HRMS Flow Design - Business Analysis & Agile Implementation

1. Executive Summary

This document outlines the comprehensive HRMS (Human Resource Management System) flow design with integrated leave management, payroll processing, attendance tracking, and approval workflows. The system follows Agile methodology with modular development approach.

2. Business Requirements Overview

Core Modules:

- Employee Management
- Leave Management System
- Attendance & Time Tracking
- Payroll Processing
- Approval Workflows
- Marketing Visit Management
- Policy Compliance Engine

3. Agile Epic & User Stories Breakdown

Epic 1: Employee Management System

User Stories:

- As an HR Admin, I want to maintain basic employee details with PF information
- As an Employee, I want to view my profile and personal information
- As a Manager, I want to access my team members' basic information

Epic 2: Leave Management System

User Stories:

- As an Employee, I want to apply for leave through the system
- As an Employee, I want to view my leave balance in real-time
- As a Manager, I want to approve/reject leave applications
- As the System, I want to automatically calculate LWP for leaves exceeding 5 days
- As the System, I want to credit 1 leave for every 21 continuous working days

Epic 3: Attendance & Time Tracking

User Stories:

- As an Employee, I want to punch in/out for attendance

- As an Employee, I want to report missed punches

- As a Marketing Person, I want to log my client visits

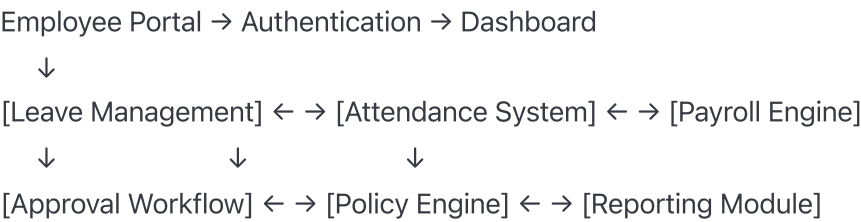- As the System, I want to track working hours and overtime automatically

Epic 4: Payroll Management

User Stories:

- As an Employee, I want to generate salary slips based on working hours

- As HR, I want to process payroll with overtime calculations

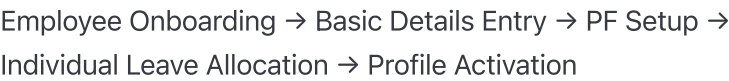- As the System, I want to integrate PF deductions automatically

4. System Architecture & Flow Design
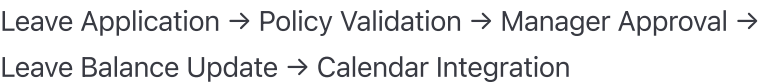
4.1 High-Level System Flow

```
Employee Portal → Authentication → Dashboard
      ↓
[Leave Management] ← → [Attendance System] ← → [Payroll Engine]
      ↓              ↓                ↓
[Approval Workflow] ← → [Policy Engine] ← → [Reporting Module]
```

4.2 Detailed Module Flows

A. Employee Master Data Flow

```
Employee Onboarding → Basic Details Entry → PF Setup →
Individual Leave Allocation → Profile Activation
```

Employee Table Structure:

- Employee ID, Name, Department, Designation

- Join Date, Salary Details, PF Number

- Individual Leave Balance, LWP Days

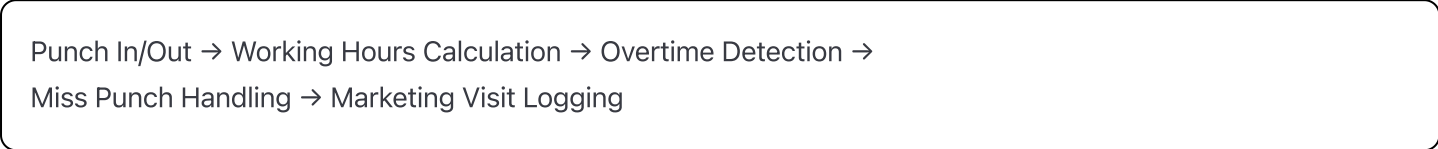- Contact Information, Emergency Contacts

B. Leave Management Flow

```
Leave Application → Policy Validation → Manager Approval →
Leave Balance Update → Calendar Integration
```

Leave Policy Engine:

1. **5+ Days Leave Policy**: Automatically converts excess to LWP

2. **21 Days Continuous Work**: Auto-credit 1 leave

3. **Leave Balance Tracking**: Real-time balance updates

4. **Approval Matrix**: Based on leave type and duration

C. Attendance & Time Tracking Flow

Punch In/Out → Working Hours Calculation → Overtime Detection →
Miss Punch Handling → Marketing Visit Logging

Attendance Features:

- Real-time punch tracking

- GPS-based location verification for marketing visits

- Miss punch request with approval workflow

- Overtime calculation (>8 hours/day)

- Marketing visit time allocation

D. Payroll Processing Flow

Monthly Attendance Data → Working Hours Calculation →
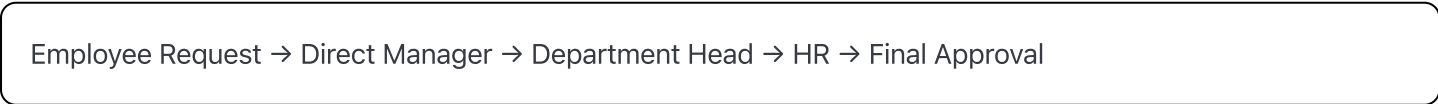Overtime Calculation → PF Deduction → Salary Slip Generation
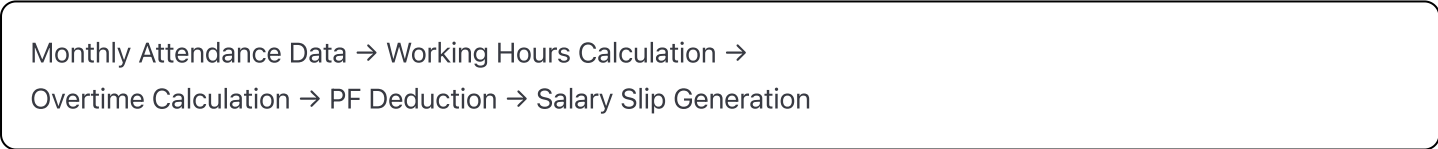
Salary Components:

- Basic Salary (based on working days)

- Overtime Amount (hourly rate × overtime hours)

- PF Deduction (12% of basic)

- LWP Deduction (if applicable)

4.3 Approval System Architecture

Multi-Level Approval Matrix:

Employee Request → Direct Manager → Department Head → HR → Final Approval

Approval Types:

- Leave Applications (1-2 levels based on duration)

- Miss Punch Requests (Manager approval)

- Marketing Visit Reports (Manager approval)

- Overtime Claims (Manager + HR approval)

5. Agile Implementation Roadmap

Sprint Planning (2-week sprints):

Sprint 1-2: Foundation Setup

- Employee master setup

- Basic authentication and dashboard

- Database schema implementation

Sprint 3-4: Leave Management Core

- Leave application functionality

- Leave balance tracking

- Basic approval workflow

Sprint 5-6: Attendance System

- Punch in/out functionality

- Working hours calculation

- Miss punch request feature

Sprint 7-8: Policy Engine Implementation

- 5+ days LWP policy

- 21 days continuous work policy

- Leave balance auto-calculation

Sprint 9-10: Payroll Integration

- Salary slip generation

- Overtime calculation

- PF integration

Sprint 11-12: Advanced Features

- Marketing visit tracking

- Multi-level approval system

- Reporting and analytics

Sprint 13-14: Testing & Optimization

- Integration testing
- Performance optimization
- User acceptance testing

6. Technical Specifications

6.1 System Requirements

- **Backend**: Node.js/Python/Java
- **Database**: MySQL/PostgreSQL
- **Frontend**: React/Angular
- **Mobile**: React Native/Flutter
- **Authentication**: JWT/OAuth 2.0

6.2 Integration Points

- Email notifications for approvals
- SMS alerts for punch reminders
- Calendar integration for leave planning
- Payroll software integration
- GPS tracking for field visits

7. Business Rules & Policies

7.1 Leave Policies

1. **Annual Leave**: 21 days per year
2. **Sick Leave**: 12 days per year
3. **Casual Leave**: 12 days per year
4. **LWP Trigger**: Automatically applied for leaves >5 days
5. **Earn Leave**: 1 day per 21 continuous working days

7.2 Attendance Policies

1. **Working Hours**: 8 hours/day standard
2. **Overtime**: Hours >8/day considered overtime
3. **Grace Period**: 15 minutes for punch in/out
4. **Miss Punch**: Maximum 3 per month allowed

7.3 Approval Policies

1. **Leave <3 days**: Manager approval only
2. **Leave 3-5 days**: Manager + HR approval
3. **Leave >5 days**: Manager + Department Head + HR
4. **Emergency Leave**: Same day approval allowed

8. Success Metrics & KPIs

Operational Metrics:

- Leave application processing time: <24 hours
- Attendance accuracy: >98%
- Payroll processing time: <2 hours/month
- System uptime: >99.5%

User Experience Metrics:

- User adoption rate: >90%
- Mobile app usage: >70%
- Approval workflow efficiency: <2 days average

9. Risk Management

Technical Risks:

- Data security and privacy compliance
- System downtime during payroll processing
- Integration challenges with existing systems

Mitigation Strategies:

- Regular security audits
- Backup and disaster recovery plans
- Phased rollout approach
- Comprehensive testing protocols

10. Future Enhancements

Phase 2 Features:

- Performance management integration
- Training and development tracking

- Asset management

- Document management system

- Advanced analytics and reporting

Phase 3 Features:

- AI-based leave pattern analysis

- Predictive attendance modeling

- Chatbot for HR queries

- Mobile-first approach optimization

11. Conclusion

This HRMS system design provides a comprehensive solution for managing human resources with automated workflows, policy compliance, and efficient approval systems. The Agile approach ensures iterative development with continuous feedback and improvement opportunities.

The system addresses all specified requirements including leave management, attendance tracking, payroll processing, and specialized features for marketing visits and miss punch handling, all while maintaining compliance with company policies and providing a seamless user experience.