

Weekly Development Report – HR Management System

Period: 7/8/2025 - 11/8/2025

Project: School HR Management System - Attendance Service

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Focus Area: Monthly Attendance statistics /detailed attendance log

Executive Summary

This week's development focused on significantly enhancing the attendance management module. Key achievements include building a comprehensive master attendance log with advanced filtering and bulk actions, a detailed daily attendance view for individual employees, and a complete exception management system for handling requests like missing punches and leave. The backend was expanded with new API endpoints to support these features, including robust data validation, processing, and persistence logic.

Frontend Development

1. Master Attendance Log (attendance-master.html)

The screenshot shows the 'Monthly Attendance Log' page. At the top, there are four summary boxes: 'Total Employees' (5), 'Validated Records' (0), 'Pending Validation' (1), and 'Missing Punches' (4). Below these are filters for Year (All Years), Month (August), Department (All Departments), Status (All Status), and a search bar. A blue 'Apply' button is next to the search bar. Below the filters is a row of buttons: 'Bulk Validate' (green), 'Clear All Late' (orange), 'Clear All Early' (purple), and 'Clear Missing Punches' (red). To the right of these buttons is a status message '0 selected'. The main table lists employees with their details: Employee name, SCHEDULED DAYS, WORKED DAYS, ABSENCE DAYS, LATE MINUTES, EARLY MINUTES, OVERTIME HOURS, WAGE CHANGES, STATUS, and ACTIONS. The table rows for each employee show their name, total scheduled days (0 or 21), worked days (0 or 12), absence days (0 or 19), late minutes (0 or 330), early minutes (0 or 360), overtime hours (0), wage changes (0.00 DA), status (Calculated), and actions (a yellow button with a circular icon and a green checkmark).

EMPLOYEE	SCHEDULED DAYS	WORKED DAYS	ABSENCE DAYS	LATE MINUTES	EARLY MINUTES	OVERTIME HOURS	WAGE CHANGES	STATUS	ACTIONS
moh benme new teck	0	0	0	0	0	0	0.00 DA	Calculated	
Achouak Benmeziane dep	21	0	0	0	0	0	0.00 DA	Calculated	
BEN HAMMOU KHALIDA No Department	21	12	19	330	360	0	0.00 DA	Calculated	
amir miro dep	3	0	0	0	0	0	0.00 DA	Calculated	

This new interface serves as the central hub for HR managers to monitor, validate, and manage monthly attendance records for all employees.

Features Implemented:

Statistics Dashboard: Provides an at-a-glance overview of key metrics, including Total Employees, Validated Records, Pending Validations, and Missing Punches.

Advanced Filtering: Allows users to drill down into the data with multi-faceted filtering options.

- Year, Month, and Department selection.
- Filtering by validation status (Validated, Calculated).
- Employee search by name.

Bulk Actions: Empowers managers to perform operations on multiple employee records simultaneously, such as Bulk Validate, Clear Late/Early Minutes, and Clear Missing Punches.

Data Table & Pagination:

- Displays a comprehensive summary for each employee, including scheduled vs. worked days, absences, late/early minutes, overtime, and wage changes.
- Features robust pagination to handle large datasets efficiently.

Interactive Modals:

- Settings Modal: Allows configuration of system-wide rules like grace periods for lateness and early departure.
- Export Modal: Enables data export to CSV or XLSX formats.

2. Daily Attendance View (daily-attendance.html)

BEN HAMMOU KHALIDA HR Manager

No Department

Year: 2025 Month: August Load

21 Scheduled Days 11 Worked Days 10 Absence Days 0m Late Minutes 10h 14m Early Minutes 0 Overtime Hours 0.00 DA Wage Changes

Daily Attendance Records Recalculate Save Changes Validate Month

DATE	SCHEDULED SHIFT	ENTRY TIME	EXIT TIME	OVERTIME HOURS	STATUS	ACTIONS
Sun, Aug 3	08:00:00 - 16:00:00	Missing Punch	Missing Punch	0	Absent	Edit
Mon, Aug 4	08:00:00 - 16:00:00	Missing Punch	Missing Punch	0	Absent	Edit
Tue, Aug 5	08:00:00 - 16:00:00	Missing Punch	Missing Punch	0	Absent	Edit
Wed, Aug 6	08:00:00 - 16:00:00	Missing Punch	Missing Punch	0	Absent	Edit
Thu, Aug 7	08:00:00 - 16:00:00	Missing Punch	Missing Punch	0	Absent	Edit
Sun, Aug 10	08:00:00 - 16:00:00	Missing Punch	15:00 55min early	0	Present	Edit
Mon, Aug 11	08:00:00 - 16:00:00	07:07	14:58 57min early	0	Present	Edit
Tue, Aug 12	08:00:00 - 16:00:00	Missing Punch	15:01 54min early	0	Present	Edit

Wage Changes + Add

\$ No wage changes

Overtime Requests + Add

⌚ No overtime requests

This detailed view allows for granular inspection and management of a single employee's attendance for a selected month.

Features Implemented:

Employee & Monthly Summary: Displays the employee's details and a summary of their monthly attendance statistics.

Daily Record Table: Lists each day of the month, showing the scheduled shift, actual entry/exit times, calculated late/early minutes, and status (e.g., Present, Absent, Justified).

Record Editing: An "Edit" modal allows for manual correction of daily records, including adjusting punch times or marking a day as justified or forced absent.

Side Panels for Related Data:

- Wage Changes:** Lists all salary adjustments for the month and includes functionality to add, edit, or delete them.
- Overtime Requests:** Manages overtime requests, allowing HR to add new requests or approve/decline pending ones.

Month-Level Actions: Provides buttons to Recalculate, Save Changes, or Validate the entire month's data for the employee.

3. Exception Management System (exceptions.html & submit-exception.html)

The screenshot shows a web-based application titled "Exceptions Management". At the top, there are two tabs: "Pending Requests" (with a count of 1) and "History". Below the tabs are three dropdown filters: "All Departments", "All Types", and "Apply Filters". A single pending request is listed:

Admin User		83aeda46-b8c0-48e4-bca8-840b9aae71ea	Pending
new teck			
Submitted 9/15/2025, 9:15:33 AM by Admin User			
Type: Missing Punch Fix			
Date: 9/15/2025			
Description: Missing punch fix: check_in at 08:00			
View Details		Reject	Approve

The screenshot shows a list of submitted attendance exceptions. The table has columns: EMPLOYEE, TYPE, DATE, STATUS, REVIEWED BY, REVIEWED AT, and ACTIONS.

EMPLOYEE	TYPE	DATE	STATUS	REVIEWED BY	REVIEWED AT	ACTIONS
Admin User new teck	Missing Punch Fix	9/15/2025	Approved	Admin User	9/15/2025, 9:16:29 AM	View
BEN HAMMOU KHALIDA No Department	Missing Punch Fix	9/4/2025	Approved	Admin User	9/7/2025, 2:59:08 PM	View
BEN HAMMOU KHALIDA No Department	Missing Punch Fix	9/7/2025	Rejected	Admin User	9/7/2025, 2:38:11 PM	View
amir miro dep	Missing Punch Fix	9/7/2025	Approved	Admin User	9/7/2025, 2:35:55 PM	View
Achouak Benmeziane dep	Missing Punch Fix	9/7/2025	Approved	Admin User	9/7/2025, 2:35:55 PM	View
BEN HAMMOU KHALIDA No Department	Missing Punch Fix	8/20/2025	Approved	Admin User	9/7/2025, 2:00:41 PM	View
Admin User new teck	Missing Punch Fix	9/6/2025	Approved	Admin User	9/7/2025, 11:34:42 AM	View

A complete workflow for submitting, reviewing, and processing attendance exceptions has been created.

Features Implemented:

Tabbed Interface (exceptions.html):

- Pending Requests Tab: Displays a list of all exceptions awaiting review, with options to approve or reject them directly.
- History Tab: Provides a searchable and paginated log of all previously processed exceptions (Approved/Rejected).

Exception Submission Form (submit-exception.html):

- A user-friendly form for employees or managers to submit new exception requests.
- The form dynamically adapts to the selected exception type (Missing Punch, Leave Request, etc.), showing only the relevant fields.

Detailed Modals: A modal view provides comprehensive details for each exception, including employee information, submission details, and payload data.

a Exception Details - Admin User X

Employee Information

Name: **Admin User**
 Employee ID: **83aeda46-b8c0-48e4-bca8-840b9aae71ea**
 Department: **new teck**

Exception Information

Type: **Missing Punch Fix**
 Date: **9/15/2025**
 Status: **Pending**

Description

Missing punch fix: check_in at 08:00

Additional Details

Time: **8:00 AM**
 Reason: **trafic**
 Punch Type: **check_in**

Submission Information

Submitted by: **admin**
 Submitted at: **9/15/2025, 9:15:33 AM**

Backend Development

1. Attendance API (attendance-api.js, attendance-routes.js)

The backend was significantly expanded to support the new frontend interfaces with a suite of new API endpoints.

API Endpoints Developed:

- /api/attendance/monthly (GET): Powers the master attendance log, supporting pagination, filtering, and search.
- /api/attendance/daily/{employeeId} (GET): Retrieves all necessary data for the daily attendance view, including daily records, summaries, wage changes, and overtime requests.
- /api/attendance/validate/bulk (POST): Handles the bulk validation of multiple employee records.
- /api/attendance/bulk/clear-... (POST): Endpoints to clear late, early, or missing punch data in bulk.
- /api/attendance/daily/save (POST): Saves manual overrides and corrections made in the daily attendance edit modal.
- /api/attendance/wage-changes (CRUD): Full set of endpoints to create, update, and delete employee salary adjustments.
- /api/attendance/overtime/... (CRUD & Actions): Endpoints to manage the entire lifecycle of overtime requests, from submission to approval/rejection.
- /api/attendance/settings (GET/PUT): Allows for retrieving and updating global attendance settings.
- /api/exceptions/... (CRUD & Actions): A comprehensive set of endpoints to manage exception requests, including fetching pending/historical data and processing approvals/rejections.
- /api/attendance/export (GET): Generates and serves attendance data in CSV or XLSX format based on the selected filters.

Key Technical Features:

- **Comprehensive Data Aggregation:** Backend logic efficiently joins data from multiple tables (employees, timetables, punches, overrides) to generate the required summaries and daily views.
- **Robust Validation & Security:** All endpoints are secured with JWT authentication, and incoming data is validated before processing.
- **Transactional Integrity:** Critical operations, such as approving an exception or validating a month, are wrapped in database transactions to ensure data consistency.
- **Modular API Design:** The API is organized into logical modules for attendance, exceptions, overtime, and settings, improving maintainability.

Problems :

- validation not implemented yet
- statistics calculation interacting with each other
- error counting exception days (justified /override)as present