

Advanced Angular Banking Dashboard Internship Task (5-Day)

Task Overview:

Develop a “**Bank Customer Portal**” featuring advanced UI/UX, comprehensive data handling, and enhanced security. Use Angular, TypeScript, PrimeNG, and in-memory JSON data (via `HttpClientInMemoryWebApiModule`) until real APIs are integrated.

Daily Task Breakdown:

Day 1: Completed - Project Setup & Core Utilities

- ✓ Project setup, theming, layout, and core utilities have been implemented and verified.
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Day 2: Multi-Account Management, Statements & Exports

- **Accounts Module:**
 - Display multi-currency support with live dummy rates.
 - Inline editing: account nicknames, alerts threshold.
 - Statement preview: last 12 months, paginated.
 - **Exports & Printing:**
 - Export statements to PDF, CSV.
 - Print-friendly statement view.
 - **Enhanced Data Grid:**
 - Virtual scroll, column reordering, column resizing.
 - Context menu for quick actions (View statement, Export, Set alert).
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Day 3: Transactions, Analytics, Budgets & AI Insights

- **Transactions Module:**
 - Date-range picker, category filter, tagging (user-defined tags).
 - Bulk operations: mark as reviewed, dispute, export selection.
- **Analytics Dashboard:**
 - Charts: spending by category, balance trend, cash-flow waterfall.
 - Budget Planner: set monthly budgets per category, track usage (bar chart).
 - AI Insights (dummy): monthly savings suggestions, expense anomalies.
- **Reporting:**
 - Schedule generation of monthly PDF reports.

- Email preview (template only).
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Day 4: Funds Transfer, Bill Payments, QR & Beneficiaries

- **Transfers & Bill Pay:**
 - Domestic & international transfer simulation with exchange rates.
 - QR code payment: generate QR for recipient to scan.
 - **OTP & Security:**
 - Multi-step OTP flow (generate code, validate via dialog).
 - Rate-limit simulation (max 3 attempts).
 - **Beneficiaries:**
 - CRUD operations, grouping (family, business), favorite flag.
 - Verify beneficiary details via modal (dummy data match).
 - **Recurring & Marketplace:**
 - Schedule recurring payments (frequency: weekly, monthly, yearly).
 - In-app marketplace: pay utility bills (electricity, water) with sample list.
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Day 5: Loans, Credit Cards, Wealth Module & Security Settings

- **Loan Application & Tracking:**
 - Multi-step wizard with file upload (ID docs), real-time form validation.
 - Track status timeline (Pending → Reviewed → Approved/Rejected).
 - **Credit Card Management:**
 - Virtual card issuance: toggle on/off for online, ATM.
 - Statement PDF download, transaction dispute.
 - Request limit increase with simulated approval.
 - **Wealth Module (Bonus):**
 - Simple portfolio overview: mock stocks/funds, performance chart.
 - Buy/sell simulation (no real trades).
 - **Profile & Security:**
 - Profile edit, change password with strength meter.
 - Two-Factor Authentication setup simulation (SMS/email toggles).
 - View audit log of sensitive actions (login, password change, transfers).
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Technical & Quality Requirements:

- **Frameworks:** Angular v12+, TypeScript, PrimeNG & PrimeIcons.
- **Data Layer:** HttpClientInMemoryWebApiModule with modular services.
- **Performance:** Lazy-loaded feature modules; OnPush change detection.

- **PWA & Offline:** Caching strategies for JSON data.
 - **Theming & Localization:** Dark/light themes; RTL support for Arabic.
 - **Accessibility:** WCAG AA compliance; semantic HTML.
 - **Testing & CI:** Unit tests for components/services; GitHub Actions for build & lint.
 - **Version Control:** GitFlow with feature branches, PR reviews.
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☒ Final Deliverables:

1. **JSON Data Files:** `accounts.json`, `transactions.json`, `analytics.json`, `beneficiaries.json`, `loans.json`, `profile.json`, `transfer-template.json`, `portfolio.json`, `marketplace.json`.
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This comprehensive 5-day task simulates end-to-end banking portal development, covering advanced UI flows, data analytics, security processes, and real-world integrations.