

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)

Monthly Attendance Log

Monitor and validate employee attendance records

Refresh

Export

Total Employees
5

Validated Records
0

Pending Validation
1

Missing Punches
4

Year

Month

Department

Status

Search Employee

All Years

August

All Departments

All Status

Search by name...

Apply

Bulk Validate

Clear All Late

Clear All Early

Clear Missing Punches

Oselected

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

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.

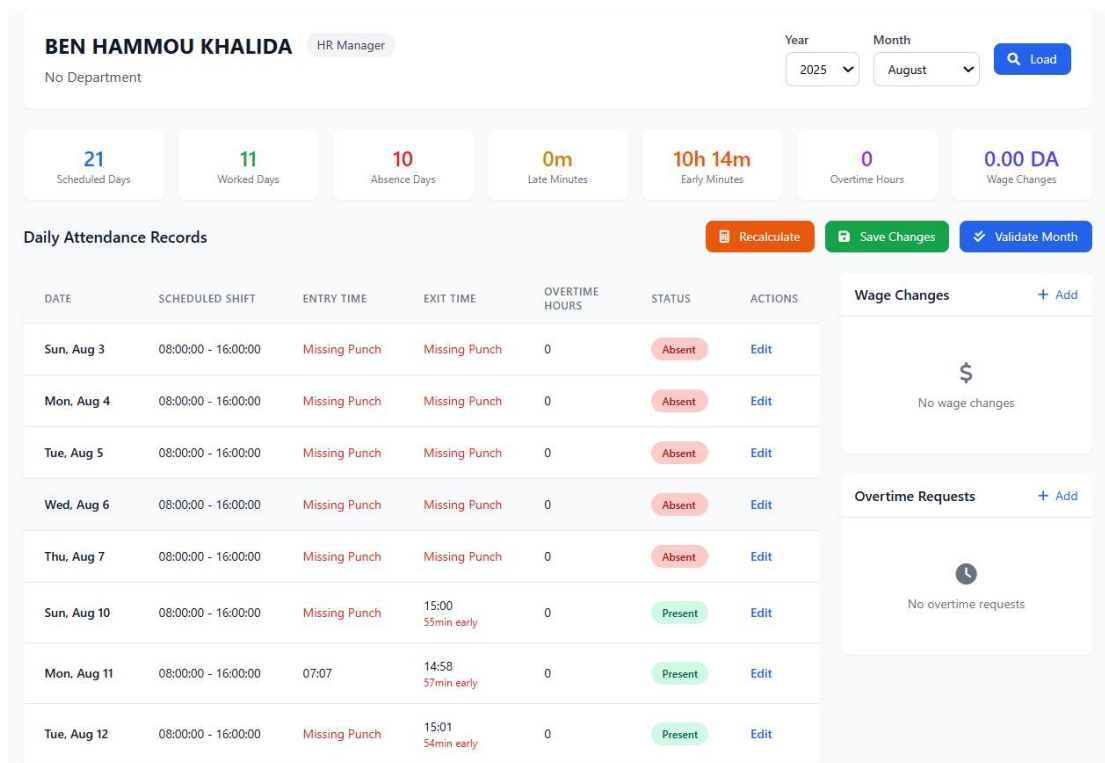
Data Table & Pagination:

- 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)



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).

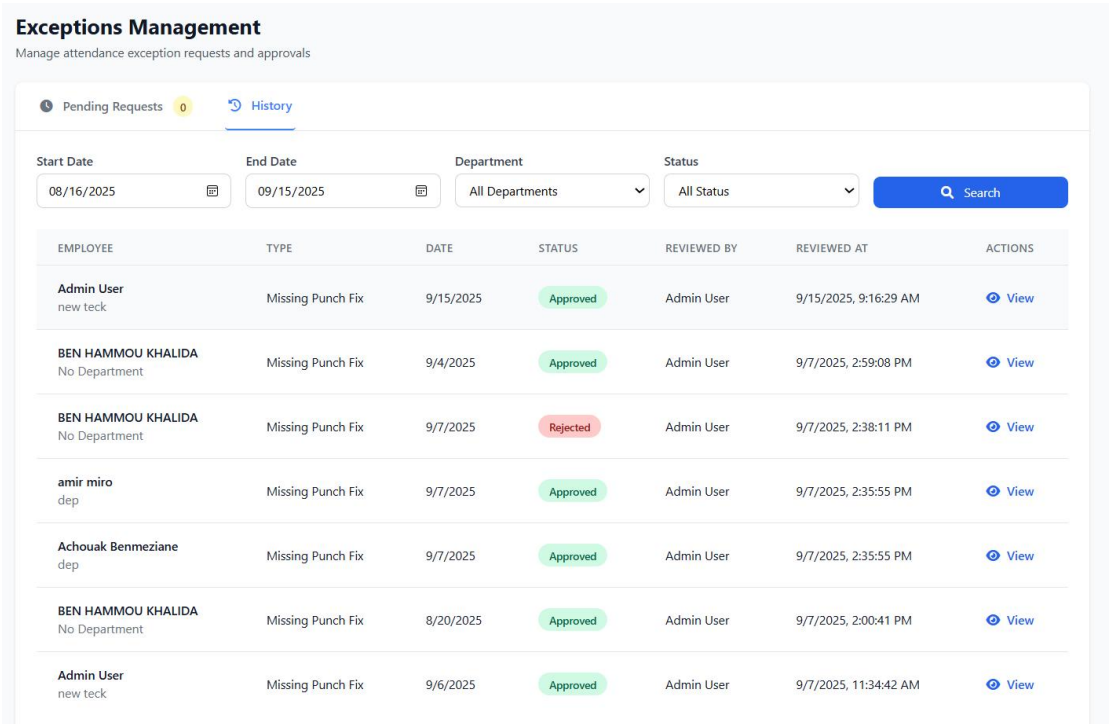
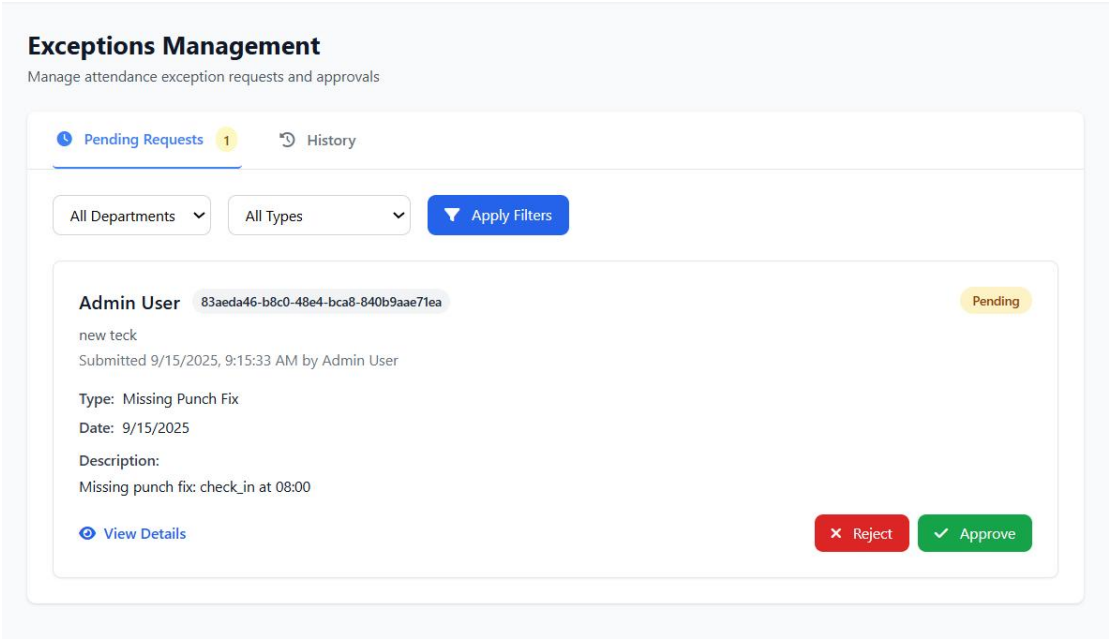
Record Editing: An "Edit" modal allows for manual correction of daily records, including adjusting punch times or marking a day as justified or forced absent.

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)



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.

Exception Details - Admin User

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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: traffic
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