const days = pts.length | | 1
        const avg = total / days
        let peak = { date: '-', cnt: 0 }
        pts.forEach(p=>{ const c = Number(p.cnt||0); if (c>peak.cnt) peak = { date: p.date, cnt: c } })
        return (
```

```
<div className="row g-3 align-items-start">
    <div className="col-md-8">
     <LineChart points={pts} />
    </div>
    <div className="col-md-4">
     <div className="small text-muted mb-2">Summary</div>
     <strong>Total bookings:</strong> {total}
      <strong>Average/day:</strong> {avg.toFixed(1)}
      <strong>Peak day:</strong> {peak.date} ({peak.cnt})
     </div>
   </div>
  )
 })()}
</div>
</div>
<div className="col-12">
<div className="card"><div className="card-body">
 <h5 className="card-title">Top Services</h5>
 {(())=>{
  const rows = data.top_services | | []
  const max = rows.reduce((m,r)=>Math.max(m, Number(r.cnt | |0)),0)
  return rows.length===0 ? <div className="text-muted">No data</div> : rows.map((r,i)=> (
   <Bar key={i} label={r.name} value={Number(r.cnt | | 0)} max={max} />
  ))
 })()}
</div>
</div>
```

```
<div className="col-12">
     <div className="card"><div className="card-body">
      <h5 className="card-title">Service Coverage</h5>
      {covLoading?(
      <div className="text-muted">Loading...</div>
      ): (!coverage | | !Array.isArray(coverage.services) | | coverage.services.length===0) ? (
      <div className="text-muted">No data</div>
      ):(
      <div className="table-responsive">
       <thead>#>Service<th className="text-
end">Bookings</thead>
        {coverage.services.map((r,i)=> (
          {r.id}td><td className="text-
end">{Number(r.bookings | | 0)}
         ))}
        </div>
      )}
     </div></div>
    </div>
    <div className="col-12">
     <div className="card"><div className="card-body">
      <div className="d-flex justify-content-between align-items-center mb-2">
      <h5 className="card-title mb-0">Bookings Overview</h5>
```

```
<div className="d-flex gap-2">
         <div className="input-group input-group-sm" style={{width:260}}>
          <span className="input-group-text">Search</span>
          <input className="form-control" value={boQ} onChange={e=>{ setBoPage(1);
setBoQ(e.target.value) }} onKeyDown={e=>{ if(e.key==='Enter'){ e.preventDefault(); setBoPage(1) } }}
onFocus={()=>setBoQFocus(true)} onBlur={()=>setBoQFocus(false)} style={boQFocus?{ boxShadow:'0 0
0 .2rem rgba(111,66,193,.25)', borderColor:'#6f42c1' }:undefined} />
         </div>
         <select className="form-select form-select-sm" style={{width:150}} value={boStatus}</pre>
onChange={e=>{ setBoPage(1); setBoStatus(e.target.value) }}>
          <option value="">All Status</option>
          <option value="pending">pending</option>
          <option value="confirmed">confirmed</option>
          <option value="canceled">canceled</option>
          <option value="completed">completed</option>
         </select>
         <select className="form-select form-select-sm" style={{width:100}} value={boPerPage}
onChange={e=>{ setBoPage(1); setBoPerPage(Number(e.target.value)) }}>
          <option value={10}>10</option>
          <option value={20}>20</option>
          <option value={50}>50</option>
          <option value={100}>100</option>
         </select>
         <button className="btn btn-outline-secondary btn-sm" onClick={()=>{
          const cols = ['ID','Date','Start','End','Status','Customer','Service','Price','Notes']
          const lines = [cols.join(',')].concat(boRows.map(r=>[
           r.id,
           r.date,
           (r.start_time | | '').slice(0,5),
           (r.end_time | | '').slice(0,5),
```

```
r.status,
    ""+String(r.customer_name||").replaceAll("",""")+"",
    '"'+String(r.service_name||").replaceAll("",""")+"",
    Number(r.price | |0).toFixed(2),
    ""+String(r.notes||").replaceAll("",""")+"",
  ].join(',')))
   const blob = new Blob([lines.join('\n')], { type:'text/csv;charset=utf-8;' })
   const url = URL.createObjectURL(blob)
  const a = document.createElement('a')
   a.href = url
  a.download = `bookings_${from}_to_${to}.csv`
   document.body.appendChild(a)
   a.click()
   a.remove()
  URL.revokeObjectURL(url)
  }}>Export CSV</button>
</div>
</div>
{boLoading?(
<div className="text-muted">Loading...</div>
): boRows.length===0?(
<div className="text-muted">No data</div>
):(
 <div className="table-responsive">
  <thead>
    #
```

```
Date
                                                 Start
                                                 End
                                                 Status
                                                 Customer
                                                Service
                                                 Price
                                                Notes
                                             </thead>
                                         \{boRows.map((r)=> (
                                                 { setSelectedBooking(r); openBookingModal() }}
style={{cursor:'zoom-in'}}>
                                                     {r.id}
                                                     {r.date}
                                                     {(r.start_time||").slice(0,5)}
                                                     {(r.end_time||").slice(0,5)}
                                                     {r.status}
                                                     {r.customer_name}
                                                     {r.service_name}
                                                     \rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightarrow\rightar
                                                     {r.notes}
                                                ))}
                                        </div>
                            )}
```

```
<div className="d-flex justify-content-between align-items-center mt-2">
                   <div className="small text-muted">Showing {(boRows.length===0)?0:((boPage-
1)*boPerPage+1)}-{Math.min(boPage*boPerPage, boTotal)} of {boTotal}</div>
                   <div className="btn-group" role="group">
                      <but/>
<br/>
onClick={()=>setBoPage(p=>Math.max(1,p-1))}>Prev</button>
                      <span className="btn btn-outline-secondary btn-sm disabled">Page {boPage} /
{Math.max(1, Math.ceil(boTotal/boPerPage))}</span>
                      <button className="btn btn-outline-secondary btn-sm" disabled={boPage>=Math.max(1,
Math.ceil(boTotal/boPerPage))} onClick={()=>setBoPage(p=>p+1)}>Next</button>
                   </div>
                 </div>
                 {bookingOpen && (
                   <>
                      <div className="modal fade show d-block" tabIndex="-1" role="dialog" aria-modal="true"</pre>
onKeyDown={bookingKeyDown}>
                        <div className="modal-dialog">
                           <div className="modal-content" ref={bookingRef}>
                             <div className="modal-header">
                                <h5 className="modal-title">Booking Details</h5>
                                <button type="button" className="btn-close" aria-label="Close"
onClick={closeBookingModal}></button>
                             </div>
                             <div className="modal-body">
                               {selectedBooking?(
                                  <div className="small">
                                     <div><strong>ID:</strong> {selectedBooking.id}</div>
                                     <div><strong>Date:</strong> {selectedBooking.date}</div>
                                     <div><strong>Time:</strong> {(selectedBooking.start_time||").slice(0,5)} -
{(selectedBooking.end_time||").slice(0,5)}</div>
```

```
<div><strong>Status:</strong> {selectedBooking.status}</div>
               <div><strong>Customer:</strong> {selectedBooking.customer_name}</div>
               <div><strong>Service:</strong> {selectedBooking.service_name}</div>
               <div><strong>Price:</strong> P{Number(selectedBooking.price | 10).toFixed(2)}</div>
               <div><strong>Notes:</strong> {selectedBooking.notes | | '--'}</div>
               <div><strong>Created:</strong> {selectedBooking.created_at || '-'}</div>
              </div>
             ):(
              <div className="text-muted">No booking selected.</div>
             )}
            </div>
            <div className="modal-footer">
             <button type="button" className="btn btn-outline-secondary"
onClick={closeBookingModal}>Close</button>
            </div>
           </div>
          </div>
         </div>
         <div className="modal-backdrop fade show"></div>
        </>
       )}
      </div>
     </div>
    </div>
  )}
  {/* Toasts */}
   <div style={{position:'fixed', right:16, bottom:16, zIndex:9999}}>
    {toast.msg && (
```

}

```
frontend/src/pages/Home.jsx
// Home.jsx — Public landing page: hero, category search, featured and all services, testimonials.
import React, { useEffect, useState } from 'react'
import { useNavigate, Navigate } from 'react-router-dom'
import { listServices } from '../services/service'
import ServiceCard from '../components/ServiceCard'
import BookingForm from '../components/BookingForm'
import { useAuthContext } from '../contexts/AuthContext'
export default function Home(){
const { user } = useAuthContext()
 const navigate = useNavigate()
const [services, setServices] = useState([])
 const [featured, setFeatured] = useState([])
 const [showFeatured, setShowFeatured] = useState(true)
 const [loading, setLoading] = useState(false)
 const [error, setError] = useState(")
 const [selected, setSelected] = useState(null)
const [successMsg, setSuccessMsg] = useState(")
 const [q, setQ] = useState(")
const [priceMax, setPriceMax] = useState(")
 const [category, setCategory] = useState(")
 const [toast, setToast] = useState({ type:", msg:" })
 const [visibleCount, setVisibleCount] = useState(12)
if (user) {
  return <Navigate to={user.role === 'admin' ? '/admin/dashboard' : '/dashboard'} replace />
}
```

```
const fetchAll = async ()=>{
 setLoading(true)
 setError(")
 try{
  const res = await listServices({ active: 1, sort: 'created_at', order: 'DESC' })
  const rows = res.data || []
  setServices(rows)
  setFeatured(rows.slice(0,6))
 }catch(e){ setError('Failed to load services') }
 finally{ setLoading(false) }
}
useEffect(()=>{ fetchAll() }, [])
const scrollToFeaturedAnchor = ()=>{
 const el = document.getElementById('featuredAnchor')
 if (el) el.scrollIntoView({ behavior: 'smooth', block: 'start' })
}
const handleBookNow = () => {
 if (!user) {
  navigate('/login')
 } else {
  scrollToFeaturedAnchor()
 }
}
const applySearch = async (opts={}) => {
 setLoading(true); setError(")
 try{
```

```
const qV = ('q' in opts) ? opts.q : q
   const categoryV = ('category' in opts) ? opts.category : category
   const priceMaxV = ('priceMax' in opts) ? opts.priceMax : priceMax
   const params = { active: 1, q: qV }
   if (categoryV) params.q = `${qV} ${categoryV}`
   if (priceMaxV) params.sort = 'price', params.order = 'ASC'
   const res = await listServices(params)
   let rows = res.data || []
   if (priceMaxV) rows = rows.filter(s => Number(s.price) <= Number(priceMaxV))</pre>
   if (categoryV) rows = rows.filter(s =>
(s.category||").toLowerCase().includes(categoryV.toLowerCase()))
   setServices(rows)
   setVisibleCount(12)
  }catch(e){ setError('Failed to search services') }
  finally{ setLoading(false) }
 }
 useEffect(()=>{ if (error) setToast({ type:'error', msg:error }) }, [error])
 useEffect(()=>{ if (successMsg) setToast({ type:'success', msg: successMsg }) }, [successMsg])
 return (
  <>
   {/* Hero Section (full-bleed) */}
   <section className="hero-bleed mb-4">
    <div className="container">
     <div className="hero-landing">
      <div className="hero-left col-md-6">
       <h1 className="display-5">GlowUpNow</h1>
```

```
Professional at-home salon & spa services. Book trusted stylists and
therapists for a pampering experience without leaving your doorstep.
       <div className="d-flex gap-2 mt-3 cta-group">
        <button className="btn btn-primary btn-lg" onClick={handleBookNow}>Book
Now</button>
        <button className="btn btn-outline-primary btn-lg" onClick={()=>{ setShowFeatured(false);
applySearch({ q:", priceMax:", category:" }); scrollToFeaturedAnchor() }}>Explore Services</button>
       </div>
      </div>
      <div className="hero-right col-md-6">
       <div className="hero-media" role="img" aria-label="Home salon service scene" />
      </div>
     </div>
    </div>
   </section>
   <div className="container py-4">
   <h5 className="mb-2">Browse by Category</h5>
   <hr className="section-divider mb-3" />
   <div className="row row-cols-2 row-cols-sm-3 row-cols-md-4 row-cols-lg-7 g-2 mb-4">
    {['Massage','Facial','Hair','Hand and Foot','Waxing','Eyelash','Eyebrow'].map(label => (
     <div key={label} className="col">
      <button className="btn btn-outline-primary rounded-pill w-100" onClick={()=>{
setCategory(label); setShowFeatured(false); applySearch({ category: label }); scrollToFeaturedAnchor()
}}>{label}</button>
     </div>
   ))}
   </div>
  {/* Trust strip */}
```

```
<div className="trust-strip d-flex align-items-center justify-content-between mb-4">
   <span className="brand">TRUSTED BY CLIENTS IN METRO</span>
   <div className="d-flex gap-3 small">
    <span className="brand">SAFE & HYGIENIC</span>
    <span className="brand">SECURE PAYMENTS</span>
    <span className="brand">VERIFIED PROS</span>
   </div>
  </div>
  {/* Value props */}
  <div className="row g-3 mb-4">
   <div className="col-md-4"><div className="card h-100"><div className="card-body">
    <h5 className="card-title">Home Service Convenience</h5>
    Professional treatments delivered to your doorstep.
No traffic, no queues.
   </div></div>
   <div className="col-md-4"><div className="card h-100"><div className="card-body">
    <h5 className="card-title">Curated Packages</h5>
    Save with bundles like Relax & Glow or Full Pamper
— perfect for self-care days.
   </div></div>
   <div className="col-md-4"><div className="card h-100"><div className="card-body">
    <h5 className="card-title">Trusted & Secure</h5>
    Secure authentication, protected data, and reliable
booking experience.
   </div></div>
  </div>
  <div className="card p-3 mb-3" style={{ position:'sticky', top:8, zIndex:10 }}>
   <div className="d-flex flex-wrap gap-2 align-items-end">
```

```
<div style={{flex:'1 1 320px', minWidth:240}}>
      <input className="form-control" placeholder="Search services..." value={q}
onChange={e=>setQ(e.target.value)} onKeyDown={e=>{if(e.key==='Enter'){e.preventDefault();
setShowFeatured(false); applySearch(); scrollToFeaturedAnchor()}}} />
     </div>
     <div style={{flex:'0 0 auto', minWidth:160, maxWidth:220}}>
      <select className="form-select" value={priceMax} onChange={e=>{ const v=e.target.value;
setPriceMax(v); setShowFeatured(false); applySearch({ priceMax: v }); scrollToFeaturedAnchor() }}>
       <option value="">Price filter</option>
       <option value="500">Up to ₱500
       <option value="1000">Up to ₱1,000
       <option value="2000">Up to ₱2,000
      </select>
     </div>
     <div style={{flex:'0 0 auto', minWidth:180, maxWidth:260}}>
      <select className="form-select" value={category} onChange={e=>{ const v=e.target.value;
setCategory(v); setShowFeatured(false); applySearch({ category: v }); scrollToFeaturedAnchor() }}>
       <option value="">All categories</option>
       <option value="Massage">Massage</option>
       <option value="Facial">Facial</option>
       <option value="Hair">Hair
       <option value="Hand and Foot">Hand and Foot
       <option value="Waxing">Waxing</option>
       <option value="Eyelash">Eyelash</option>
       <option value="Eyebrow">Eyebrow</option>
      </select>
     </div>
     <div className="ms-auto d-flex gap-2" style={{flex:'0 0 auto'}}>
      <button className="btn btn-outline-secondary" onClick={()=>{ setShowFeatured(false);
applySearch(); scrollToFeaturedAnchor() }}>Search</button>
```

```
<button className="btn btn-outline-primary" onClick={()=>{ setQ("); setPriceMax(");
setCategory("); setVisibleCount(12); setShowFeatured(true); fetchAll(); scrollToFeaturedAnchor()
}}>Clear</button>
     </div>
    </div>
   </div>
   {loading && <div className="alert alert-info">Loading...</div>}
   {/* Anchor for scrolling */}
   <div id="featuredAnchor" />
   {showFeatured && featured.length>0 && (
    <div className="section-featured mb-3">
     <div className="d-flex align-items-end justify-content-between mb-2">
      <h5 id="featured" className="mb-0">Featured</h5>
      <div className="text-muted small">Top {featured.length}</div>
     </div>
     <div className="row g-3">
      {featured.map(s => (
       <div key={s.id} className="col-md-3">
        <ServiceCard service={s} onSelect={user ? setSelected : null} />
       </div>
      ))}
     </div>
    </div>
   )}
   <hr className="section-divider" />
```

```
<div className="d-flex align-items-end justify-content-between mb-2">
    <h5 className="mb-0">All Services</h5>
    <div className="text-muted small">{services.length} results</div>
   </div>
   {services.length===0?(
    <div className="text-muted">No results matched your filters.</div>
  ):(
    <div className="row g-3">
     {services.slice(0, visibleCount).map(s => (
      <div key={s.id} className="col-md-4">
       <ServiceCard service={s} onSelect={user ? setSelected : null} />
      </div>
     ))}
    </div>
   )}
   {visibleCount < services.length && (
    <div className="d-flex justify-content-center mt-3">
     <button className="btn btn-outline-secondary" onClick={()=> setVisibleCount(v=>
Math.min(services.length, v+12))}>Load more</button>
    </div>
   )}
   {selected && user && (
    <BookingForm
     service={selected}
     onSuccess={() => {
      setSelected(null)
```

```
setSuccessMsg('Booking created successfully!')
     setTimeout(()=>setSuccessMsg("), 3000)
    }}
   />
  )}
  {/* Testimonials */}
   <hr className="section-divider my-4" />
   <h5 className="mb-2">What clients say</h5>
   <div className="row g-3 mb-4">
    <div className="col-md-4">
     <div className="card testimonial-card h-100"><div className="card-body">
      <div className="small text-muted mb-1">Aira, Makati</div>
      <div className="stars mb-2">★★★★</div>
      <div className="quote small">"Loved the convenience and the therapist was very
professional. Will book again!"</div>
     </div>
    </div>
    <div className="col-md-4">
     <div className="card testimonial-card h-100"><div className="card-body">
      <div className="small text-muted mb-1">Janelle, QC</div>
      <div className="stars mb-2">★★★★</div>
      <div className="quote small">"Great service! The facial package was exactly what I needed
after a long week."</div>
     </div></div>
    </div>
    <div className="col-md-4">
     <div className="card testimonial-card h-100"><div className="card-body">
      <div className="small text-muted mb-1">Mico, Taguig</div>
```

```
<div className="stars mb-2">★★★★★</div>
      <div className="quote small">"Booked a couples massage — punctual, clean, and super
relaxing."</div>
     </div></div>
    </div>
   </div>
   {/* Toasts */}
   <div style={{position:'fixed', right:16, bottom:16, zIndex:9999}}>
    {toast.msg && (
     <div className={`toast align-items-center text-white ${toast.type==='error'?'bg-danger':'bg-</pre>
success'} show`} role="alert">
      <div className="d-flex">
       <div className="toast-body">{toast.msg}</div>
       <button type="button" className="btn-close btn-close-white me-2 m-auto"
onClick={()=>setToast({type:",msg:"})}></button>
      </div>
     </div>
    )}
   </div>
   {/* Footer removed (handled by global footer) */}
  </div>
  </>
}
```

```
frontend/src/pages/Login.jsx
import React, { useState } from 'react'
import { useNavigate, Navigate } from 'react-router-dom'
import { useAuthContext } from '../contexts/AuthContext'
export default function Login(){
const { login, register, user, loading } = useAuthContext()
const nav = useNavigate()
const [email,setEmail] = useState(")
const [password,setPassword] = useState(")
const [name,setName] = useState(")
const [mode, setMode] = useState('login')
const [error,setError] = useState(")
 const [submitting,setSubmitting] = useState(false)
 const onSubmit = async (e)=>{
  e.preventDefault()
  setSubmitting(true)
  setError(")
  try{
   if(mode==='login'){
    await login(email,password)
   }else{
    await register(name,email,password)
   }
   nav('/')
  }catch(err){
   if (err.status === 422 && err.data?.errors) {
    const messages = Object.values(err.data.errors).filter(Boolean)
```

```
setError(messages.length ? messages.join(' '): 'Invalid input')
   } else if (err.data?.error) {
    setError(err.data.error)
   } else if (err.message) {
    setError(err.message)
   } else {
    setError('Authentication failed')
   }
  }finally{setSubmitting(false)}
}
if (loading) return (<div className="container py-4"><div className="alert alert-
info">Loading...</div></div>)
if (user) return (<Navigate to={user.role === 'admin' ? '/admin/dashboard' : '/dashboard'} replace />)
return (
  <div className="container-fluid auth-wrap d-flex align-items-center py-4 py-md-5">
   <div className="container">
    <div className="row align-items-center g-4">
     <div className="col-lg-6 d-none d-lg-block">
      <div className="auth-left">
       <div className="mb-3">
        <div className="fs-4 fw-bold">GlowUpNow</div>
        <div className="small" style={{opacity:.9}}>Home salon & spa services, on demand</div>
       </div>
       <h1 className="display-6 mb-3">{mode==='login' ? 'Welcome back' : 'Join
GlowUpNow'}</h1>
       {mode==='login' ? 'Book massages, facials, nails, and hair services with
trusted pros at your home. Sign in to continue.': 'Create your account to book at-home salon & spa
services, save preferences, and track your bookings.'}
```

```
{mode==='login'?(
        <>
         className="d-flex align-items-center gap-2"><span className="badge rounded-pill bg-</li>
light text-dark">Secure</span><span>Protected authentication</span>
         className="d-flex align-items-center gap-2"><span className="badge rounded-pill bg-</li>
light text-dark">Fast</span><span>Quick, seamless booking</span>
         className="d-flex align-items-center gap-2"><span className="badge rounded-pill bg-</p>
light text-dark">Trusted</span><span>Verified professionals</span>
        </>
       ):(
        <>
         className="d-flex align-items-center gap-2"><span className="badge rounded-pill bg-</p>
light text-dark">Personal</span><span>Set your preferences</span>
         className="d-flex align-items-center gap-2"><span className="badge rounded-pill bg-</p>
light text-dark">Tracking</span><span>Manage bookings & history</span>
         className="d-flex align-items-center gap-2"><span className="badge rounded-pill bg-</p>
light text-dark">Perks</span><span>Access exclusive offers</span>
        </>
       )}
      </div>
    </div>
    <div className="col-lg-5 ms-lg-auto">
     <div className="card auth-card p-4 p-md-5">
       <div className="d-flex justify-content-between align-items-center mb-2">
        <h2 className="h3 m-0">{mode==='login' ? 'Sign in' : 'Create account'}</h2>
        <button type="button" className="btn btn-outline-secondary btn-sm"
onClick={()=>setMode(mode==='login'?'register':'login')}>
        {mode==='login'?'Register': 'Login'}
        </button>
```

```
</div>
       {error && <div className="alert alert-danger">{error}</div>}
       <form onSubmit={onSubmit}>
        {mode==='register' && (
         <div className="mb-3">
          <label className="form-label">Name</label>
          <input className="form-control" placeholder="Your full name" value={name}
onChange={e=>setName(e.target.value)} onFocus={()=>{}} onBlur={()=>{}} />
         </div>
        )}
        <div className="mb-3">
         <label className="form-label">Email</label>
         <input type="email" className="form-control" placeholder="you@example.com"
value={email} onChange={e=>setEmail(e.target.value)} onFocus={()=>{}} onBlur={()=>{}} />
        </div>
        <div className="mb-3">
         <label className="form-label">Password</label>
         <input type="password" className="form-control" placeholder={mode==='login' ? 'Your</pre>
password' : 'Create a password (min 8 characters)'} value={password}
onChange={e=>setPassword(e.target.value)} />
        </div>
        <div className="d-grid gap-2">
         <button disabled={submitting} className="btn btn-primary" type="submit">{submitting ?
'Please wait...': (mode==='login'?'Sign in': 'Create account')}</button>
         <button type="button" className="btn btn-outline-primary"
onClick={()=>setMode(mode==='login'?'register':'login')}>
          {mode==='login'?'New here? Create an account': 'Have an account? Sign in'}
         </button>
        </div>
        {mode==='register' && (
```

<div className="text-muted small mt-2">By creating an account, you agree to our Terms
and Privacy Policy.</div>

```
frontend/src/pages/ServiceManagement.jsx
// ServiceManagement.jsx — Admin: manage services (CRUD), filters, pagination, image upload.
import React, { useEffect, useState, useRef, useMemo } from 'react'
import useClickOutside from '../hooks/useClickOutside'
import useDebounce from '../hooks/useDebounce'
import useModal from '../hooks/useModal'
import { listServices, createService, updateService, deleteService, createServiceForm } from
'../services/serviceService'
export default function ServiceManagement(){
const empty = { id: 0, name: ", category:", description: ", price: ", duration_minutes: ", image_path:",
active: 1 }
const [items,setItems] = useState([])
const [form,setForm] = useState(empty)
const [loading,setLoading] = useState(false)
const [error,setError] = useState(")
const [success,setSuccess] = useState(")
 const [q,setQ] = useState(")
const [imageFile, setImageFile] = useState(null)
// Filters
const [fCategory, setFCategory] = useState(")
 const [fPriceMin, setFPriceMin] = useState(")
const [fPriceMax, setFPriceMax] = useState(")
 const [fDurMin, setFDurMin] = useState(")
const [fDurMax, setFDurMax] = useState(")
 const [fActive, setFActive] = useState(")
// Pagination
const [page, setPage] = useState(1)
 const [perPage, setPerPage] = useState(10)
```

```
const formRef = useRef(null)
// Delete modal state
const [toDelete, setToDelete] = useState(null)
const { open: confirmOpen, openModal, closeModal, onKeyDown, ref: delRef } = useModal(false)
// Toasts
const [toast, setToast] = useState({ type:", msg:" })
const [nameTouched, setNameTouched] = useState(false)
const [priceTouched, setPriceTouched] = useState(false)
const [durTouched, setDurTouched] = useState(false)
const [qFocus, setQFocus] = useState(false)
useClickOutside(delRef, ()=>{ if (confirmOpen && !loading) closeDelete() })
const load = async()=>{
 setLoading(true); setError(")
 try{
  const res = await listServices({ q, active: " })
  setItems(res.data | | [])
 }catch(e){ setError('Failed to load services') }
 finally{ setLoading(false) }
}
useEffect(()=>{ load() },[])
const submit = async (e)=>{
 e.preventDefault()
 setLoading(true); setError("); setSuccess(")
 try{
```

```
const payload = { ...form, price: Number(form.price), duration_minutes:
Number(form.duration_minutes) }
   if (imageFile) {
    const fd = new FormData()
    Object.entries(payload).forEach(([k,v])=>{ if(v!==undefined && v!==null && v!==") fd.append(k,
String(v)) })
    if (form.id) fd.append('id', String(form.id))
    fd.append('image', imageFile)
    await createServiceForm(fd)
   } else {
    if(form.id){ await updateService(payload) }
    else { await createService(payload) }
   }
   setForm(empty)
   setImageFile(null)
   setSuccess('Saved')
   load()
  }catch(err){ setError(err.data?.error | | err.data?.errors ? JSON.stringify(err.data.errors) : 'Save
failed') }
  finally{ setLoading(false) }
}
 const edit = (s)=> {
  setForm({ ...s })
  setImageFile(null)
  // scroll to form for editing
  setTimeout(()=>{
   if (formRef.current) {
    formRef.current.scrollIntoView({ behavior: 'smooth', block: 'start' })
   }
```

```
}, 0)
}
const doRemove = async(id)=>{
  setLoading(true); setError("); setSuccess(")
  try{ await deleteService(id); setSuccess('Deleted'); load() }catch(e){ setError('Delete failed') } finally{
setLoading(false) }
}
const openDelete = (s)=>{ setToDelete(s); openModal() }
 const closeDelete = ()=>{ closeModal(); setToDelete(null) }
 const confirmDelete = async()=>{
  if(!toDelete) return;
  const id = toDelete.id
  closeDelete()
  await doRemove(id)
}
// Derived filtering + pagination
const dq = useDebounce(q, 300)
const filteredItems = useMemo(()=> items.filter(s => {
  if (dq && !(`${s.name} ${s.category}
${s.description||"}`.toLowerCase().includes(dq.toLowerCase()))) return false
  if (fCategory && s.category !== fCategory) return false
  const price = Number(s.price)
  if (fPriceMin !== " && price < Number(fPriceMin)) return false
  if (fPriceMax !== " && price > Number(fPriceMax)) return false
  const dur = Number(s.duration_minutes)
  if (fDurMin !== " && dur < Number(fDurMin)) return false
  if (fDurMax !== " && dur > Number(fDurMax)) return false
  if (fActive !== " && Number(s.active) !== Number(fActive)) return false
```

```
return true
}), [items, dq, fCategory, fPriceMin, fPriceMax, fDurMin, fDurMax, fActive])
const totalPages = Math.max(1, Math.ceil(filteredItems.length / perPage))
const safePage = Math.min(page, totalPages)
const startIdx = (safePage - 1) * perPage
const pageItems = useMemo(()=> filteredItems.slice(startIdx, startIdx + perPage), [filteredItems,
startIdx, perPage])
const clearFilters = ()=>{
  setQ("); setFCategory("); setFPriceMin("); setFPriceMax("); setFDurMin("); setFDurMax(");
setFActive("); setPage(1)
  load()
}
const onInteract = ()=>{ setSuccess("); setError("); setToast({type:",msg:"}) }
const onEnter = (e)=>{ if(e.key==='Enter'){ e.preventDefault(); setPage(1); onInteract() } }
useEffect(()=>{
 if (error) setToast({ type:'error', msg:error })
}, [error])
 useEffect(()=>{
  if (success) setToast({ type:'success', msg:success })
}, [success])
return (
  <div className="container py-4">
   <h2 className="mb-3">Service Management</h2>
   <div ref={formRef} className="card p-3 mb-3">
    <form onSubmit={submit} className="row g-3">
```

```
<div className="col-md-4">
      <label className="form-label">Name</label>
      <input className={`form-control ${nameTouched && !form.name ? 'is-invalid':"}`}</pre>
value={form.name} onChange={e=>setForm(f=>({...f,name:e.target.value}))}
onBlur={()=>setNameTouched(true)} onFocus={()=>setNameTouched(false)} required />
      {nameTouched &&!form.name? (<div className="invalid-feedback">Name is required</div>)
: null}
     </div>
     <div className="col-md-4">
      <label className="form-label">Category</label>
      <select className="form-select" value={form.category}</pre>
onChange={e=>setForm(f=>({...f,category:e.target.value}))}>
       <option value="">Select category</option>
       <option value="Massage">Massage</option>
       <option value="Facial">Facial</option>
       <option value="Hair">Hair
       <option value="Hand and Foot">Hand and Foot
       <option value="Waxing">Waxing</option>
       <option value="Eyelash">Eyelash
       <option value="Eyebrow">Eyebrow</option>
      </select>
     </div>
     <div className="col-md-4">
      <label className="form-label">Price</label>
      <input type="number" step="0.01" className={`form-control ${priceTouched && (!form.price
| | Number(form.price)<=0) ? 'is-invalid':"}`} value={form.price}
onChange={e=>setForm(f=>({...f,price:e.target.value}))} onBlur={()=>setPriceTouched(true)}
onFocus={()=>setPriceTouched(false)} required />
      {priceTouched && (!form.price | | Number(form.price)<=0) ? (<div className="invalid-</p>
feedback">Enter a positive price</div>) : null}
     </div>
     <div className="col-md-4">
```

```
<label className="form-label">Duration (mins)</label>
      <input type="number" className={`form-control ${durTouched && (!form.duration_minutes
|| Number(form.duration_minutes)<=0) ? 'is-invalid':"}`} value={form.duration_minutes}
onChange={e=>setForm(f=>({...f,duration_minutes:e.target.value}))}
onBlur={()=>setDurTouched(true)} onFocus={()=>setDurTouched(false)} required />
      {durTouched && (!form.duration_minutes || Number(form.duration_minutes)<=0) ? (<div
className="invalid-feedback">Enter a positive duration</div>) : null}
     </div>
     <div className="col-md-4">
      <label className="form-label">Image</label>
      <input type="file" accept="image/*" className="form-control"
onChange={e=>setImageFile((e.target.files && e.target.files[0]) | | null)} />
      {form.id && form.image_path ? (<div className="form-text">Current:
{form.image_path}</div>): null}
     </div>
     <div className="col-md-4">
      <label className="form-label">Active</label>
      <select className="form-select" value={form.active}</pre>
onChange={e=>setForm(f=>({...f,active:Number(e.target.value)}))}>
       <option value={1}>Yes</option>
       <option value={0}>No</option>
      </select>
     </div>
     <div className="col-12">
      <label className="form-label">Description</label>
      <textarea className="form-control" rows="2" value={form.description}
onChange={e=>setForm(f=>({...f,description:e.target.value}))} />
     </div>
     <div className="col-12 text-end">
      <button className="btn btn-primary" disabled={loading}
type="submit">{form.id?'Update':'Create'} Service</button>
```

```
{form.id? <button type="button" className="btn btn-outline-secondary ms-2" onClick={()=>{
setForm(empty); setImageFile(null) }}>Cancel</button> : null}
     </div>
    </form>
   </div>
   <div className="card p-3 mb-3" style={{ position:'sticky', top:8, zIndex:10 }}>
    <div className="row g-3 align-items-end">
     <div className="col-12 col-md-6 col-lg-3">
      <label className="form-label">Search</label>
      <input className="form-control" placeholder="Search services" value={q} onChange={e=>{
setQ(e.target.value); setPage(1); onInteract() }} onKeyDown={onEnter} onKeyPress={onEnter}
onFocus={()=>setQFocus(true)} onBlur={()=>setQFocus(false)} style={qFocus?{ boxShadow:'0 0 0 .2rem
rgba(111,66,193,.25)', borderColor:'#6f42c1' }:undefined} />
     </div>
     <div className="col-6 col-md-6 col-lg-3">
      <label className="form-label">Category</label>
      <select className="form-select" value={fCategory} onChange={e=>{
setFCategory(e.target.value); setPage(1); onInteract() }} onKeyDown={onEnter} onKeyPress={onEnter}>
       <option value="">All</option>
       <option value="Massage">Massage</option>
       <option value="Facial">Facial</option>
       <option value="Hair">Hair
       <option value="Hand and Foot">Hand and Foot
       <option value="Waxing">Waxing</option>
       <option value="Eyelash">Eyelash</option>
       <option value="Eyebrow">Eyebrow</option>
      </select>
     </div>
     <div className="col-6 col-md-6 col-lg-3">
```

```
<label className="form-label">Active</label>
      <select className="form-select" value={fActive} onChange={e=>{ setFActive(e.target.value);
setPage(1); onInteract() }} onKeyDown={onEnter} onKeyPress={onEnter}>
       <option value="">All</option>
       <option value="1">Yes</option>
       <option value="0">No</option>
      </select>
     </div>
     <div className="col-6 col-md-6 col-lg-3">
      <label className="form-label">Per page</label>
      <select className="form-select" value={perPage} onChange={e=>{
setPerPage(Number(e.target.value)); setPage(1); onInteract() }} onKeyDown={onEnter}
onKeyPress={onEnter}>
       <option value={5}>5</option>
       <option value={10}>10</option>
       <option value={20}>20</option>
       <option value={50}>50</option>
      </select>
     </div>
     <div className="col-md-6 col-lg-4">
      <label className="form-label">Price</label>
      <div className="d-flex gap-2">
       <input type="number" step="0.01" className="form-control" placeholder="Min"
value={fPriceMin} onChange={e=>{ setFPriceMin(e.target.value); setPage(1); onInteract() }}
onKeyDown={onEnter} onKeyPress={onEnter} />
       <input type="number" step="0.01" className="form-control" placeholder="Max"</pre>
value={fPriceMax} onChange={e=>{ setFPriceMax(e.target.value); setPage(1); onInteract() }}
onKeyDown={onEnter} onKeyPress={onEnter} />
      </div>
     </div>
     <div className="col-md-6 col-lg-4">
```

```
<label className="form-label">Duration (mins)</label>
      <div className="d-flex gap-2">
       <input type="number" className="form-control" placeholder="Min" value={fDurMin}</pre>
onChange={e=>{ setFDurMin(e.target.value); setPage(1); onInteract() }} onKeyDown={onEnter}
onKeyPress={onEnter} />
       <input type="number" className="form-control" placeholder="Max" value={fDurMax}</pre>
onChange={e=>{ setFDurMax(e.target.value); setPage(1); onInteract() }} onKeyDown={onEnter}
onKeyPress={onEnter} />
      </div>
     </div>
     <div className="col-md-12 col-lg-4 d-flex justify-content-lg-end align-items-end mt-2 mt-lg-0">
      <button className="btn btn-outline-primary" type="button" onClick={clearFilters}>Clear
search/filters</button>
     </div>
    </div>
   </div>
   {/* Toasts */}
   <div style={{position:'fixed', right:16, bottom:16, zIndex:9999}}>
    {toast.msg && (
     <div className={`toast align-items-center text-white ${toast.type==='error'?'bg-danger':'bg-
success'} show`} role="alert">
      <div className="d-flex">
       <div className="toast-body">{toast.msg}</div>
       <button type="button" className="btn-close btn-close-white me-2 m-auto"
onClick={()=>setToast({type:",msg:"})}></button>
      </div>
     </div>
    )}
   </div>
```

```
{filteredItems.length === 0 ? (
  <div className="text-muted">No results matched your filters.</div>
  ):(
  <div className="table-responsive">
   <thead>
    #NameCategoryPriceDurationActive</
th>
    </thead>
    {pageItems.map(s => (
     edit(s)}>
      {s.id}
      {s.name}
      {s.category | | '-'}
      P{Number(s.price).toFixed(2)}
      {s.duration_minutes} mins
      {s.active? 'Yes':'No'}
      <button className="btn btn-sm btn-outline-primary me-2" onClick={()=>edit(s)}
disabled={loading}>Edit</button>
       <button className="btn btn-sm btn-outline-danger" onClick={()=>openDelete(s)}
disabled={loading}>Delete</button>
      ))}
```

```
</div>
  )}
   <div className="d-flex justify-content-between align-items-center mt-2">
    <div className="small text-muted">Showing {filteredItems.length === 0 ? 0 : (startIdx+1)}-
{Math.min(startIdx+perPage, filteredItems.length)} of {filteredItems.length}</div>
    <div className="btn-group" role="group" aria-label="Pagination">
     <button type="button" className="btn btn-outline-secondary btn-sm" disabled={safePage<=1}
onClick={()=>{ onInteract(); setPage(p=>Math.max(1, p-1))}}>Prev</button>
     <span className="btn btn-outline-secondary btn-sm disabled">Page {safePage} /
{totalPages}</span>
     <button type="button" className="btn btn-outline-secondary btn-sm"
disabled={safePage>=totalPages} onClick={()=>{ onInteract(); setPage(p=>Math.min(totalPages,
p+1))}}>Next</button>
    </div>
   </div>
   {confirmOpen && (
    <>
     <div className="modal fade show d-block" tabIndex="-1" role="dialog" aria-modal="true"</pre>
onKeyDown={onKeyDown}>
      <div className="modal-dialog">
       <div className="modal-content" ref={delRef}>
        <div className="modal-header">
         <h5 className="modal-title">Delete service</h5>
         <button type="button" className="btn-close" aria-label="Close"
onClick={closeDelete}></button>
        </div>
        <div className="modal-body">
         Are you sure you want to delete "{toDelete?.name}"?
        </div>
        <div className="modal-footer">
```

```
frontend/src/pages/UserDashboard.jsx
import React, { useEffect, useState } from 'react'
import { listServices } from '../services/service'
import ServiceCard from '../components/ServiceCard'
import { useNavigate } from 'react-router-dom'
export default function UserDashboard(){
 const navigate = useNavigate()
 const [services, setServices] = useState([])
 const [featured, setFeatured] = useState([])
 const [showFeatured, setShowFeatured] = useState(true)
 const [visibleCount, setVisibleCount] = useState(12)
 const [q, setQ] = useState(")
 const [priceMax, setPriceMax] = useState(")
 const [category, setCategory] = useState(")
 const [loading, setLoading] = useState(false)
 const [error, setError] = useState(")
 const [toast, setToast] = useState({ type:", msg:" })
 useEffect(()=>{
  const loadServices = async ()=>{
   setLoading(true); setError(")
   try{
    const res = await listServices({ active:1, sort:'created_at', order:'DESC' })
    const rows = res.data | | []
    setServices(rows)
    setFeatured(rows.slice(0,6))
   }catch{ setError('Failed to load services') }
   finally{ setLoading(false) }
```

```
}
 loadServices()
},[])
const handleSelectForBooking = (svc) => {
 navigate('/bookings', { state: { selected: svc } })
}
const scrollToAnchor = ()=>{
 const el = document.getElementById('ud-featuredAnchor')
 if (el) el.scrollIntoView({ behavior: 'smooth', block: 'start' })
}
const fetchAll = async ()=>{
 setLoading(true); setError(")
 try{
  const res = await listServices({ active:1, sort:'created_at', order:'DESC' })
  const rows = res.data || []
  setServices(rows)
  setFeatured(rows.slice(0,6))
 }catch{ setError('Failed to load services') }
 finally{ setLoading(false) }
}
const applySearch = async (opts={})=>{
 setLoading(true); setError(")
 try{
  const qV = ('q' in opts) ? opts.q : q
  const priceV = ('priceMax' in opts) ? opts.priceMax : priceMax
```

```
const catV = ('category' in opts) ? opts.category : category
   const params = { active:1, q: qV }
   if (priceV) params.sort='price', params.order='ASC'
   const res = await listServices(params)
   let rows = res.data || []
   if (priceV) rows = rows.filter(s => Number(s.price) <= Number(priceV))</pre>
   if (catV) rows = rows.filter(s => (s.category | | ").toLowerCase().includes(catV.toLowerCase()))
   setServices(rows)
   setVisibleCount(12)
  }catch{ setError('Search failed') }
  finally{ setLoading(false) }
}
useEffect(()=>{ if (error) setToast({ type:'error', msg:error }) }, [error])
return (
  <div className="container py-4">
   <div className="d-flex justify-content-between align-items-center mb-3" style={{ position:'sticky',</pre>
top:8, zIndex:10 }}>
    <h3 className="mb-0">Discover Services</h3>
    <div className="d-flex gap-2">
     <input className="form-control" placeholder="Search services" value={q}
onChange={e=>setQ(e.target.value)} onKeyDown={e=>{ if(e.key==='Enter'){ e.preventDefault();
setShowFeatured(false); applySearch(); scrollToAnchor() } }} />
     <select className="form-select" value={priceMax} onChange={e=>{ const v=e.target.value;
setPriceMax(v); setShowFeatured(false); applySearch({ priceMax: v }); scrollToAnchor() }}>
      <option value="">Price</option>
      <option value="500">≤ ₱500</option>
      <option value="1000">≤ ₱1,000
      <option value="2000">≤ ₱2,000</option>
```

```
</select>
     <select className="form-select" value={category} onChange={e=>{ const v=e.target.value;
setCategory(v); setShowFeatured(false); applySearch({ category: v }); scrollToAnchor() }}>
      <option value="">All categories</option>
      <option value="Massage">Massage</option>
      <option value="Hair">Hair
      <option value="Nails">Nails</option>
      <option value="Skin">Skin</option>
      <option value="Package">Package</option>
     </select>
     <button className="btn btn-outline-secondary" onClick={()=>{ setShowFeatured(false);
applySearch(); scrollToAnchor() }}>Search</button>
     <button className="btn btn-outline-primary" onClick={()=>{ setQ("); setPriceMax(");
setCategory("); setVisibleCount(12); setShowFeatured(true); fetchAll(); scrollToAnchor()
}}>Clear</button>
    </div>
   </div>
   {loading && <div className="text-muted small mb-2">Loading...</div>}
   {/* Anchor for scrolling */}
   <div id="ud-featuredAnchor" />
   {showFeatured && featured.length>0 && (
    <div className="section-featured mb-3">
     <div className="d-flex align-items-end justify-content-between mb-2">
      <h5 className="mb-0">Featured</h5>
      <div className="text-muted small">Top {featured.length}</div>
     </div>
     <div className="row g-3">
```

```
{featured.map(s => (
    <div key={s.id} className="col-md-3">
     <ServiceCard service={s} onSelect={handleSelectForBooking} />
    </div>
   ))}
  </div>
 </div>
)}
<hr className="section-divider" />
<div className="d-flex align-items-end justify-content-between mb-2">
 <h5 className="mb-0">All Services</h5>
 <div className="text-muted small">{services.length} results</div>
</div>
{services.length===0?(
 <div className="text-muted">No results matched your filters.</div>
):(
 <>
  <div className="row g-3">
   {services.slice(0, visibleCount).map(s => (
    <div key={s.id} className="col-md-4">
     <ServiceCard service={s} onSelect={handleSelectForBooking} />
    </div>
   ))}
  </div>
  {visibleCount < services.length && (
   <div className="d-flex justify-content-center mt-3">
```

```
<button className="btn btn-outline-secondary" onClick={()=> setVisibleCount(v=>
Math.min(services.length, v+12))}>Load more</button>
      </div>
     )}
    </>
   )}
   {/* Toasts */}
   <div style={{position:'fixed', right:16, bottom:16, zIndex:9999}}>
    {toast.msg && (
     <div className={`toast align-items-center text-white ${toast.type==='error'?'bg-danger':'bg-</pre>
success'} show`} role="alert">
      <div className="d-flex">
       <div className="toast-body">{toast.msg}</div>
       <button type="button" className="btn-close btn-close-white me-2 m-auto"
onClick={()=>setToast({type:",msg:"})}></button>
      </div>
     </div>
    )}
   </div>
  </div>
```

}

```
frontend/src/pages/UserProfile.jsx
import React, { useEffect, useState } from 'react'
import { getMe, updateMe } from '../services/userService'
export default function UserProfile(){
const [form,setForm] = useState({ name:", email:", phone:" })
 const [loading,setLoading] = useState(false)
 const [msg,setMsg] = useState(")
 const [err,setErr] = useState(")
 const [initial,setInitial] = useState({ name:", phone:" })
 useEffect(()=>{
  (async()=>{
   try{
    const res = await getMe()
    if(res.user){
     const next = { name: res.user.name||", email: res.user.email||", phone: res.user.phone||" }
     setForm(next)
     setInitial({ name: next.name | |", phone: next.phone | | " })
    }
   }catch(e){ setErr('Failed to load profile') }
  })()
 },[])
 const submit = async (e)=>{
  e.preventDefault()
  setLoading(true); setMsg("); setErr(")
  try{
   const current = { name: form.name||", phone: form.phone||" }
```

```
if (current.name === (initial.name||") && (current.phone||") === (initial.phone||")) {
    setMsg('No changes')
    return
   }
   await updateMe({ name: current.name, phone: current.phone })
   setInitial(current)
   setMsg('Profile updated')
  }catch(e){ setErr('Update failed') }
  finally{ setLoading(false) }
}
return (
  <div className="container py-4">
   <h2 className="mb-3">My Profile</h2>
   {msg && <div className="alert alert-success">{msg}</div>}
   {err && <div className="alert alert-danger">{err}</div>}
   <form onSubmit={submit} className="card p-3">
    <div className="row g-3">
     <div className="col-md-6">
      <label className="form-label" htmlFor="profile_name">Name</label>
      <input id="profile_name" name="name" className="form-control" value={form.name}</pre>
onChange={e=>setForm(f=>({...f,name:e.target.value}))} onFocus={()=>{}} onBlur={()=>{}} />
     </div>
     <div className="col-md-6">
      <label className="form-label" htmlFor="profile_email">Email</label>
      <input id="profile_email" name="email" type="email" className="form-control"
value={form.email} disabled />
     </div>
     <div className="col-md-6">
```

```
frontend/src/services/analyticsService.js
// analyticsService.js — Client wrappers for analytics endpoints (summary, coverage, bookings).
import { httpGet } from './http'
export async function getSummary(params={}){
const q = new URLSearchParams(params).toString()
return httpGet('/api/analytics/summary${q?'?${q}':"}')
}
export async function getServiceCoverage(params={}){
const q = new URLSearchParams(params).toString()
return httpGet('/api/analytics/services-coverage${q?'?${q}':"}')
}
export async function getRightJoinDemo(params={}){
 const q = new URLSearchParams(params).toString()
return httpGet('/api/analytics/right-join-demo${q?'?${q}':"}')
}
export async function getAnalyticsBookings(params={}){
const q = new URLSearchParams(params).toString()
return httpGet('/api/analytics/bookings${q?'?${q}':"}')
}
```

```
frontend/src/services/authService.js
import { httpGet, httpPost } from './http'

export async function login(email, password){
  return httpPost('/api/auth/login', { email, password })
}

export async function logout(){
  return httpPost('/api/auth/logout')
}

export async function register(name, email, password){
  return httpPost('/api/auth/register', { name, email, password })
}

export async function me(){
  return httpGet('/api/auth/me')
}
```

```
frontend/src/services/bookingService.js
import { httpGet, httpPost, httpPut, httpDelete } from './http'
export async function listBookings(params = {}){
const q = new URLSearchParams(params).toString()
return httpGet(`/api/bookings${q ? `?${q}` : "}`)
}
export async function createBooking(payload){
return httpPost('/api/bookings', payload)
}
export async function updateBooking(payload){
return httpPut('/api/bookings', payload)
}
export async function updateBookingStatus(payload){
const { httpPatch } = await import('./http')
 return httpPatch('/api/bookings/status', payload)
}
export async function rescheduleBooking(payload){
const { httpPatch } = await import('./http')
 return httpPatch('/api/bookings/reschedule', payload)
}
export async function deleteBooking(id){
return httpDelete('/api/bookings', { id })
}
export async function cancelBooking(id){
return updateBookingStatus({ id, status: 'canceled' })
}
```

```
frontend/src/services/http.js
// http.js — HTTP helpers for API base and JSON/form requests.
export const API = import.meta.env.VITE_API_BASE_URL | |
'http://localhost/glowupnow/backend/public'
export async function httpGet(path, opts = {}) {
 const res = await fetch(`${API}${path}`, {
  method: 'GET',
  credentials: 'include',
  headers: { Accept: 'application/json', ...(opts.headers | | {}) },
 })
 return handle(res)
}
export async function httpPost(path, body = {}, opts = {}) {
 const res = await fetch(`${API}${path}`, {
  method: 'POST',
  credentials: 'include',
  headers: { 'Content-Type': 'application/json', ...(opts.headers | | {}) },
  body: JSON.stringify(body),
 })
 return handle(res)
}
export async function httpPut(path, body = {}, opts = {}) {
 const res = await fetch(`${API}${path}`, {
  method: 'PUT',
  credentials: 'include',
  headers: { 'Content-Type': 'application/json', ...(opts.headers | | {}) },
```

```
body: JSON.stringify(body),
 })
 return handle(res)
}
export async function httpPostForm(path, formData, opts = {}) {
 const res = await fetch(`${API}${path}`, {
  method: 'POST',
  credentials: 'include',
  headers: { ...(opts.headers | | {}) },
  body: formData,
 })
 return handle(res)
}
export async function httpPutForm(path, formData, opts = {}) {
 const res = await fetch(`${API}${path}`, {
  method: 'PUT',
  credentials: 'include',
  headers: { ...(opts.headers | | {}) },
  body: formData,
 })
 return handle(res)
}
export async function httpPatch(path, body = {}, opts = {}) {
 const res = await fetch(`${API}${path}`, {
  method: 'PATCH',
  credentials: 'include',
```

```
headers: { 'Content-Type': 'application/json', ...(opts.headers | | {}) },
  body: JSON.stringify(body),
 })
 return handle(res)
}
export async function httpDelete(path, body = null, opts = {}) {
 const hasBody = body !== null && body !== undefined
 const res = await fetch(`${API}${path}`, {
  method: 'DELETE',
  credentials: 'include',
  headers: hasBody ? { 'Content-Type': 'application/json', ...(opts.headers | | {}) } : { ...(opts.headers | |
{}) },
  body: hasBody? JSON.stringify(body): undefined,
 })
 return handle(res)
}
async function handle(res) {
 const text = await res.text()
 let data = null
 if (text) {
  try { data = JSON.parse(text) } catch { /* non-JSON response */ }
 }
 if (!res.ok) {
  const message = (data && (data.error || data.message)) || text || 'Request failed'
  const err = new Error(message)
  err.status = res.status
  err.data = data
```

```
err.raw = text
throw err
}
return data
}
```

```
frontend/src/services/serviceService.js
import { httpGet, httpPost, httpPut, httpDelete, httpPostForm } from './http'
export async function listServices(params = {}){
const q = new URLSearchParams(params).toString()
return httpGet('/api/services${q?'?${q}':"}')
}
export async function createService(payload){
return httpPost('/api/services', payload)
}
export async function updateService(payload){
return httpPut('/api/services', payload)
}
export async function deleteService(id){
return httpDelete('/api/services', { id })
}
// FormData versions (also used for updates when including files)
export async function createServiceForm(formData){
// Controller will treat presence of 'id' as update
return httpPostForm('/api/services', formData)
}
```

```
frontend/src/services/userService.js
// userService.js — Authenticated user profile and admin user listing helpers.
import { httpGet, httpPut } from './http'
export async function getMe(){
return httpGet('/api/auth/me')
}
export async function updateMe(payload){
return httpPut('/api/users', payload)
}
// Admin: list all users (supports ?q=&page=&perPage=)
export async function listUsers(params){
const qs = new URLSearchParams(params | | {}).toString();
return httpGet('/api/admin/users' + (qs ? ('?' + qs) : "));
}
// Admin: update user (role, name, phone)
export async function updateUser(payload){
return httpPut('/api/admin/users', payload);
}
// Admin: delete user
export async function deleteUser(id){
 return fetch('/api/admin/users?id=' + encodeURIComponent(id), {
  method: 'DELETE',
  credentials: 'include',
  headers: { 'Accept': 'application/json' }
```

```
}).then(r=>r.json());
}
```

## **Backend**

## Controllers

```
backend/app/controllers/AdminUserController.php
<?php
// AdminUserController — Admin-only user listing with search and pagination (read-only).
namespace App\controllers;
use App\core\Controller;
use App\core\Request;
use App\core\Response;
use App\core\Database;
class AdminUserController extends Controller {
  public function index(Request $req, Response $res): void {
    $pdo = Database::pdo();
    $q = trim($req->query()['q'] ?? ");
    $page = max(1, (int)($req->query()['page'] ?? 1));
    $perPage = min(100, max(5, (int)($req->query()['perPage'] ?? ($req->query()['per_page']
?? 20))));
    $offset = ($page - 1) * $perPage;
    $where = [];
    $params = [];
    if ($q !== "){
      $where[] = '(name LIKE :q OR email LIKE :q OR role LIKE :q)';
```

```
$params[':q'] = '%'.$q.'%';
    }
    $whereSql = $where ? ('WHERE '.implode(' AND ', $where)) : ";
    $stmt = $pdo->prepare("SELECT COUNT(*) FROM users $whereSql");
    $stmt->execute($params);
    $total = (int)$stmt->fetchColumn();
    $sql = "SELECT id, name, email, role, phone, created_at
        FROM users $whereSql
        ORDER BY created_at DESC, id DESC
        LIMIT :limit OFFSET :offset";
    $stmt = $pdo->prepare($sql);
    foreach ($params as $k=>$v){ $stmt->bindValue($k, $v); }
    $stmt->bindValue(':limit', $perPage, \PDO::PARAM_INT);
    $stmt->bindValue(':offset', $offset, \PDO::PARAM_INT);
    $stmt->execute();
    $rows = $stmt->fetchAll();
    $res->json([
      'total' => $total,
      'page' => $page,
      'per_page' => $perPage,
      'rows' => $rows,
    ]);
  }
}
```

```
backend/app/controllers/AuthController.php
<?php
namespace App\controllers;
use App\core\Controller;
use App\core\Request;
use App\core\Response;
use App\models\User;
class AuthController extends Controller {
  public function register(Request $req, Response $res): void {
    $data = $req->body();
    $name = trim($data['name'] ?? ");
    $email = strtolower(trim($data['email'] ?? "));
    $password = (string)($data['password'] ?? ");
    $errors = [];
    if ($name === ") $errors['name'] = 'Name is required';
    if (!filter var($email, FILTER VALIDATE EMAIL)) $errors['email'] = 'Invalid email';
    if (strlen($password) < 6) $errors['password'] = 'Password must be at least 6 characters';
    if ($errors) { $res->json(['errors'=>$errors],422); return; }
    if (User::findByEmail($email)) { $res->json(['errors'=>['email'=>'Email already in
use']],422); return; }
    $hash = password_hash($password, PASSWORD_BCRYPT);
    $userId = User::create([ 'name'=>$name, 'email'=>$email, 'password_hash'=>$hash,
'role'=>'customer']);
```

```
if (!$userId) { $res->json(['error'=>'Registration failed'],500); return; }
    $ SESSION['user id'] = $userId;
    $ SESSION['role'] = 'customer';
    $res->json(['message'=>'Registered','user'=>User::findById($userId)],201);
  }
  public function login(Request $req, Response $res): void {
    $data = $req->body();
    $email = strtolower(trim($data['email'] ?? "));
    $password = (string)($data['password'] ?? ");
    if (!filter var($email, FILTER VALIDATE EMAIL) | | $password===") { $res-
>json(['error'=>'Invalid credentials'],401); return; }
    $user = User::findByEmail($email);
    if (!$user | | !password_verify($password, $user['password_hash'])) { $res-
>json(['error'=>'Invalid credentials'],401); return; }
    session_regenerate_id(true);
    $ SESSION['user id'] = (int)$user['id'];
    $ SESSION['role'] = $user['role'];
    $res->json(['message'=>'Logged in','user'=>User::publicUser($user)],200);
  }
  public function logout(Request $req, Response $res): void {
    $ SESSION = [];
    if (ini_get("session.use_cookies")) {
      $params = session_get_cookie_params();
      setcookie(session_name(), ", time() - 42000, $params['path'], $params['domain'],
$params['secure'], $params['httponly']);
```

```
}
session_destroy();
$res->json(['message'=>'Logged out']);
}

public function me(Request $req, Response $res): void {
    $uid = $_SESSION['user_id'] ?? null;
    if (!$uid) { $res->json(['user'=>null],200); return; }
    $user = User::findByld((int)$uid);
    $res->json(['user'=>User::publicUser($user)]);
}
```

```
backend/app/controllers/BookingController.php
<?php
namespace App\controllers;
use App\core\Controller;
use App\core\Request;
use App\core\Response;
use App\models\Booking;
use App\services\TimeSlotService;
use RuntimeException;
class BookingController extends Controller {
  public function index(Request $req, Response $res): void {
    $filters = $req->query();
    $res->ison(['data'=>Booking::list($filters)]);
  }
  public function store(Request $req, Response $res): void {
    $data = $req->body();
    $errors = [];
    $userId = (int)($data['user_id'] ?? ($_SESSION['user_id'] ?? 0));
    $serviceId = (int)($data['service_id'] ?? 0);
    $date = $data['date'] ?? ";
    $start = $data['start time'] ?? ";
    if ($userId<=0) $errors['user id']='User required';</pre>
    if ($serviceId<=0) $errors['service_id']='Service required';</pre>
    if (!$date) $errors['date']='Date required';
```

```
if (!$start) $errors['start_time']='Start time required';
  if ($errors) { $res->json(['errors'=>$errors],422); return; }
  $end = TimeSlotService::computeEndTime($serviceId, $start);
  // In no-staff mode, enforce general business hours only.
  if (!TimeSlotService::isWithinWorkingHours(0, $date, $start, $end)) {
    $res->json(['error'=>'Outside working hours'],422); return;
  }
  try {
    $id = Booking::create([
      'user_id'=>$userId,
      'service id'=>$serviceId,
      'date'=>$date,
      'start_time'=>$start,
      'end time'=>$end,
      'notes'=>$data['notes'] ?? ",
      'status'=>'pending'
    ]);
    $res->json(['message'=>'Created','id'=>$id],201);
  } catch (RuntimeException $e) {
    if ($e->getMessage()==='Slot taken') { $res->json(['error'=>'Slot taken'],409); return; }
    $res->json(['error'=>'Create failed'],500);
  }
}
public function update(Request $req, Response $res): void {
  $data = $req->body();
```

```
$id = (int)($data['id'] ?? 0);
  if ($id<=0) { $res->json(['error'=>'Invalid id'],400); return; }
  $ok = Booking::update($id,$data);
  $res->json(['updated'=>$ok]);
}
public function updateStatus(Request $req, Response $res): void {
  $data = $req->body();
  $id = (int)($data['id'] ?? 0);
  $status = $data['status'] ?? ";
  if ($id<=0 | | !in_array($status,['pending','confirmed','canceled','completed'],true)) {
    $res->json(['error'=>'Invalid input'],422); return;
  }
  $ok = Booking::updateStatus($id,$status);
  $res->json(['updated'=>$ok]);
}
public function destroy(Request $req, Response $res): void {
  $id = (int)($req->query()['id'] ?? ($req->body()['id'] ?? 0));
  if ($id<=0) { $res->json(['error'=>'Invalid id'],400); return; }
  $ok = Booking::delete($id);
  $res->json(['deleted'=>$ok]);
}
```

}

```
backend/app/controllers/DashboardController.php
<?php
// DashboardController — Admin analytics endpoints: summary, service coverage, bookings
list and CSV.
namespace App\controllers;
use App\core\Controller;
use App\core\Request;
use App\core\Response;
use App\core\Database;
class DashboardController extends Controller {
  public function summary(Request $req, Response $res): void {
    $pdo = Database::pdo();
    $from = $req->query()['from'] ?? date('Y-m-01');
    $to = $req->query()['to'] ?? date('Y-m-t');
    $stmt = $pdo->prepare("SELECT COUNT(*) cnt FROM bookings WHERE date BETWEEN
:from AND :to");
    $stmt->execute([':from'=>$from, ':to'=>$to]);
    $totalBookings = (int)$stmt->fetchColumn();
    $stmt = $pdo->prepare("SELECT s.name, COUNT(*) cnt
                FROM bookings b
                INNER JOIN services s ON s.id=b.service_id
                WHERE b.date BETWEEN :from AND :to
                GROUP BY s.id, s.name
                ORDER BY cnt DESC
```

```
LIMIT 5");
    $stmt->execute([':from'=>$from, ':to'=>$to]);
    $topServices = $stmt->fetchAll();
    // status breakdown
    $stmt = $pdo->prepare("SELECT status, COUNT(*) cnt
                FROM bookings
                WHERE date BETWEEN :from AND :to
                GROUP BY status");
    $stmt->execute([':from'=>$from, ':to'=>$to]);
    $byStatus = $stmt->fetchAll();
    // category breakdown
    $stmt = $pdo->prepare("SELECT COALESCE(NULLIF(s.category,"), 'Uncategorized') AS
category, COUNT(*) cnt
                FROM bookings b
                INNER JOIN services s ON s.id=b.service id
                WHERE b.date BETWEEN :from AND :to
                GROUP BY COALESCE(NULLIF(s.category,"), 'Uncategorized')
                ORDER BY cnt DESC");
    $stmt->execute([':from'=>$from, ':to'=>$to]);
    $byCategory = $stmt->fetchAll();
    // daily trend within range
    $stmt = $pdo->prepare("SELECT date, COUNT(*) cnt
                FROM bookings
                WHERE date BETWEEN :from AND :to
```

```
GROUP BY date
                ORDER BY date ASC");
    $stmt->execute([':from'=>$from, ':to'=>$to]);
    $daily = $stmt->fetchAll();
    // Revenue totals and average duration for services booked in range
    $stmt = $pdo->prepare("SELECT COALESCE(SUM(s.price),0) AS total rev,
COALESCE(AVG(s.duration_minutes),0) AS avg_duration
                FROM bookings b
                INNER JOIN services s ON s.id=b.service id
                WHERE b.date BETWEEN :from AND :to");
    $stmt->execute([':from'=>$from, ':to'=>$to]);
    $row = $stmt->fetch();
    $totalRevenue = (float)($row['total rev'] ?? 0);
    $avgDuration = (float)($row['avg_duration'] ?? 0);
    \text{$days = max(1, (int)((strtotime($to) - strtotime($from)) / 86400) + 1);}
    $avgPerDay = $totalRevenue / $days;
    // Revenue by category (no HAVING filter)
    $stmt = $pdo->prepare("SELECT COALESCE(NULLIF(s.category,"), 'Uncategorized') AS
category, COALESCE(SUM(s.price),0) AS total_rev
                FROM bookings b
                INNER JOIN services s ON s.id=b.service_id
                WHERE b.date BETWEEN :from AND :to
                GROUP BY COALESCE(NULLIF(s.category,"), 'Uncategorized')
                ORDER BY total rev DESC");
    $stmt->execute([':from'=>$from, ':to'=>$to]);
    $revByCategory = $stmt->fetchAll();
```

```
$res->json([
    'range' => ['from'=>$from,'to'=>$to],
    'totals' => ['bookings'=>$totalBookings],
    'top_services' => $topServices,
    'by_status' => $byStatus,
    'by category' => $byCategory,
    'daily' => $daily,
    'revenue' => [
      'total' => $totalRevenue,
      'avg_per_day' => $avgPerDay,
      'avg duration minutes' => $avgDuration,
    ],
    'revenue_by_category' => $revByCategory,
    'bounds' => [
      'min date' => $bounds['min date'] ?? null,
      'max_date' => $bounds['max_date'] ?? null,
    ],
  ]);
}
public function bookingsCsv(Request $req, Response $res): void {
  $pdo = Database::pdo();
  $q = $req->query()['q'] ?? ";
  $status = $req->query()['status'] ?? ";
  $from = $req->query()['from'] ?? date('Y-m-01');
  $to = $req->query()['to'] ?? date('Y-m-t');
```

```
$where = ["b.date BETWEEN :from AND :to"];
    $params = [':from'=>$from, ':to'=>$to];
    if ($status !== ") { $where[] = 'b.status = :status'; $params[':status'] = $status; }
    if ($q !== ") {
      $where[] = '(b.id = :idq OR u.name LIKE :uq OR s.name LIKE :sq)';
      $params[':idq'] = ctype digit($q) ? (int)$q : -1;
      $params[':uq'] = '%'.$q.'%';
      $params[':sq'] = '%'.$q.'%';
    }
    $whereSql = 'WHERE '.implode(' AND ', $where);
    header('Content-Type: text/csv; charset=utf-8');
    header('Content-Disposition: attachment;
filename="bookings_'.($from).'_to_'.($to).'.csv"');
    $out = fopen('php://output', 'w');
    fputcsv($out, ['ID','Date','Start','End','Status','Customer','Service','Price','Notes']);
    $stmt = $pdo->prepare("SELECT b.id, b.date, b.start time, b.end time, b.status, b.notes,
                    u.name AS customer_name, s.name AS service_name, s.price
                 FROM bookings b
                 INNER JOIN services s ON s.id=b.service id
                 INNER JOIN users u ON u.id=b.user id
                 $whereSql
                 ORDER BY b.date DESC, b.start_time DESC");
    $stmt->execute($params);
    while ($r = $stmt->fetch()) {
      fputcsv($out, [
```

```
$r['id'], $r['date'], $r['start_time'], $r['end_time'], $r['status'],
        $r['customer_name'], $r['service_name'], number_format((float)$r['price'],2,'.',''),
$r['notes']
      ]);
    }
    fclose($out);
    exit;
  }
  public function rightJoinDemo(Request $req, Response $res): void {
    $pdo = Database::pdo();
    $from = $req->query()['from'] ?? date('Y-m-01');
    $to = $req->query()['to'] ?? date('Y-m-t');
    // RIGHT JOIN example (mirrors the LEFT JOIN coverage but uses RIGHT JOIN syntax):
    // Ensures all services appear even if they have zero bookings in the date range.
    $stmt = $pdo->prepare("SELECT s.id, s.name, COALESCE(COUNT(b.id),0) AS bookings
                FROM bookings b
                RIGHT JOIN services s
                 ON s.id = b.service_id
                 AND b.date BETWEEN :from AND :to
                GROUP BY s.id, s.name
                ORDER BY bookings DESC, s.name ASC");
    $stmt->execute([':from'=>$from, ':to'=>$to]);
    $rows = $stmt->fetchAll();
    $res->json([
```

```
'range' => ['from'=>$from,'to'=>$to],
    'services' => $rows,
 1);
}
public function serviceCoverage(Request $req, Response $res): void {
  $pdo = Database::pdo();
  $from = $req->query()['from'] ?? date('Y-m-01');
  $to = $req->query()['to'] ?? date('Y-m-t');
  // LEFT JOIN: include services with zero bookings in the window
  $stmt = $pdo->prepare("SELECT s.id, s.name, COALESCE(COUNT(b.id),0) AS bookings
              FROM services s
              LEFT JOIN bookings b
               ON b.service id = s.id
               AND b.date BETWEEN :from AND :to
              GROUP BY s.id, s.name
              ORDER BY bookings DESC, s.name ASC");
  $stmt->execute([':from'=>$from, ':to'=>$to]);
  $rows = $stmt->fetchAll();
  $res->json([
    'range' => ['from'=>$from,'to'=>$to],
    'services' => $rows,
 1);
}
```

```
public function bookingsList(Request $req, Response $res): void {
    $pdo = Database::pdo();
    $q = $req->query()['q'] ?? ";
    $status = $req->query()['status'] ?? ";
    $from = $req->query()['from'] ?? date('Y-m-01');
    $to = $req->query()['to'] ?? date('Y-m-t');
    $page = max(1, (int)($req->query()['page'] ?? 1));
    $perPage = min(100, max(5, (int)($req->query()['per_page'] ?? 20)));
    $offset = ($page - 1) * $perPage;
    $where = ["b.date BETWEEN :from AND :to"];
    $params = [':from'=>$from, ':to'=>$to];
    if ($status !== ") { $where[] = 'b.status = :status'; $params[':status'] = $status; }
    if ($q !== ") {
      $where[] = '(b.id = :idg OR u.name LIKE :ug OR s.name LIKE :sg)';
      $params[':idq'] = ctype digit($q) ? (int)$q : -1;
      $params[':uq'] = '%'.$q.'%';
      $params[':sq'] = '%'.$q.'%';
    }
    $whereSql = 'WHERE '.implode(' AND ', $where);
    $stmt = $pdo->prepare("SELECT COUNT(*) FROM bookings b INNER JOIN services s ON
s.id=b.service id INNER JOIN users u ON u.id=b.user id $whereSql");
    $stmt->execute($params);
    $total = (int)$stmt->fetchColumn();
    $stmt = $pdo->prepare("SELECT b.id, b.date, b.start_time, b.end_time, b.status, b.notes,
b.created at,
```

```
s.name AS service_name, s.price, u.name AS customer_name
               FROM bookings b
               INNER JOIN services s ON s.id=b.service_id
               INNER JOIN users u ON u.id=b.user_id
               $whereSql
               ORDER BY b.date DESC, b.start_time DESC
               LIMIT :limit OFFSET :offset");
  foreach ($params as $k=>$v) { $stmt->bindValue($k, $v); }
  $stmt->bindValue(':limit', $perPage, \PDO::PARAM_INT);
  $stmt->bindValue(':offset', $offset, \PDO::PARAM_INT);
  $stmt->execute();
  $rows = $stmt->fetchAll();
  $res->json([
    'total' => $total,
    'page' => $page,
    'per_page' => $perPage,
    'rows' => $rows,
  ]);
}
```

}

```
backend/app/controllers/ServiceController.php
<?php
// ServiceController — Public service listing and admin create/update/delete with image
uploads.
namespace App\controllers;
use App\core\Controller;
use App\core\Request;
use App\core\Response;
use App\models\Service;
class ServiceController extends Controller {
  public function index(Request $req, Response $res): void {
    $q = trim($req->query()['q'] ?? ");
    $active = $req->query()['active'] ?? null;
    $sort = $req->query()['sort'] ?? 'created_at';
    $order = strtoupper($req->query()['order'] ?? 'DESC');
    if (!in array($order, ['ASC','DESC'], true)) { $order = 'DESC'; }
    $services = Service::list($q, $active, $sort, $order);
    $res->ison(['data'=>$services]);
  }
  public function store(Request $req, Response $res): void {
    // Accept both JSON and multipart/form-data
    $data = $req->body();
    $id = (int)($data['id'] ?? 0);
    $name = trim($data['name'] ?? ");
```

```
// Defaults: price and duration have sensible fallbacks
    $price = isset($data['price']) ? (float)$data['price'] : 500.0;
    if ($price <= 0) { $price = 500.0; }
    $duration = isset($data['duration minutes']) ? (int)$data['duration minutes'] : 60;
    if ($duration <= 0) { $duration = 60; }
    $desc = trim($data['description'] ?? ");
    $category = trim($data['category'] ?? ");
    $imagePath = trim($data['image path'] ?? ");
    $isFeatured = (int)($data['is featured'] ?? 0);
    // Handle uploaded file if present
    if (!empty($ FILES['image']) && is uploaded file($ FILES['image']['tmp name'])) {
      $root = dirname(__DIR___, 2);
      $uploadDir = $root . '/public/uploads/services';
      if (!is_dir($uploadDir)) { @mkdir($uploadDir, 0775, true); }
      $ext = pathinfo($ FILES['image']['name'], PATHINFO EXTENSION) ?: 'jpg';
      $safe = preg_replace('/[^a-zA-Z0-9_-]/','', strtolower(pathinfo($_FILES['image']['name'],
PATHINFO FILENAME)));
      if ($safe===") { $safe = 'service'; }
      $filename = $safe . '-' . time() . '.' . $ext;
      $dest = $uploadDir . '/' . $filename;
      if (!move_uploaded_file($_FILES['image']['tmp_name'], $dest)) {
         $res->json(['error'=>'Failed to upload image'], 500); return;
      }
      // Public path exposed via backend/public base
      $imagePath = '/uploads/services/' . $filename;
    }
```

```
$errors = [];
if ($name===") $errors['name']='Name required';
if ($price<=0) $errors['price']='Price must be positive';
if ($duration<=0) $errors['duration_minutes']='Duration must be positive';
if ($errors) { $res->json(['errors'=>$errors],422); return; }
if ($id > 0) {
  $current = Service::findById($id);
  if (!$current) { $res->json(['error'=>'Not found'],404); return; }
  // Preserve current image if none provided
  if ($imagePath === ") { $imagePath = $current['image path'] ?? null; }
  $ok = Service::update($id, [
    'name'=>$name,
    'category'=>$category ?: null,
    'description'=>$desc,
    'price'=>$price,
    'duration minutes'=>$duration,
    'image path'=>$imagePath,
    'is_featured'=>$isFeatured,
    'active'=>$data['active'] ?? $current['active'] ?? 1,
  ]);
  if (!$ok) { $res->json(['error'=>'Update failed'],500); return; }
  $res->json(['message'=>'Updated','id'=>$id]);
  return;
}
```

```
$newId = Service::create([
    'name'=>$name,
    'category'=>$category ?: null,
    'description'=>$desc,
    'price'=>$price,
    'duration_minutes'=>$duration,
    'image_path'=>$imagePath ?: null,
    'is featured'=>$isFeatured
  ]);
  $res->json(['message'=>'Created','id'=>$newld],201);
}
public function update(Request $req, Response $res): void {
  $data = $req->body();
  $id = (int)($data['id'] ?? 0);
  if ($id<=0) { $res->json(['error'=>'Invalid id'],400); return; }
  $ok = Service::update($id, $data);
  if (!$ok) { $res->ison(['error'=>'Update failed'],500); return; }
  $res->json(['message'=>'Updated']);
}
public function destroy(Request $req, Response $res): void {
  $id = (int)($req->query()['id'] ?? ($req->body()['id'] ?? 0));
  if ($id<=0) { $res->json(['error'=>'Invalid id'],400); return; }
  $ok = Service::delete($id);
  $res->json(['deleted'=>$ok]);
}
```

```
backend/app/controllers/StreamController.php
<?php
// StreamController — Server-Sent Events (SSE) stream for lightweight real-time pings.
namespace App\controllers;
use App\core\Request;
use App\core\Response;
class StreamController {
  public function bookings(Request $req, Response $res): void {
    // SSE headers
    header('Content-Type: text/event-stream');
    header('Cache-Control: no-cache');
    header('Connection: keep-alive');
    // Ensure output buffering does not interfere
    if (function_exists('apache_setenv')) { @apache_setenv('no-gzip', '1'); }
    @ini_set('zlib.output_compression', '0');
    @ini_set('implicit_flush', '1');
    while (ob_get_level() > 0) { @ob_end_flush(); }
    @ob_implicit_flush(1);
    // Simple heartbeat loop; real events could be pushed on changes
    $start = time();
    $maxSeconds = 300; // 5 minutes per connection
    echo ": connected\n\n"; // comment to open the stream
    flush();
    while (true) {
      if (connection_aborted()) { break; }
```

```
$elapsed = time() - $start;
if ($elapsed > $maxSeconds) { break; }
echo "event: ping\n";
echo "data: {}\n\n";
flush();
// 25s between pings
sleep(25);
}
// graceful end
echo "event: end\n";
echo "data: {}\n\n";
flush();
}
```

```
backend/app/controllers/UserController.php
<?php
namespace App\controllers;
use App\core\Controller;
use App\core\Request;
use App\core\Response;
use App\models\User;
class UserController extends Controller {
  public function index(Request $req, Response $res): void {
    $uid = $_SESSION['user_id'] ?? null;
    if (!$uid) { $res->json(['error'=>'Unauthorized'],401); return; }
    $user = User::findById((int)$uid);
    $res->json(['user'=>User::publicUser($user)]);
  }
  public function update(Request $req, Response $res): void {
    $uid = $_SESSION['user_id'] ?? null;
    if (!$uid) { $res->json(['error'=>'Unauthorized'],401); return; }
    $data = $req->body();
    $name = trim($data['name'] ?? ");
    if ($name===") { $res->json(['errors'=>['name'=>'Name required']],422); return; }
    $ok = User::updateProfile((int)$uid, ['name'=>$name,'phone'=>$data['phone'] ?? null]);
    $res->json(['updated'=>$ok]);
  }
}
```

```
backend/app/core/Controller.php

<?php

// Base Controller — Common base for controllers; can hold shared helpers.
namespace App\core;

class Controller {
    protected function json($data, int $status = 200): void {
        http_response_code($status);
        header('Content-Type: application/json');
        echo json_encode($data);
    }
}</pre>
```

```
backend/app/core/Database.php
<?php
// Database — PDO connection singleton/factory for database access.
namespace App\core;
use PDO;use PDOException;use RuntimeException;
class Database {
  private static ?PDO $pdo = null;
  public static function pdo(): PDO {
    if (self::$pdo === null) {
      $host = $_ENV['DB_HOST'] ?? '127.0.0.1';
      $port = (int)($_ENV['DB_PORT'] ?? 3306);
      $db = $_ENV['DB_DATABASE'] ?? 'glowupnow';
      $user = $_ENV['DB_USERNAME'] ?? 'root';
      $pass = $_ENV['DB_PASSWORD'] ?? ";
      $dsn = "mysql:host={$host};port={$port};dbname={$db};charset=utf8mb4";
      try {
        self::$pdo = new PDO($dsn, $user, $pass, [
          PDO::ATTR_ERRMODE => PDO::ERRMODE_EXCEPTION,
          PDO::ATTR_DEFAULT_FETCH_MODE => PDO::FETCH_ASSOC,
          PDO::ATTR_EMULATE_PREPARES => false,
        ]);
      } catch (PDOException $e) {
        throw new RuntimeException('DB connection failed: '. $e->getMessage());
     }
    }
    return self::$pdo;
```

}
}

```
backend/app/core/Request.php
<?php
// Request — Encapsulates HTTP request data (query, body, files, headers).
namespace App\core;
class Request {
  public function method(): string { return strtoupper($_SERVER['REQUEST_METHOD'] ?? 'GET'); }
  public function path(): string {
    $uri = $_SERVER['REQUEST_URI'] ?? '/';
    $script = $_SERVER['SCRIPT_NAME'] ?? ";
    $base = rtrim(str_replace('index.php','',$script),'/');
    $path = parse_url($uri, PHP_URL_PATH) ?? '/';
    if ($base && str_starts_with($path, $base)) { $path = substr($path, strlen($base)); }
    return '/' . ltrim($path,'/');
  }
  public function body(): array {
    $input = file_get_contents('php://input');
    $contentType = $_SERVER['CONTENT_TYPE'] ?? ";
    if (str_contains($contentType,'application/json')) {
      $decoded = json_decode($input, true);
      return is_array($decoded) ? $decoded : [];
    }
    return $_POST ?: [];
  }
  public function query(): array { return $_GET ?: []; }
  public function headers(): array { return function_exists('getallheaders') ? (getallheaders() ?: []) : []; }
}
```

```
backend/app/core/Response.php

<?php

// Response — Minimal JSON response helper.
namespace App\core;

class Response {
   public function json($data, int $status = 200): void {
     http_response_code($status);
     header('Content-Type: application/json');
     echo json_encode($data);
   }
}</pre>
```

```
backend/app/core/Router.php
<?php
namespace App\core;
class Router {
  private array $routes = [];
  private array $middlewares = [];
  public function add(string $method, string $path, callable $handler, array $mw = []): void {
    $this->routes[strtoupper($method)][$path] = $handler;
    if (!empty($mw)) { $this->middlewares[$method.$path] = $mw; }
  }
  public function dispatch(Request $req, Response $res): void {
    $method = $req->method();
    $path = $req->path();
    $handler = $this->routes[$method][$path] ?? null;
    if (!$handler) { $res->json(['error'=>'Not Found','path'=>$path],404); return; }
    $stack = $this->middlewares[$method.$path] ?? [];
    $next = function() use (&$handler, $req, $res) { call_user_func($handler, $req, $res); };
    while ($mw = array_pop($stack)) {
      $prev = $next;
      $next = function() use ($mw, $req, $res, $prev) { $mw($req, $res, $prev); };
    }
    $next();
  }
}
```

## Middlewares

```
backend/app/middlewares/CorsMiddleware.php
<?php
namespace App\middlewares;
use App\core\Request;
use App\core\Response;
class CorsMiddleware {
  public function __invoke(Request $req, Response $res, callable $next): void {
    $origins = $_ENV['CORS_ALLOWED_ORIGINS'] ?? ";
    $allowed = array_filter(array_map('trim', explode(',', $origins)));
    $origin = $_SERVER['HTTP_ORIGIN'] ?? ";
    // Allow any localhost origin (any port) during development
    $isLocalhost = $origin && (
      preg_match('#^http://localhost(?::\d+)?$#', $origin) ||
      preg_match('#^http://127\.0\.1(?::\d+)?$#', $origin)
    );
    if ($origin && ($isLocalhost || in_array($origin, $allowed, true))) {
      header("Access-Control-Allow-Origin: {$origin}");
      header('Vary: Origin');
      header('Access-Control-Allow-Credentials: true');
    }
    // Echo requested headers if provided (preflight), fallback to common defaults
    $reqHeaders = $_SERVER['HTTP_ACCESS_CONTROL_REQUEST_HEADERS'] ?? 'Content-Type,
Authorization, Accept';
    header("Access-Control-Allow-Headers: {$reqHeaders}");
```

```
header('Access-Control-Allow-Methods: GET, POST, PUT, PATCH, DELETE, OPTIONS');
```

```
if ($req->method() === 'OPTIONS') {
    http_response_code(204);
    exit;
    }
    $next();
}
```

```
backend/app/models/Booking.php
<?php
// Booking model — Data access for bookings with joins to services and users.
namespace App\models;
use App\core\Database;use PDO;use PDOException;use RuntimeException;
class Booking {
  public static function list(array $filters = []): array {
    $pdo = Database::pdo();
    $sql = "SELECT b.id, b.user_id, b.service_id, b.date, b.start_time, b.end_time, b.status, b.notes,
b.created_at,
            s.name AS service_name, s.price, u.name AS customer_name
         FROM bookings b
         INNER JOIN services s ON s.id = b.service_id
        INNER JOIN users u ON u.id = b.user id
        WHERE 1";
    $params = [];
    if (!empty($filters['status'])) { $sql .= " AND b.status = :status"; $params[':status'] =
$filters['status']; }
    if (!empty($filters['service_id'])) { $sql .= " AND b.service_id = :sid"; $params[':sid'] =
(int)$filters['service_id']; }
    if (!empty($filters['user_id'])) { $sql .= " AND b.user_id = :uid"; $params[':uid'] =
(int)$filters['user_id']; }
    if (!empty($filters['from'])) { $sql .= " AND b.date >= :from"; $params[':from'] = $filters['from']; }
    if (!empty($filters['to'])) { $sql .= " AND b.date <= :to"; $params[':to'] = $filters['to']; }
    $sql .= " ORDER BY b.date DESC, b.start_time DESC";
    $stmt = $pdo->prepare($sql);
```

```
$stmt->execute($params);
    return $stmt->fetchAll();
  }
  public static function create(array $data): int {
    $pdo = Database::pdo();
    try {
      $pdo->beginTransaction();
      // No-staff mode: lock overlapping bookings for the same date/time window
      $lock = $pdo->prepare("SELECT id FROM bookings WHERE date = :date AND (
           (start_time < :end_time AND end_time > :start_time)
        ) FOR UPDATE");
      $lock->execute([
        ':date' => $data['date'],
        ':start_time' => $data['start_time'],
        ':end_time' => $data['end_time'],
      ]);
      if ($lock->fetch()) { throw new RuntimeException('Slot taken'); }
      $stmt = $pdo->prepare("INSERT INTO bookings (user_id, service_id, date, start_time, end_time,
status, notes, created_at)
                   VALUES (:user_id,:service_id,:date,:start_time,:end_time,:status,:notes,NOW())");
      $stmt->execute([
        ':user_id' => $data['user_id'],
        ':service_id' => $data['service_id'],
        ':date' => $data['date'],
        ':start_time' => $data['start_time'],
        ':end time' => $data['end time'],
        ':status' => $data['status'] ?? 'pending',
```

```
':notes' => $data['notes'] ?? ",
    ]);
    $id = (int)$pdo->lastInsertId();
    $pdo->commit();
    return $id;
  } catch (RuntimeException $e) {
    $pdo->rollBack();
    throw $e;
  } catch (PDOException $e) {
    $pdo->rollBack();
    throw $e;
 }
}
public static function update(int $id, array $data): bool {
  $pdo = Database::pdo();
  $stmt = $pdo->prepare("UPDATE bookings SET notes=:notes WHERE id=:id");
  return $stmt->execute([':notes'=>$data['notes'] ?? ", ':id'=>$id]);
}
public static function updateStatus(int $id, string $newStatus): bool {
  $pdo = Database::pdo();
  $stmt = $pdo->prepare("UPDATE bookings SET status=:status WHERE id=:id");
  return $stmt->execute([':status'=>$newStatus, ':id'=>$id]);
}
public static function delete(int $id): bool {
  $pdo = Database::pdo();
  $stmt = $pdo->prepare("DELETE FROM bookings WHERE id=:id");
```

```
return $stmt->execute([':id'=>$id]);
}
```

```
backend/app/models/Service.php
<?php
// Service model — Data access for services (CRUD) and related queries.
namespace App\models;
use App\core\Database;use PDO;
class Service {
  public static function list(string $q = ", $active = null, string $sort='created_at', string $order='DESC'):
array {
    $pdo = Database::pdo();
    $allowedSort = ['created_at','price','name'];
    if (!in_array($sort,$allowedSort,true)) $sort='created_at';
    $sql = "SELECT
id,name,category,description,price,duration_minutes,image_path,is_featured,active,created_at FROM
services WHERE 1";
    $params = [];
    if ($q !== ") {
      $sql .= " AND (name LIKE :q1 OR description LIKE :q2)";
      $params[':q1'] = '%'.$q.'%';
      $params[':q2'] = '%'.$q.'%';
    }
    if ($active !== null && $active !== ") { $sql .= " AND active = :active"; $params[':active'] =
(int)$active; }
    $sql .= " ORDER BY {$sort} {$order}";
    $stmt = $pdo->prepare($sql);
    $stmt->execute($params);
    return $stmt->fetchAll();
  }
  public static function create(array $data): int {
```

```
$pdo = Database::pdo();
    $stmt = $pdo->prepare("INSERT INTO services
(name,category,description,price,duration_minutes,image_path,is_featured,active,created_at)
VALUES (:name,:category,:description,:price,:duration,:image_path,:is_featured,1,NOW())");
    $stmt->execute([
      ':name'=>$data['name'],
      ':category'=>$data['category'] ?? null,
      ':description'=>$data['description'] ?? ",
      ':price'=>$data['price'],
      ':duration'=>$data['duration_minutes'],
      ':image_path'=>$data['image_path'] ?? null,
      ':is_featured'=>(int)($data['is_featured'] ?? 0)
    ]);
    return (int)$pdo->lastInsertId();
  }
  public static function update(int $id, array $data): bool {
    $pdo = Database::pdo();
    $stmt = $pdo->prepare("UPDATE services SET name=:name, category=:category,
description=:description, price=:price, duration_minutes=:duration, image_path=:image_path,
is_featured=:is_featured, active=:active WHERE id=:id");
    return $stmt->execute([
      ':name'=>$data['name'],
      ':category'=>$data['category'] ?? null,
      ':description'=>$data['description'] ?? ",
      ':price'=>(float)($data['price'] ?? 0),
      ':duration'=>(int)($data['duration_minutes'] ?? 0),
      ':image_path'=>$data['image_path'] ?? null,
      ':is_featured'=>(int)($data['is_featured'] ?? 0),
      ':active'=>(int)($data['active'] ?? 1),
      ':id'=>$id
```

```
]);
  }
  public static function delete(int $id): bool {
    $pdo = Database::pdo();
    $stmt = $pdo->prepare("DELETE FROM services WHERE id=:id");
    return $stmt->execute([':id'=>$id]);
  }
  public static function findById(int $id): ?array {
    $pdo = Database::pdo();
    $stmt = $pdo->prepare("SELECT
id, name, category, description, price, duration\_minutes, image\_path, is\_featured, active, created\_at\ FROM
services WHERE id=:id LIMIT 1");
    $stmt->execute([':id'=>$id]);
    $row = $stmt->fetch();
    return $row ?: null;
 }
}
```

```
backend/app/models/User.php
<?php
// User model — Data access for users (auth, profile) and helpers.
namespace App\models;
use App\core\Database;use PDO;
class User {
  public static function create(array $data): ?int {
    $pdo = Database::pdo();
    $stmt = $pdo->prepare("INSERT INTO users (name,email,password_hash,role,phone,created_at)
VALUES (:name,:email,:password_hash,:role,:phone,NOW())");
    $ok = $stmt->execute([
      ':name'=>$data['name'],
      ':email'=>$data['email'],
      ':password_hash'=>$data['password_hash'],
      ':role'=>$data['role'] ?? 'customer',
      ':phone'=>$data['phone'] ?? null,
    ]);
    return $ok ? (int)$pdo->lastInsertId() : null;
  }
  public static function findByEmail(string $email): ?array {
    $pdo = Database::pdo();
    $stmt = $pdo->prepare("SELECT * FROM users WHERE email = :email LIMIT 1");
    $stmt->execute([':email'=>$email]);
    $row = $stmt->fetch();
    return $row ?: null;
  }
  public static function findById(int $id): ?array {
```

```
$pdo = Database::pdo();
    $stmt = $pdo->prepare("SELECT * FROM users WHERE id=:id");
    $stmt->execute([':id'=>$id]);
    $row = $stmt->fetch();
    return $row ?: null;
  }
  public static function publicUser(?array $user): ?array {
    if (!$user) return null;
    return [
      'id'=>(int)$user['id'],
      'name'=>$user['name'],
      'email'=>$user['email'],
      'role'=>$user['role'],
      'phone'=>$user['phone'] ?? null,
      'created_at'=>$user['created_at'] ?? null,
    ];
  }
  public static function updateProfile(int $id, array $data): bool {
    $pdo = Database::pdo();
    $stmt = $pdo->prepare("UPDATE users SET name=:name, phone=:phone WHERE id=:id");
    return $stmt->execute([':name'=>$data['name'], ':phone'=>$data['phone'] ?? null, ':id'=>$id]);
 }
}
```

```
backend/app/services/TimeSlotService.php
<?php
namespace App\services;
use App\models\Service;
class TimeSlotService {
  public static function computeEndTime(int $serviceId, string $startTime): string {
    $service = Service::findById($serviceId);
    $duration = (int)($service['duration_minutes'] ?? 0);
    if ($duration <= 0) { $duration = 60; }
    $start = strtotime($startTime);
    return date('H:i:s', $start + ($duration * 60));
  }
  public static function is Within Working Hours (int $staffId, string $date, string $start, string $end):
bool {
    // TODO: Implement using working_hours table; temporary rule 09:00-18:00
    $min = strtotime('09:00:00');
    $max = strtotime('18:00:00');
    $s = strtotime($start);
    $e = strtotime($end);
    return $s >= $min && $e <= $max && $e > $s;
  }
}
```

```
Bootstrap / Routes / Entry
backend/bootstrap.php
<?php
// Lightweight bootstrap without Composer.
// 1) Simple .env loader
$envFile = __DIR__ . '/.env';
if (is_file($envFile)) {
  $lines = file($envFile, FILE_IGNORE_NEW_LINES | FILE_SKIP_EMPTY_LINES);
  foreach ($lines as $line) {
    if (str_starts_with(trim($line), '#')) continue;
    $parts = explode('=', $line, 2);
    if (count($parts) === 2) {
      $key = trim($parts[0]);
      $val = trim($parts[1]);
      $val = trim($val, "\"' ");
      $_ENV[$key] = $val;
      putenv("{$key}={$val}");
    }
  }
}
// 2) Minimal PSR-4 autoloader for App\ namespace
spl_autoload_register(function(string $class){
  $prefix = 'App\\';
  if (strncmp($class, $prefix, strlen($prefix)) !== 0) return;
```

\$relative = substr(\$class, strlen(\$prefix));

\$path = \_\_DIR\_\_ . '/app/' . str\_replace('\\', '/', \$relative) . '.php';

```
if (is_file($path)) require $path;
});

// 3) Error reporting
$debug = ($_ENV['APP_DEBUG'] ?? 'false') === 'true';
ini_set('display_errors', $debug ? '1' : '0');
ini_set('display_startup_errors', $debug ? '1' : '0');
error_reporting($debug ? E_ALL : 0);

// 4) Timezone & session
date_default_timezone_set('Asia/Manila');
session_name($_ENV['SESSION_NAME'] ?? 'GLOWUPSESSID');
if (session_status() === PHP_SESSION_NONE) session_start();
```

```
backend/public/index.php
<?php
require __DIR__ . '/../bootstrap.php';
use App\core\{Router, Request, Response};
$origin = $_SERVER['HTTP_ORIGIN'] ?? ";
$allowed = array_filter(array_map('trim', explode(',', $_ENV['CORS_ALLOWED_ORIGINS'] ?? '')));
$isLocalhost = $origin && (
  preg match('#^http://localhost(?::\d+)?$#', $origin) | |
  preg_match('#^http://127\.0\.1(?::\d+)?$#', $origin)
);
if ($origin && ($isLocalhost | | in_array($origin, $allowed, true))) {
  header("Access-Control-Allow-Origin: {$origin}");
  header('Vary: Origin');
  header('Access-Control-Allow-Credentials: true');
}
// Echo requested headers if provided (preflight), fallback to common defaults
$reqHeaders = $_SERVER['HTTP_ACCESS_CONTROL_REQUEST_HEADERS'] ?? 'Content-Type,
Authorization, Accept';
header("Access-Control-Allow-Headers: {$reqHeaders}");
header('Access-Control-Allow-Methods: GET, POST, PUT, PATCH, DELETE, OPTIONS');
if (($_SERVER['REQUEST_METHOD'] ?? 'GET') === 'OPTIONS') {
  http_response_code(204);
  exit;
}
$router = new Router();
```

```
$request = new Request();
$response = new Response();

require __DIR__ . '/../routes/api.php';
$router->dispatch($request, $response);
```

```
backend/routes/api.php
<?php
// routes/api.php — Defines API routes, middlewares, and handlers (auth, services, bookings,
analytics, SSE).
use App\core\{Request, Response};
use App\middlewares\CorsMiddleware;
use App\middlewares\AuthMiddleware;
use App\middlewares\AdminMiddleware;
use App\controllers\{AuthController, ServiceController, BookingController, UserController,
DashboardController, StreamController, AdminUserController};
$cors = new CorsMiddleware();
$auth = new AuthMiddleware();
$admin = new AdminMiddleware();
$router->add('GET', '/api/health', function(Request $req, Response $res){
  $res->json(['status'=>'ok','time'=>date('c')]);
}, [$cors]);
// Auth
$router->add('POST', '/api/auth/register', [new AuthController,'register'], [$cors]);
$router->add('POST', '/api/auth/login', [new AuthController,'login'], [$cors]);
$router->add('POST', '/api/auth/logout', [new AuthController,'logout'], [$cors]);
$router->add('GET', '/api/auth/me', [new AuthController,'me'], [$cors, $auth]);
// Services
$router->add('GET', '/api/services', [new ServiceController,'index'], [$cors]);
$router->add('POST','/api/services', [new ServiceController,'store'], [$cors, $auth, $admin]);
$router->add('PUT', '/api/services', [new ServiceController, 'update'], [$cors, $auth, $admin]);
```

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$router->add('DELETE','/api/services', [new ServiceController,'destroy'], [$cors, $auth, $admin]);
// Bookings
$router->add('GET', '/api/bookings', [new BookingController, 'index'], [$cors, $auth]);
$router->add('POST','/api/bookings', [new BookingController,'store'], [$cors, $auth]);
$router->add('PUT', '/api/bookings', [new BookingController,'update'], [$cors, $auth]);
$router->add('PATCH','/api/bookings/status', [new BookingController,'updateStatus'], [$cors, $auth,
$admin]);
$router->add('DELETE','/api/bookings', [new BookingController,'destroy'], [$cors, $auth]);
// Users
$router->add('GET','/api/users', [new UserController,'index'], [$cors, $auth]);
$router->add('PUT','/api/users', [new UserController,'update'], [$cors, $auth]);
// Admin users
$router->add('GET','/api/admin/users', [new AdminUserController,'index'], [$cors, $auth, $admin]);
// Dashboard
$router->add('GET','/api/analytics/summary', [new DashboardController,'summary'], [$cors, $auth,
$admin]);
$router->add('GET','/api/analytics/services-coverage', [new DashboardController,'serviceCoverage'],
[$cors, $auth, $admin]);
$router->add('GET','/api/analytics/bookings', [new DashboardController,'bookingsList'], [$cors, $auth,
$admin]);
$router->add('GET','/api/analytics/bookings.csv', [new DashboardController,'bookingsCsv'], [$cors,
$auth, $admin]);
$router->add('GET','/api/analytics/right-join-demo', [new DashboardController,'rightJoinDemo'],
[$cors, $auth, $admin]);
// SSE streams
$router->add('GET','/api/stream/bookings', [new StreamController,'bookings'], [$cors]);
```