ELIKSER PEOPLEOPS V3 · MODERNIZATION DOCUMENTATION

QA How-To & Testing Guide

Local Setup, RBAC Security Tests, Functional Matrix (MOD-01–11) & Regression Checklist · v1.1

Elikser Employee Portal — QA How-To & Testing Guide

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Target Scope: Current V2 Baseline (`EmployeePortal-2-Service` + `EmployeePortal-2-Web`) & Approved V3 Target Modernization — **Angular LTS** (`web/`), **.NET 10 Web API** (`api/`), **Azure SQL** (`sqldb-employee-{dev,qa,prod}`), **Azure Blob Storage** (`stemployee{dev,qa,prod}`) (PRD v1.1)
Target Environment URLs:

- **Interactive Mockups:** https://mockups.employee.elikser.com (local: `docs/mockups/index.html`)
- **DEV:** `https://employee.dev.elikser.com` + `https://service.employee.dev.elikser.com`
- **QA:** `https://employee.qa.elikser.com` + `https://service.employee.qa.elikser.com`
- **PROD:** `https://employee.elikser.com` + `https://service.employee.elikser.com`

Part 1 — How to Set Up & Run the Portal Locally for QA

1.1 Prerequisites

Before testing locally, ensure the QA workstation has:

1. **.NET 10 SDK** (per `DOCS_SESSION_MIGRATION.md` , all 8 backend projects compile and run under .NET 10 SDK).
2. **Microsoft SQL Server** (`localhost` default instance `MSSQLSERVER`) with database `epdbdev07` restored/attached and Integrated Windows Authentication enabled.
3. **Node.js & npm** (Node 12/14 LTS recommended for Angular 8 CLI `EmployeePortal-2-Web` , or `NODE_OPTIONS=--openssl-legacy-provider` if using Node 18+ for Webpack 4).
4. **Google Chrome or Microsoft Edge** (with DevTools enabled for inspecting `Network` , `Application → Local Storage` , and `Console`).
5. **Microsoft Entra ID Test Accounts** under tenant `719456a1-069e-4f5a-a577-85431acfb7aa` (`@elikser.com` or invited guest test accounts seeded in `AppUser`).

1.2 Starting the Backend API (`EmployeePortal-2-Service`)

1. Verify the SQL connection string in `EP.API/appsettings.Development.json` :

```json
  "DefaultConnection": "Server=localhost;Database=epdbdev07;Integrated
Security=True;TrustServerCertificate=True;"
```

2. Open PowerShell in `E:\dev\EmployeePortal\EmployeePortal-2-Service` and start `EP.API` using the `Hydro.API` profile from `launchSettings.json` :

```powershell
cd E:\dev\EmployeePortal\EmployeePortal-2-Service
dotnet run --project EP.API\EmployeePortal.API.csproj --launch-profile Hydro.API
```

3. Confirm the API is listening on `http://localhost:5000` (`https://localhost:5001`) and verify Swagger loads at `http://localhost:5000/swagger`.
4. **Where to Check Server Logs:** Runtime errors and stack traces are written under `EP.API/Logs/`. Keep this folder open during negative/error testing.

1.3 Starting the Frontend Web App (`EmployeePortal-2-Web`)

1. Verify `domain-utills.ts` routes `localhost` requests to `http://localhost:5000/api/` (currently line 32 sets `domain = "http://localhost:5000/"`).
2. Open a second PowerShell terminal and run:

```powershell
cd E:\dev\EmployeePortal\EmployeePortal-2-Web
npm install
npm start
```

(If running on Node 17+, prefix with `$env:NODE_OPTIONS="--openssl-legacy-provider"; npm start`.)

3. Open `http://localhost:4200/#/login` in an Incognito/InPrivate browser profile per test persona so MSAL accounts do not collide.

1.4 QA Environment Tips: Authentication, Token Inspection & Role Switching

1. **Signing In:** Click `Sign in with Microsoft`. Authenticate via Entra ID popup (`select_account` prompt allows picking different test accounts).
2. **Inspecting User Claims & Role/Feature Assignments:**
   - Open Chrome DevTools -> **Application -> Local Storage ->** `http://localhost:4200`.
   - Check keys `Auth` (contains `Bearer <jwt>`) and `Data` (cached login response containing `roleId`, `featureIds`, `userId`, `employeeId`, `isLead`).
   - Decode the `Auth` JWT on a local offline JWT decoder (never paste production tokens to public sites!) to verify claims: `nameid` (`EmployeeId`), `groupsid` (`UserId`), `isLead` (`"1"` or `"0"`), and `roles` / `permissions` (V3).
3. **Inspecting API Errors in DevTools:**
   - Open **Network -> Fetch/XHR** and monitor HTTP status codes:
     - `200 / 201 / 204`: Success.
     - `400`: Validation error (should display user-friendly inline message, never raw stack trace).
     - `401`: Missing/invalid/expired token (should redirect cleanly to `/login`, **never** returned merely because a record ID was not found—note legacy V2 bug returning `401` on not-found items!).
     - `403`: Insufficient Role/Feature permission or ownership violation (e.g., trying to edit another user's salary or idea).

Part 2 — Role-Based Access Control (RBAC) Verification Matrix

Test every major route and API endpoint with **at least 6 distinct test accounts**:

1. `qa.employee@elikser.com` (`Team Member`, `isLead = 0`)
2. `qa.lead@elikser.com` (`Team Member` + assigned `ProjectLeadId` on Project X, `isLead = 1`)
3. `qa.interviewer@elikser.com` (`Team Member` + `Interviewer` RoleType)
4. `qa.hr@elikser.com` (`HR` role)
5. `qa.exec@elikser.com` (`Executive` role)
6. `qa.admin@elikser.com` (`Admin` role)

How to Execute RBAC Security Tests (UI + API)

1. **UI Direct-URL Guard Check:** Log in as `qa.employee`. Paste restricted routes directly into the address bar:
   - `/#/admin/manageuser`
   - `/#/admin/managerole`
   - `/#/admin/admin-candidate`
   - `/#/admin/employeelist`
   - `/#/admin/hrLeaveApplication`
   - `/#/admin/payroll/run` (V3)
   - **Expected V3 Outcome:** Route guard blocks navigation, renders `"403 Access Denied"` (or redirects to `/dashboard`), and zero restricted data fetches fire. *(Note: Current legacy V2 `AuthGuard` fails this check!)*
2. **Direct API Replay Check (Postman / `Invoke-RestMethod`):**
   - Copy the `Authorization: Bearer <token>` header from `qa.employee`.
   - Replay privileged API requests (`POST /api/AppUser/UpsertAppUser`, `GET /api/AppUser/GetEmployeeProfile?UserId=1`, `POST /api/Request/LeaveApplicationApproval`, `POST /api/v1/payroll/...`).
   - **Expected V3 Outcome:** Every unauthorized request returns `403 Forbidden`.

Part 3 — Module-by-Module Functional Test Cases (`MOD-01` – `MOD-11`)

Compare UI behavior and layouts directly against the corresponding interactive mockup in `docs/mockups/`.

`MOD-01` — Auth, First-Time Onboarding & RBAC

Mockup Reference: `01-auth-onboarding-rbac.html`

Test ID	Scenario	Step-by-Step QA Actions	Test Data	Expected Result
`TC-01-01`	Valid Entra ID SSO Login	1. Go to `/#/login`. 2. Click `Sign in with Microsoft`. 3. Sign in as returning active user.	`qa.employee@elikser.com` (`IsFirstTimeLogin=false`)	Redirects to Dashboard; `Auth` JWT stored; valid `isLead` & role claims.
`TC-01-02`	First-Time Onboarding Wizard	1. Provision brand new user (`IsFirstTimeLogin=true`). 2. Log in via SSO. 3. Complete all 4 steps & click `Launch Dashboard`.	`new.hire@elikser.com`	Redirects to Onboarding Wizard (no `"welcome note here"` stub); subsequent login goes straight to Dashboard.
`TC-01-03`	Deactivated / Resigned Login Block	1. Set user `IsActive=false` (or `EmployeeStatus=Resigned`). 2. Attempt SSO login.	`deactivated@elikser.com`	Login blocked (`403`); clear banner `"Account deactivated. Contact HR."`
`TC-01-04`	Unsigned / Tampered Token Rejection	1. Craft unsigned JWT (`alg: none`) with `preferred_username` of Admin. 2. `POST /api/Auth/Login`.	Unsigned base64 JWT	Backend returns `401 Unauthorized` (does NOT return portal JWT!).
`TC-01-05`	Multi-Role Assign & Deselect + Logout	1. In `Manage Users`, assign 2 roles, save, edit, deselect 1 role, save. 2. Click `Log Out`.	Roles: `HR`, `Team`	Deselected role removed cleanly; `Log Out` clears `localStorage` & MSAL cache; browser Back button cannot reopen protected view.

`MOD-02` — Role-Adaptive Dashboard & Notifications

Mockup Reference: `02-dashboard-notifications.html`

Test ID	Scenario	Step-by-Step QA Actions	Test Data	Expected Result
TC-02-01	Live Shift Check-In / Out State	1. On Dashboard, toggle WFH ON and click Check In. 2. Refresh browser (F5). 3. Click Check Out.	IsWFH = true	Button reflects Checked In + live elapsed timer even after F5; Check Out logs timestamp and calculates duration.
TC-02-02	Role-Specific Approvals Queue	1. Log in as qa.lead, then qa.hr, then qa.exec.	Pending timesheet, leave, payroll batch	Each role sees ONLY approvals belonging to its authority scope and can act directly.
TC-02-03	Real-Time Notification Delivery & Clear	1. As HR, create Broadcast Announcement with ValidityFrom = Today, ValidityTo = Today + 7d. 2. Observe Employee browser tab.	Target: All or Group: Team	Employee bell badge increments without page reload (SignalR); clicking opens notification; ValidityTo < ValidityFrom blocked by validation.

MOD-03 — Recruitment & ATS

Mockup Reference: 03-recruitment-ats.html

Test ID	Scenario	Step-by-Step QA Actions	Test Data	Expected Result
TC-03-01	Add Candidate + Resume Upload (>5MB)	1. Open ATS -> + Add Candidate. 2. Fill fields & attach 6 MB PDF resume. 3. Save & click candidate name.	FullName: Zoya Tariq, Salary: 150000, 6MB PDF	Multipart upload succeeds without localStorage quota crash; Resume opens cleanly in PDF previewer; page refresh retains candidate state.
TC-03-02	Schedule & Reschedule Interview	1. From Candidate table, click Schedule. 2. Try past date -> verify error. 3. Pick future date, select Role + 2 Interviewers, check Online. 4. Click Interview Date to reschedule.	DateTime: Now + 2 days	Past datetime rejected; future datetime saves & creates calendar invite; clicking Reschedule in table opens Reschedule form properly!
TC-03-03	Question Bank Filter & Safe Delete	1. Open Evaluation Resources → Questions. 2. Select Subject = .NET and QuestionType = All (0). 3. Delete 1 Question.	Subject .NET, Type 0	Questions render properly (not overwritten empty); deleting a Question removes the Question, NOT a Guideline!
TC-03-04	Scorecard -> Offer/NDA -> 1-Click Hire	1. As Interviewer, submit 4/5 ratings & Eligible for OnBoarding. 2. As HR, generate Offer + NDA PDFs. 3. Click Convert to Employee.	OfferedSalary: 185000, JoiningDate: Today + 14d	Candidate converts cleanly in 1 transaction; Employee record inherits CV/Contract/NDA in Document Vault and gets Onboarding checklist.

MOD-04 — Employee Directory & 5-Tab 360° Profile

Mockup Reference: 04-employee-directory-profile.html

Test ID	Scenario	Step-by-Step QA Actions	Test Data	Expected Result
TC-04-01	Field-Level Salary Lock	1. As qa.employee, open My Profile → Personal. 2. Inspect BasicSalary. 3. Attempt API tampering via DevTools/Postman.	Payload basicSalary: 999999	UI renders BasicSalary read-only; API rejects with 403 and DB value stays unchanged.
TC-04-02	Family Tab (0 Children & Add/Remove Child)	1. Open Profile of Single employee (0 children) -> Tab 3 Family. 2. Switch to Married, add Spouse + 2 Children, remove 1 Child, Save.	MaritalStatus: Married, 2 children -> remove 1	Zero JS console errors when 0 children; + Add Child and Remove persist exact child list.
TC-04-03	Tab 5 Professional Profile Isolation	1. Log in as HR (UserId=2). 2. Open Employee Directory -> click Employee UserId=15 -> Tab 5 Professional Profile.	Target UserId=15	Displays Employee 15's projects & tech tools (NOT HR's own projects!); PDF export generates clean CV for Employee 15.

`MOD-05` — Lifecycle Checklists & E-Sign Resignation

Mockup Reference: `05-lifecycle-checklists-resignation.html`

Test ID	Scenario	Step-by-Step QA Actions	Test Data	Expected Result
`TC-05-01`	Boarding Checklists & Probation Confirmation	1. Open Probation employee's checklist. 2. Mark all tasks `Done` & Save. 3. Click `Confirm Permanent & Generate Letter`.	Probation Employee	Status transitions `Probation → Permanent`; End-of-Probation PDF saved to Document Vault.
`TC-05-02`	E-Sign Resignation (Future Date) & Preview	1. As Employee, open `Resignation`. 2. Select `Last Working Day = Today + 30 days`. 3. Draw on signature pad. 4. Click `Generate & View Document` -> `Submit`.	`LastDay = Today + 30d`, drawn PNG	Date picker accepts future date (blocks past dates); PDF renders cleanly without `FileNotFoundException`; status = `Pending`.
`TC-05-03`	Resignation Approval Notification Target	1. As HR, open `Manage Resignations`. 2. Click `Accept` on Employee's resignation. 3. Check both Employee and HR inboxes/notifications.	Pending resignation	Employee receives `"Your resignation request has been accepted"` (NOT HR!); Employee `Offboarding Checklist` auto-created.

`MOD-06` — Attendance, WFH & Audit Trail

Mockup Reference: `06-attendance-wfh.html`

Test ID	Scenario	Step-by-Step QA Actions	Test Data	Expected Result
`TC-06-01`	Missing Check-Out & Regularization	1. Seed prior-day row with `CheckOut = NULL`. 2. Log in as Employee -> Attendance. 3. Click `Request Regularization`, enter `18:15` + reason. 4. Approve as Lead/HR.	`CheckOut: 18:15`, `Reason: Forgot at EOD`	Row flagged `"Missing Check-Out"` (NOT silently forced to `14:00`); after approval, Check-Out updates and duration formats as `Xh Ym`.
`TC-06-02`	In-Place Edit + Immutable Audit Log	1. As HR, click an existing attendance row (`ID = 4082`). 2. Change Check-In to `09:00`, toggle `WFH`, enter 20-char `Reason`, Save.	`ID = 4082`, `Reason = Approved remote morning`	Updates `ID = 4082` **in-place** (row count stays 1, no duplicate `attendanceId=0`); Audit Log displays old->new values, `ModifiedBy`, and `Reason`.
`TC-06-03`	Lead Scoping & WFH Excel Export	1. As `qa.lead`, open `Manage Attendance`. 2. Export Excel report and open `.xlsx`.	`qa.lead`, mix of WFH=true/false rows	Lead sees ONLY their project team members (not empty list); Excel `Work From Home` matches UI (`Yes` / `No`, never inverted).

`MOD-07` — Projects, Teams & Timesheets

Mockup Reference: `07-projects-timesheets.html`

Test ID	Scenario	Step-by-Step QA Actions	Test Data	Expected Result
`TC-07-01`	Project Date Validation & Activity Unassign	1. Create Project with `EndDate < StartDate` -> check error. 2. Fix dates, add Team + Lead. 3. Assign 2 Activity Groups, save, then **Unassign 1**.	`Start: Nov 01`, `End: Nov 30`	Invalid date range blocked; Lead & Team save cleanly; Unassign removes group from future timecards without page refresh.
`TC-07-02`	Weekly Timecard Sunday Mapping & Bounds	1. Create/open week `Mon–Sun`. 2. Try entering `-2` or `28` hours -> verify block. 3. Enter `4.0h` on **Sunday** + description, Save, reload page.	`Sunday: 4.0h`	Negative/`>24h` blocked; Real Project Name displays (never `"aaa"`); Sunday hours persist strictly on **Sunday** (Wednesday unaffected!).

Test ID	Scenario	Step-by-Step QA Actions	Test Data	Expected Result
TC-07-03	Reject & Re-Submit Flow	1. Submit weekly timecard -> Pending. 2. As Lead, click Reject with comment "Clarify API task". 3. As Employee, edit hours & click Re-Submit.	Comment: "Clarify API task"	Employee sees rejection comment, edits hours, and Re-Submit button transitions Rejected → Pending.

MOD-08 — Unified Requests & HR Approvals Hub

Mockup Reference: 08-requests-approvals-hub.html

Test ID	Scenario	Step-by-Step QA Actions	Test Data	Expected Result
TC-08-01	Holiday-Aware Leave Calculator & Lock	1. Ensure 2026-12-25 is a Public Holiday in Setup. 2. As new hire (0 prior leaves), open Leave Request. 3. Select 2026-12-24 to 2026-12-28. 4. Submit & have HR Approve. 5. Try clicking Approved row to edit.	Dec 24 – Dec 28 (Thu–Mon w/ Fri holiday)	No data[0] crash; Working Days auto-calculates 2.0 Days; Balance deducts 2.0 on HR Accept; Approved row cannot be edited.
TC-08-02	Expense Claim Amount Visibility	1. Employee submits Claim (Oct 2026, PKR 12,500, PDF receipt). 2. Open HR Claim Approvals table. 3. Click Export.	Amount: 12500, Month: Oct 2026	HR table prominently shows PKR 12,500, Oct 2026, and working Receipt Preview; export filename reflects Claims (not "Item Request History.xlsx").
TC-08-03	Items Tab Switching & Email Delivery	1. Open Items Request. 2. Switch to History then back to New Items. 3. Submit request for Laptop Stand.	Item: Laptop Stand	Clicking New Items stays on New Items tab; IT/HR recipient email list is non-empty and notification delivers.
TC-08-04	Experience & Bank Letter Issuance	1. Employee requests Experience Letter or Bank Opening Letter. 2. HR approves request.	Type: Bank Opening Letter	PDF letter generated cleanly, added to Employee's Document Vault, and downloadable by employee.

MOD-09 — Monthly Payroll, Payslips & Claims

Mockup Reference: 09-payroll-payslips.html

Test ID	Scenario	Step-by-Step QA Actions	Test Data	Expected Result
TC-09-01	Holiday-Adjusted Payroll Generation & Overtime	1. Select editable period Oct 2026 (1 holiday). 2. Include employee A (160/160h) and employee B (overtime 172/160h). 3. Click Generate Draft.	Basic PKR 200,000	Working days exclude holiday; Employee B PaidLeaveHours is 0 (NEVER negative!).
TC-09-02	Idempotent Bonus & Allowance Adjustments	1. Edit Payroll row: set Travel=10,000, Bonus=15,000, Save. 2. Edit SAME row again: change Bonus=20,000, Save.	Base=200,000, Bonus: 15k → 20k	GrossIncome = 230,000 (NOT 245,000 !) and NetSalary reflects deduction accurately in DB.
TC-09-03	Executive Batch Approval & Historical PDF	1. HR submits batch. 2. As Employee, try calling Approve API -> verify 403. 3. As Executive, Approve batch. 4. Generate Payslip PDF for **past month** (Aug 2026).	Past month Aug 2026	Only Executive can approve; historical PDF renders cleanly in memory (no DateTime.Now.Month error, no server crash!).
TC-09-04	Closed-Loop Discrepancy Claim	1. Employee submits Claim on Oct 2026 payslip ("Missing overtime meal allowance"). 2. HR opens Payroll Claims & resolves with notes.	Claim description + HR resolution	Claim status moves Open → Resolved; employee sees HR's resolution comment & notification.

MOD-10 — Knowledge Base, Ideas & Company Blog

Mockup Reference: 10-knowledge-ideas-blogs.html

Test ID	Scenario	Step-by-Step QA Actions	Test Data	Expected Result
`TC-10-01`	Policy Title Validation, Metadata Edit & Ack	1. HR creates Policy `"2026 WFH & Security Policy v2.1"` + PDF. 2. HR edits Title ONLY (no file re-upload) & saves. 3. Employee reads summary & clicks `Acknowledge`.	Title w/ numbers & punctuation	Alphanumeric title accepted; existing PDF attachment is preserved on metadata edit; employee acknowledgment timestamp recorded.
`TC-10-02`	Idea Board Readability & Creator Ownership	1. Employee A creates Idea with long Abstract. 2. Log in as Employee B -> verify Abstract is readable & Upvote works; verify Edit/Delete are disabled/blocked (`403`).	Author: A, Viewer: B	Full Abstract visible to all; B can upvote but CANNOT edit or delete A's idea.
`TC-10-03`	Blog Submission, Delete Pending & Published Feed	1. Employee submits Blog (`Pending`), tests Delete/Edit on `Pending` blog. 2. Resubmits; HR clicks `Approve & Publish`. 3. Employee opens `Company Blog Feed`.	Title + sanitized CKEditor HTML	`Pending` blog can be deleted cleanly (no contradictory `*ngIf`); Approved blog appears in Company Blog Feed for all employees!

`MOD-11` — System Setup, Holidays & Templates

Mockup Reference: `11-system-setup-master-data.html`

Test ID	Scenario	Step-by-Step QA Actions	Test Data	Expected Result
`TC-11-01`	Item Setup Edit Isolation	1. Open `Setup → Items`. 2. Click Edit on `"27-inch Monitor"`. 3. Update description & Save.	Item: `27-inch Monitor`	Loads `Item` DTO cleanly (NOT `ToolData` !), updates Item row without error.
`TC-11-02`	Public Holiday Calendar Impact	1. Add Public Holiday `"2026-12-25 Quaid-e-Azam Day"`. 2. Verify Leave calculator (`MOD-08`) and Payroll working hours (`MOD-09`).	`2026-12-25`	Holiday excluded from Leave days and Payroll expected working hours automatically.
`TC-11-03`	`.docx` Template Health Check	1. Open `Setup → Document Templates`. 2. Verify all 7 required templates (`EmployeeResignationLetter.docx` , `ExperienceLetter.docx` , etc.).	7 templates	Missing template or invalid `<Placeholder>` triggers red warning banner BEFORE a user hits a 500 runtime error.

Part 4 — End-to-End Cross-Module Integration Journeys

Journey A: Hire-to-Onboard (`MOD-03` -> `MOD-01` -> `MOD-04` -> `MOD-05`)

1. HR creates Job Role `QA Automation Engineer` (`MOD-11`) and adds Candidate `Sara Malik` with PDF CV (`MOD-03`).
2. HR schedules Interview Stage 1 (`Technical`) inviting `qa.interviewer`.
3. `qa.interviewer` consults Question Bank, submits `4/5` Soft & `5/5` Technical rating, selects `Eligible for OnBoarding`.
4. HR generates Contract & NDA PDFs, then clicks `Convert to Employee` (`sara.malik@elikser.com` , `Probation`).
5. `sara.malik` signs in via Microsoft SSO (`MOD-01`), completes the 4-step Onboarding Wizard, and acknowledges Core Policies (`MOD-10`).
6. Verify Sara appears in Employee Directory (`MOD-04`) with her CV/Contract/NDA in Document Vault, active Leave Balance, and Onboarding Checklist (`MOD-05`).

Journey B: Work-to-Pay (`MOD-06` -> `MOD-07` -> `MOD-08` -> `MOD-09`)

1. Admin creates Project `FinTech Core API` , assigns `qa.lead` as Project Lead, adds `qa.employee` , and assigns Activity Groups (`MOD-07`).
2. `qa.employee` checks in (`WFH = true` , `MOD-06`), logs `32.0h` across Mon–Thu and `8.0h` on Sunday (`MOD-07`), applies for 1-day Leave spanning a Public Holiday (`MOD-08`), and submits an Expense Claim of `PKR 4,500` (`MOD-08`).

3. `qa.lead` approves the Weekly Timesheet; HR approves the Leave (verifying 1-day debit in Leave Ledger) and Expense Claim (`PKR 4,500` visible).
4. HR generates Monthly Payroll (`MOD-09`), adds `Bonus = PKR 10,000` , edits Bonus to `15,000` (confirming non-cumulative Gross), and submits to Executive.
5. `qa.exec` approves the Payroll Batch; `qa.employee` downloads PDF Payslip (`MOD-09`), raises a Discrepancy Claim, and HR resolves it.

Journey C: Resign-to-Offboard (`MOD-05` -> `MOD-04` -> `MOD-01`)

1. `qa.employee` opens Resignation (`MOD-05`), chooses `Last Working Day = Today + 30 days` , draws signature, previews `EmployeeResignationLetter.docx` PDF, and submits.
2. HR views submission and clicks `Accept` .
3. **Verify:** Notification & email arrive in **`qa.employee` 's** inbox (NOT HR's); Employee Directory (`MOD-04`) populates `Resignation Date` ; Offboarding Checklist (`MOD-05`) is seeded.
4. IT/HR mark Offboarding tasks `Done` and deactivate account (`IsActive = false`).
5. Attempt SSO login as `qa.employee` -> **Blocked with** `403` .

Part 5 — Legacy Bug & Security Regression Checklist (25 Mandatory Checks)

QA MUST verify all 25 items below pass before signing off any release candidate:

#	Severity	Legacy Defect / Vulnerability Discovered in V1 or V2	Exact Verification Check	Pass Criteria
01	`P0`	Unsigned Microsoft/Google JWT accepted (`AuthenticationService.cs`)	Submit unsigned `alg:none` JWT to SSO login	`401 Unauthorized` returned
02	`P0`	Missing `[Authorize]` / RBAC on API controllers	Call HR/Admin endpoints with Team Member JWT	`403 Forbidden` returned
03	`P0`	`MyProfile` salary tampering IDOR (`AppUserService.cs`)	Send `basicSalary` in self-profile PUT payload	`403` or field ignored; DB unchanged
04	`P0`	`GetEmployeeProfile?UserId=X` exposes any employee's PII/CNIC/salary	Request another employee's profile as Team Member	`403 Forbidden` returned
05	`P0`	`[AllowAnonymous]` cron email endpoints leak employee email lists	`GET` cron endpoints with no `Authorization` header	`401` / `403` returned
06	`P0`	Deactivated/Resigned users can still log in	SSO login with `IsActive=false` or `Resigned` user	`403` access denied banner
07	`P0`	Logout reloads page without clearing `localStorage` or MSAL session	Click `Log Out` and inspect `localStorage` + press Back	Storage empty; protected route redirects to `/login`
08	`P0`	Null `featureIds` renders entire Admin sidebar (`userfeatureId == null`)	Simulate empty/null permission array in UI	Zero admin menus rendered
09	`P1`	`EmployeeResignationLetter.docx` missing (`FileNotFoundException`)	Click `Generate & View Document` on Resignation	Valid PDF renders (`200 OK`)
10	`P1`	Resignation `lastDayDate` has `[max]="todayDate"` blocking future dates	Pick `Today + 30 days` on Resignation form	Future date accepted; past date blocked
11	`P1`	`ChangeResignationLetterStatus` emails/notifies HR instead of employee	HR accepts employee resignation	Employee receives notification, not HR
12	`P1`	`profile.component.ts` crashes on `0` children (`childName.split(',')`)	Open Family tab for unmarried/0-child employee	Loads with zero console errors + Remove Child works

#	Severity	Legacy Defect / Vulnerability Discovered in V1 or V2	Exact Verification Check	Pass Criteria
13	`P1`	Tab 5 Professional Profile shows HR's own projects instead of viewed `:Id`	HR views Employee #15 Tab 5	Shows Employee #15's projects
14	`P1`	V1 Sunday timesheet hours saved onto Wednesday (`wedTaskDate`)	Save `4h` on Sunday and inspect DB/UI	Stored on Sunday's date; Wednesday unchanged
15	`P1`	V1 Rejected timesheets lack `Re-Submit` button (`statusId == 5`)	Reject timesheet as Lead, reopen as Employee	`Re-Submit` button visible and works
16	`P1`	V2 `monHourshours` / `tueHourshours` / `wedHourshours` template crash	Touch/edit Mon–Wed cells in Daily/Weekly editor	Zero `TypeError` in browser console
17	`P1`	`EditAttendance` inserts duplicate row (`attendanceId = 0`) & drops `Reason`	Edit existing attendance row with Reason & Save	Existing row updated; Reason in Audit Log
18	`P1`	V2 `employee-attendance` Excel export inverts `isWFH`	Export attendance with `WFH = true` row	Excel column accurately shows `Yes` / `WFH`
19	`P1`	New employee (`0` prior leaves) crashes Leave Request screen (`data[0]`)	Open Leave Request with brand new employee	Displays `0` / full annual quota without crash
20	`P1`	Approved/Rejected leaves can be clicked & overwritten via `UpdateLeaveRequest`	Click an Approved leave row in History	Read-only view; edit/update blocked
21	`P1`	HR Claim Approval table omits `Amount` and `Target Month-Year`	Open HR Claims Approvals	`Amount` and `Target Month` clearly displayed
22	`P1`	`ItemsRequest` clicking `New Items` tab snaps back to `History`	Click `New Items` tab after viewing `History`	Stays on `New Items` tab cleanly
23	`P1`	V1 Payroll `EditPayRoll` double-adds `Bonus` & `CreatEmployeePayRoll` allows negative `PaidLeaves`	Edit Bonus twice; generate payroll with overtime	`GrossIncome` non-cumulative; `PaidLeaves ≥ 0`
24	`P1`	V1 PDF generation kills API (`Console.ReadKey` / wrong-month overwrite / `myWelcome.pdf` race)	Generate 2 concurrent payslips for past month	Both PDFs succeed for exact selected month
25	`P2`	Candidate table Reschedule/Feedback dead links, Question delete calling `removeGuides()` , & `AddItem` reading `ToolData`	Click Reschedule/Feedback in ATS, delete Question, edit Setup Item	All 3 navigate/delete/edit the exact target entity

Part 6 — Defect Triage Rubric & QA Release Sign-Off Gate

6.1 Severity Definitions

- **S1 (Blocker):** Security bypass (auth/RBAC/IDOR), server crash (`Console.ReadKey` , `500` on core workflow), payroll miscalculation, or data corruption (Sunday->Wednesday overwrite, duplicate attendance insertion). *Release blocked immediately.*
- **S2 (Major):** Broken workflow navigation (dead ATS row actions, resignation date block, missing re-submit), missing required business field (omitted Claim Amount), or unreadable uploads (>5MB Base64 crash). *Must be fixed prior to UAT sign-off.*
- **S3 (Minor):** Copy-pasted modal labels (`"Delete Role"` on user delete), non-critical sort/filter issues, formatting raw minutes instead of `Xh Ym` . *Schedule in sprint backlog.*
- **S4 (Cosmetic):** Alignment, contrast, icon inconsistencies.

6.2 Release Readiness Gate

A release candidate passes QA sign-off ONLY when:

1. **100%** of Security & Regression Checklist items (`#01–#25`) pass in both UI and direct API verification.
2. **100%** of End-to-End Integration Journeys (`A` , `B` , `C`) pass without console errors or `500` responses in `EP.API/Logs/` .
3. Zero `S1` or `S2` open defects remain, and UI matches the approved responsive layouts (`Desktop` , `Tablet` , `Mobile`) in `docs/mockups/index.html` .