**User Story: Automatic & Manual Fingerprint Enrollment + Attendance Sync with ZKBio Time**

As an HR Manager, I want employee data to sync with fingerprint devices upon onboarding  
so that employees can clock in/out immediately, the system remains error-free, and HR efforts are minimized.

**Description**

This feature enables integration between the HR system and ZKBio Time for seamless fingerprint device management. Upon onboarding, employees can be registered to fingerprint devices either automatically (upon creation in the HR system) or manually.  
**Key functional behaviors include:**

* The employee code in ZKBio Time must exactly match the employee code in the HR system for proper linking.
* The system supports both automatic and manual enrollment options.
* HR users can view synced employee data and their status.
* HR users can navigate to "صفحة معالجة البيانات" (Data Handling Page) to take appropriate actions when an employee is flagged (late arrival).

**Acceptance Criteria**

**1. New Hires:**

* When HR creates or updates an employee profile (employee code), the data can be:
  + Automatically pushed to ZKBio Time if auto-sync is enabled.
  + Manually sent via a "Sync to Device" button.
* After sync, fingerprint enrollment is initiated at the nearest configured device.

**2. Attendance Tracking:**

* Clock-in/out events from ZKBio fingerprint devices sync to the central system in real time.
* HR canview attendance logs per employee.

**3. Error Handling:**

* If syncing fails (device offline or unreachable):
  + The system retries automatically (configurable retry logic).
  + Failures are logged with a timestamp.
  + HR is notified with a warning and can manually retry or contact IT.

**Technical Details**

* **API Calls Needed:**
  + POST /employees/ → Create employee in ZKBio Time.
  + PATCH /employees/{id}/ → Update employee data.
  + GET /transactions/ → Retrieve attendance records.
* **Data Flow:**HR System → ZKBio Time API → Fingerprint Device → ZKBio → Attendance Logs → HR System
* **Security:**
  + All requests must be authenticated using tokens (/api-token-auth/).
  + Sensitive fields such as employee IDs must be encrypted in transit and at rest.

**Why This Matters**

* HR: Flexible options (auto/manual) for fingerprint enrollment → streamlined onboarding process.
* Finance: Accurate, real-time attendance logs → error-free payroll.
* IT: Secure, traceable sync → fewer manual interventions and tickets.
* Managers: Ability to act on late arrivals directly via صفحة معالجة البيانات (Data Handling Page).