

# Automated Employee Time-Off Management System

**Company:** Zenith HealthTech

**Category:** Human Resources / Operations

**Version:** v1.0

**Last Updated:** 10/10/2025

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## Overview

At **Zenith HealthTech**, efficient HR operations are vital to maintaining employee satisfaction and compliance.

This project implements an **automated employee time-off management system** using **Airtable**, **Zapier**, and **Fillout Forms** to streamline the entire Paid Time Off (PTO) process, from submission to approval, balance tracking, and notifications.

Employees are entitled to **22 working days of Paid Time Off (PTO)** annually. This automation ensures that leave requests are handled consistently, balances are always accurate, and HR is free from repetitive administrative tasks.

The workflow provides:

- Centralized employee, department, and manager data
  - Automated notifications and balance updates
  - Transparent approval and rejection tracking
  - Scheduled monthly reminders for leave balance
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# Detailed Description

## Business Problem

Traditionally, time-off management is handled manually through spreadsheets and email chains. This creates inconsistencies, delays, and a lack of visibility into employees' remaining leave balances. Managers may overlook requests or approve excess leave, and HR must manually track balances, a process that becomes error-prone at scale.

## Automation Solution

This system centralizes all employee and manager data in **Airtable**, automates the approval and notification processes through **Zapier**, and maintains real-time leave balances. When an employee submits a leave request, the system automatically routes it to their department manager for approval, updates the balance upon approval, and notifies all relevant parties.

## Expected Outcomes

- 80–90% reduction in HR manual tracking time
  - Transparent and traceable leave records
  - Real-time accuracy of remaining PTO
  - Improved employee experience with faster responses
  - Scalable design for any organization with department-based hierarchy
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## How It Works (Functionality)

### 1 Data Structure in Airtable

The system uses three linked tables:

**1. Employees** — stores employee name, email, department, manager link, leave entitlement (22 days), leave taken, and remaining balance.

**Formula:** Balance = 22 - Leave Taken

**2. Departments** — defines departments, their managers, and director-level approvers (directors approve managers' leave).

### **3. Leave Requests** — captures each request with fields:

- Employee (linked)
  - Start Date, End Date, Days Requested
  - Notes (optional comments from employee)
  - Manager Notes (for approval/rejection reason)
  - Status (Pending / Approved / Rejected / Auto-Rejected)
  - Approval Timestamp
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## **2|Leave Request Submission**

Employees submit requests via a **Fillout form** dynamically linked to the “**Leave Requests**” table in Airtable.

- The form is personalized per employee via URL parameters (e.g., name and record ID).
  - It displays the employee name (non-editable) and only allows valid date selections within the current year.
  - A validation rule ensures the **End Date** is after the **Start Date**.
  - The form link is included in the monthly HR email showing the employee’s remaining balance.
  - Each new submission triggers Zapier to validate and route the request automatically.
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## **3|Balance Validation (Zapier Logic)**

When a new request is received, Zapier retrieves the employee’s current **Balance** from the “Employees” table and performs multi-branch validation:

**If Remaining PTO ≥ Requested Days:**

- **Holiday Exclusion Logic:**  
Before approval, the system checks official holidays (via Google Calendar API or a holiday database). Any overlapping holidays are automatically excluded from the total leave days calculated, ensuring employees are not charged for public holidays within their leave period.
- Proceed to manager notification.
- Update Airtable field → **Manager Notified = true**.

**If Remaining PTO = 0:**

- Block request and send auto-reply stating no remaining leave.

**If Remaining PTO < Requested Days:**

- Update record → **Status = Auto-Rejected (Insufficient Balance)**.
- Send automated email to employee:  
*“Your leave request could not be processed because you have only {{Balance}} days remaining. Please adjust and resubmit.”*

This ensures no request is processed beyond the employee's entitled limit.

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## 4 Manager Approval Workflow

If balance validation passes, Zapier sends an email to the manager (approver) with a link to a short fillout form containing:

- Employee name and requested dates
- Action buttons to **Approve / Reject**
- A notes field for the manager to add comments

The manager clicks an action button, submits and updates the Airtable record.

- **Status = Approved or Rejected**
  - **Manager Notes**
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## 5 Employee Notification

When a manager's action is recorded:

Zapier sends an automatic email to the employee confirming the outcome.

If approved:

*"Your leave request for {{DaysRequested}} days has been approved."*

If rejected:

*"Your leave request has been declined. Reason: {{ManagerNotes}}."*

Airtable is updated to indicate that the employee has been notified of the manager's decision.

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## 6 Leave Balance Update

If a request is approved:

- Zapier increments the **Leave Taken** field in the "Employees" table.
- Airtable automatically recalculates:  
 $\text{Balance} = 22 - \text{Leave Taken}$

This ensures balances stay accurate and up to date.

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## 7 Leave Balance Reset (Automated Airtable Logic)

Balances automatically reset to **22 days** at the start of each new year through an Airtable **rollup + formula setup**, eliminating the need for a separate Zapier workflow.

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## 8 Monthly Leave Balance Reminder (Automated HR Workflow)

A scheduled Zap runs on the **1st of every month** to:

- Retrieve all employees from the “Employees” table.
- Filter to include only those with **Balance > 0**.
- Send each employee a personalized email showing:
  - Remaining leave balance
  - Dynamic Fillout form link for new requests

Example message:

“You currently have {{Balance}} leave days remaining. Click below to submit your next request.”

- Update field → **Last Reminder Sent = {{zap\_meta\_human\_now}}**

This ensures employees stay informed and reduces end-of-year leave congestion.

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## Tools Required

Tool	Purpose
Airtable	Database for employees, departments, leave requests
Zapier	Workflow automation (notifications, approvals, balance updates)
Gmail	Communication for approvals and notifications

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## Size of Project

**Medium** (≈5–6 automations / Zap steps)

Includes:

- Request creation
  - Balance validation
  - Manager notification
  - Approval handling
  - Employee notification
  - Monthly reminder
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## Setup Requirements

- Airtable account (free or Pro tier)
  - Zapier account with multi-step Zaps
  - Gmail integration for notifications
  - HR data import (employees, departments, balances)
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## Deployment Time Estimate

- Initial setup: 3–4 hours
- Testing and fine-tuning: 1–2 hours
- Custom approval email setup: 1 hour

- Monthly reminder automation: 30 minutes
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## Value Proposition

Benefit	Impact
Time saved	≈ 10–15 HR hours per month (manual tracking removed)
Error reduction	Eliminates manual balance errors and late approvals
Employee experience	Instant notifications and clarity
Transparency	Audit trail of all approvals and balances

### Estimated ROI Example:

If HR time is valued at \$25/hour and automation saves 12 hours monthly:

$$\text{ROI} = (12 \times \$25 \times 12 \text{ months}) - (\$20/\text{month Zapier + Airtable})$$

≈ \$3,400 annual value

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## Known Limitations

- Airtable native forms can't show live balance dynamically (only static notes).
- Requires Zapier premium plan for multi-step automations.
- Manual intervention needed if annual entitlement changes per employee.
- Approval links must remain secure (avoid sharing externally).

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## Testimonials / Use Cases

Tested internally at Zenith HealthTech. The HR team achieved full automation of leave approvals and reporting and reduced processing time by 85% in the first month.

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## Size Classification

**Medium** — 6 connected automation steps, 3 integrated tools.

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## Estimated ROI

\$3,400/year in time savings (based on mid-size HR team).

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## Version & Updates

Version	Date	Description
v1.0	Initial	End-to-end automation setup
v1.1	+ Balance validation	Added Zapier filter to auto-reject over-limit requests
v1.2	+ Monthly reminder	Added scheduled HR emails for employees with remaining leave

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## **Next Steps / Possible Enhancements**

- Add a self-service portal (via Softr or Fillout) for dynamic forms showing live balance.
  - Integrate Slack bot commands for real-time leave requests.
  - Add departmental analytics dashboard to track leave trends.
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