

## Main Processes (Overall Flow)

### 1. User login to the system

- The parent/guardian or caregiver opens the application, accesses the Login page, and logs in using their registered email and password.
- After successful authentication, the system redirects the user to the main dashboard.

### 2. Create and manage child profiles

- From the dashboard, the parent navigates to the *Children/Child Profiles* section.
- The parent creates a new child profile by entering basic information (name, gender, date of birth, preterm/full-term status, optional photo).
- The system validates and saves the profile; the parent can later view or update this profile when information changes.

### 3. Record periodic growth measurements

- The parent or authorized caregiver opens a specific child profile and navigates to the *Measurements* section.
- They add a new measurement by entering weight, height/length, head circumference (if available) and the measurement date.
- The system validates the input, stores the measurement, and automatically calculates BMI and the child's age at the time of measurement.

### 4. Process and update growth data

- After new measurements are saved, the system updates the child's growth history.
- The system uses the selected growth standard (e.g., WHO/CDC) to prepare data for charting and percentile calculation.

### 5. View and interpret growth charts

- The parent, caregiver, or doctor opens the *Growth Charts* view for a child.
- The system displays charts (e.g., Age vs Weight, Age vs Height, Age vs BMI) and shows the child's percentile position and growth zone (below / within / above normal range).
- Users can adjust the time range or inspect individual data points to better understand the child's growth trend.

### 6. Receive reminders for future measurements

- The parent configures a measurement reminder schedule (e.g., monthly or quarterly) for each child.
- When the scheduled time arrives, the system sends notifications (in-app or email) reminding the parent/caregiver to record new measurements, and the cycle of step 3–5 is repeated.

## 7. Generate and share growth reports

- When needed (e.g., before a doctor visit), the parent opens the *Reports* section and selects a child, a date range, and a report format (PDF/CSV/chart images).
- The system generates the growth report and allows the parent to download it or share it with doctors or other caregivers via email or a secure link.