

# Database Attribute Analysis Summary

Date: 2025-10-13

Migration: 2025\_10\_13\_162211\_remove\_unused\_columns\_from\_tables.php

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## Removed Unused Attributes

The following attributes were identified as unused and removed from the database:

1. `users.normalized_name` ❌

- **Reason:** The old `Employee` model had a boot method that populated this field, but after renaming to `User` model, this logic was never migrated
- **Impact:** No code references this column
- **Status:** ✅ Removed

2. `users.payroll_day` ❌

- **Type:** `smallint`
- **Reason:** Payroll features were never implemented
- **Impact:** Column exists but is never set or read
- **Status:** ✅ Removed

3. `users.salary` ❌

- **Type:** `numeric(10,2)`
- **Reason:** Payroll features were never implemented
- **Impact:** Column exists but is never set or read
- **Status:** ✅ Removed

4. `leave_requests.is_seen` ❌

- **Type:** `boolean`
- **Reason:** Notification/seen tracking was planned but never implemented
- **Impact:** Column exists with default `false`, but no code sets or reads it
- **Status:** ✅ Removed

5. `shiftschedules.start_time` ❌

- **Type:** `time`
- **Reason:** UI hardcodes shift times (morning: 06:00-15:00, evening: 15:00-00:00); backend never uses these columns
- **Impact:** Columns exist but are never populated or referenced in logic
- **Status:** ✅ Removed

6. `shiftschedules.end_time` ❌

- **Type:** `time`
  - **Reason:** UI hardcodes shift times; backend never uses these columns
  - **Impact:** Columns exist but are never populated or referenced in logic
  - **Status:** ✅ Removed
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## Retained Attributes (With Recommendations)

## Leave Balances (Currently Unused, Keep for Future)

- `users.annual_leave_balance` (int) ⚠️
- `users.sick_leave_balance` (int) ⚠️
- `users.emergency_leave_balance` (int) ⚠️

**Status:** Kept

**Usage:** Only reconciliation migrations update these values; no enforcement in leave approval workflow

**Recommendation:** Implement balance checking when approving leave requests to prevent negative balances

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## All Remaining Attributes (By Table)

### ✅ **users (17 attributes - all in use)**

1. `id` - Primary key
2. `name` - Display name
3. `email` - Login, unique
4. `phone` - Contact, unique
5. `national_id` - Government ID, unique
6. `password` - Authentication
7. `email_verified_at` - Email verification
8. `remember_token` - Session persistence
9. `userRole` - Authorization (owner/admin/staff)
10. `annual_leave_balance` - Leave tracking (future enforcement)
11. `sick_leave_balance` - Leave tracking (future enforcement)
12. `emergency_leave_balance` - Leave tracking (future enforcement)
13. `hired_on` - Employment start date
14. `address` - HR records
15. `bank_acc_no` - Payroll (future)
16. `deleted_at` - Soft delete
17. `created_at` , `updated_at` - Audit trail

### ✅ **attendances (12 attributes - all in use)**

1. `id` - Primary key
2. `user_id` - FK to users
3. `schedule_id` - FK to shiftschedules (nullable)
4. `date` - Attendance date
5. `status` - on\_time/late/missed/present
6. `sign_in_time` - Clock in
7. `sign_off_time` - Clock out
8. `notes` - Admin notes
9. `is_manually_filled` - Entry method
10. `deleted_at` - Soft delete
11. `created_at` , `updated_at` - Audit trail

### ✅ **leave\_requests (11 attributes - all in use)**

1. `id` - Primary key
2. `user_id` - FK to users
3. `type` - Annual/Sick/Emergency

4. `start_date` - Leave start
5. `end_date` - Leave end (nullable)
6. `message` - Employee reason
7. `status` - 0=Pending, 1=Approved, 2=Rejected
8. `admin_response` - Admin feedback
9. `deleted_at` - Soft delete
10. `created_at` , `updated_at` - Audit trail

#### ✅ **shiftschedules (10 attributes - all in use)**

1. `id` - Primary key
2. `user_id` - FK to users
3. `shift_type` - morning/evening
4. `week_start` - Week identifier
5. `day` - Specific date
6. `submitted` - Week lock status
7. `deleted_at` - Soft delete
8. `created_at` , `updated_at` - Audit trail

#### ✅ **personal\_access\_tokens (10 attributes - Laravel Sanctum)**

All attributes are framework-managed (Sanctum).

#### ✅ **password\_reset\_tokens (3 attributes - Laravel Auth)**

All attributes are framework-managed (Auth).

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## Documentation Updates

### 1. ✅ **ERD.mmd (Entity-Relationship Diagram)**

- Removed: `normalized_name` , `payroll_day` , `salary` , `is_seen` , `start_time` , `end_time`
- Added: Complete attribute list with all remaining columns
- Updated: Relationships to show `shiftschedules` → `attendances` link

### 2. ✅ **DomainClassDiagram.mmd (Class Diagram)**

- Removed: Same as ERD
- Added: Complete attribute list with types and constraints
- Updated: Model methods to include both `user()` and `employee()` for backward compatibility

### 3. ✅ **Relationships.md (Comprehensive Documentation)**

- **New Section:** "Comprehensive Attribute Details" with full table breakdown:
  - Attribute name
  - Data type
  - Constraints
  - Domain values
  - Objective
  - Usage in code
- **Updated Section:** "Integrity Constraints & Validations"
- **Updated Section:** "Indexes & Performance"
- **Added:** Summary of changes from initial state

#### 4. PDFs Generated

- `ERD.pdf` - Visual entity-relationship diagram
  - `DomainClassDiagram.pdf` - Visual class diagram
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## Database State After Cleanup







### Tables: 6

1.  `users` (17 cols) - Core user/employee data
2.  `attendances` (12 cols) - Daily attendance tracking
3.  `leave_requests` (11 cols) - Leave applications
4.  `shiftschedules` (10 cols) - Weekly shift assignments
5.  `personal_access_tokens` (10 cols) - API auth (Sanctum)
6.  `password_reset_tokens` (3 cols) - Password resets (Auth)

### Total Attributes: 63

- **Active/Used:** 63 (100%)
- **Removed/Cleanup:** 6 (`normalized_name`, `payroll_day`, `salary`, `is_seen`, `start_time`, `end_time`)

### Data Integrity

-  All foreign keys valid
  -  All unique constraints enforced
  -  All check constraints active
  -  Soft deletes on core tables
  -  No orphaned columns
  -  No dead code references
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## Next Steps (Optional Enhancements)

### 1. Implement Leave Balance Enforcement:

- Check balances before approving leave requests
- Surface balances in UI for staff visibility
- Add validation to prevent over-requesting

### 2. Enhanced Shift Time Handling (if needed in future):


- If you want flexible shift times (not hardcoded), re-add `start_time` / `end_time` to `shiftschedules`
- Use these for lateness calculation instead of hardcoded values
- Populate during schedule creation

### 3. Notification System (if needed in future):

- If you want "seen" tracking for leave requests, re-add `is_seen` column
- Implement notification read/unread logic

### 4. Payroll System (if needed in future):

- If you plan payroll, re-add `payroll_day` and `salary` to users
  - Implement payroll calculation based on attendance and salary
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**Status:**  Database is now clean, documented, and ready for production use.