

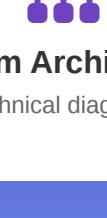
ATTENDO Documentation

Complete User Guide & System Documentation



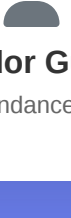
Quick Setup Instructions

1. Quickstart



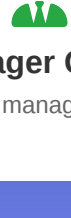
System Architecture

Technical diagrams



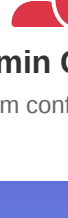
Vendor Guide

Daily attendance tracking



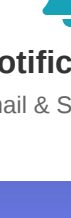
Manager Guide

Team management



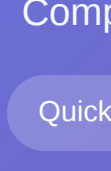
Admin Guide

System configuration



Notifications

Email & SMS alerts



ATTENDO Setup Guide

Complete installation and configuration guide for new PC setup

Quick Start Guide

5-Step Setup Process

Ready to Impress Edition

Quick Start

5 Key Scripts

Launch App

Features Showcase

Quick Overview

ATTENDO is a comprehensive vendor timesheet management system that can be set up on any Windows PC in just 5 simple steps. This guide will walk you through the complete setup process from download to full operation.

Setup Time: Approximately 10-15 minutes for complete setup on a fresh PC

What You'll Get After Setup

- Multi-Role System:** Vendor, Manager, and Admin dashboards
- Real-time Notifications:** Email, SMS, and Teams integration
- AI-Powered Analytics:** Predictive insights and team optimization
- Manager Mismatches Table:** Advanced table interface for attendance conflicts
- Power Automate Integration:** Excel-based workflow automation
- Comprehensive Reporting:** Monthly reports and analytics

Complete Quick Start Flow

Complete Quick Start Flow (Copy & Paste)

Step 1: Clone repository

```
git clone <repository-url>
```

Step 2: Navigate to directory

```
cd vendor-timesheet-tool
```

Step 3: Install dependencies

```
pip install -r requirements.txt
```

Step 4: Initialize database

```
python 1_initialize_database.py
```

Step 5: Load sample data

```
python 2_load_sample_data.py
```

Step 6: Add test scenarios

```
python 3_Add_Special_Cases_SampleData.py
```

Step 7: Launch application

```
python app.py
```

Step 8: Open browser

→ Navigate to: <http://localhost:5000>

→ Use credentials: **admin/admin123**

🎉 DONE! Ready to demo all features!

Quick System Test

- 👤 Login as **Admin** (admin/admin123)
- 🔗 Visit the Admin Dashboard to see reconciliation
- 👤 Switch to Manager role (manager/manager123)
- 📊 Test the Manager Mismatches Table view
- 👤 Try the Vendor interface (vendor/vendor123)
- 🔗 Explore API docs at <http://localhost:5000/apidocs>

Prerequisites

Before setting up ATTENDO, ensure your system meets these requirements:

System Requirements

Operating System:

Windows 10/11 (64-bit)

RAM Memory:

Minimum 4GB, Recommended 8GB

Storage Space:

At least 2GB free space

Network:

Internet connection for initial setup

Software Prerequisites

Required Software Dependencies

Python 3.8 or higher

Core programming language for ATTENDO

SQLite database engine

Included with Python installation

pip (Python package manager)

Package installer for Python dependencies

Modern web browser

Chrome, Firefox, Edge for web interface

Note: All dependencies auto-installed during setup

Auto-Installation: The setup scripts will automatically check for and install missing dependencies. No manual installation required!

Download & Setup

1. Clone Repository (Recommended)

Clone the ATTENDO repository directly from GitHub for the latest version.

Repository Setup Commands

Step 1: Clone the repository

```
git clone <repository-url>
```

Step 2: Navigate to project directory

```
cd vendor-timesheet-tool
```

Step 3: Install Python dependencies

```
pip install -r requirements.txt
```

Step 4: Verify installation

✅ Ready for database initialization

✅ All dependencies installed successfully

Repository Cloned: You now have the complete ATTENDO project with all source files and the 5 key setup scripts ready to run.

The 5 Key Setup Scripts

ATTENDO includes 5 essential Python scripts. Run scripts 1-3 in order for complete setup with sample data, then use 4-5 as needed.

Quick Setup Commands (Run in Order):

Essential Setup Commands (Run in Order)

Step 1: Initialize Database

```
python 1_initialize_database.py
```

Creates database + 12 tables

Step 2: Load Sample Data

```
python 2_load_sample_data.py
```

Loads users, vendors, managers

Step 3: Add Special Cases & Test Data

```
python 3_Add_Special_Cases_SampleData.py
```

Adds holidays + test cases

Utility Tools (Use as needed)

Step 4: View Database Contents (Optional)

```
python 4_ViewDatabase.py
```

Browse/query database

Step 5: Clear Tables (Optional - Reset)

```
python 5_clear_tables_in_database.py
```

Clean/reset data

1_initialize_database.py

Creates SQLite database with 12 tables and relationships

🔥 Run: python 1_initialize_database.py

2_load_sample_data.py

Loads users, vendors, managers with default passwords

🔥 Run: python 2_load_sample_data.py

3_Add_Special_Cases_SampleData.py

Adds holidays, attendance records, and test scenarios

🔥 Run: python 3_Add_Special_Cases_SampleData.py

4_ViewDatabase.py

Interactive database viewer for browsing tables and data

🔥 Run: python 4_ViewDatabase.py

5_clear_tables_in_Database.py

Cleans and resets database tables for fresh start

🔥 Run: python 5_clear_tables_in_Database.py

After Running Scripts 1-3: You'll have a fully working system with sample users, attendance data, holidays, and ready-to-demo scenarios. Login with default credentials and explore!

System Configuration

Default Login Credentials

Default Accounts Created

ADMIN ACCESS

Username: admin

Password: admin123

Role: System Administrator

Access: All system functions

MANAGER ACCESS

Username: manager1

Password: manager123

Role: Team Manager

Access: Team oversight & approvals

VENDOR ACCESS

Username: vendor1

Password: vendor123

Role: Vendor/Employee

Access: Status submission & reports

Email & Notification Setup (Optional)

For full notification functionality, configure these environment variables:

Notification Configuration (Optional)

Email Notification Settings

SMTP_SERVER=smtp.gmail.com

SMTP_PORT=587

SMTP_USER=your-email@gmail.com

SMTP_PASSWORD=your-app-password

SMS & Teams Integration

SMS_API_URL=your-sms-gateway-url

TEAMS_WEBHOOK_URL=your-teams-webhook

Note: System works perfectly without these! Notifications will be logged locally for demos

Quick Demo Mode: The system works perfectly without email configuration. Notifications will be logged locally for demonstration purposes.

Launch ATTENDO

Start the Application

Launch ATTENDO Application

Step 1: Start ATTENDO server

```
python app.py
```

Step 2: Verify successful startup

✅ Swagger UI registered successfully!

✅ API Documentation available at: <http://localhost:5000/apidocs>

✅ Power Automate API endpoints registered

✅ NotificationService initialized successfully

• Running on <http://127.0.0.1:5000>

• Press CTRL+C to quit

Step 3: Application ready!

🎉 SUCCESS! ATTENDO is now live and ready for demo!

Access the System

Open your web browser and navigate to:

Application Access URLs

Main Application Portal

<http://localhost:5000>

Login with default credentials above

Interactive API Documentation

<http://localhost:5000/api/docs>

Full Swagger UI with testing capabilities

System Test Data & Health Check

<http://localhost:5000/api/docs/test-data>

Verify all endpoints are working

Success! ATTENDO is now running! You can now login with the default credentials and explore all features.

ATTENDO - Complete Features Showcase

Enterprise-Grade Innovation Showcase

Core System Architecture

Multi-Role Authentication

Secure role-based access control with Vendor, Manager, and Admin interfaces

Database Excellence

Normalized 12-table SQLite database with optimized queries and relationships

RESTful API Design

35+ endpoints with Swagger documentation and interactive testing interface

Responsive UI/UX

Bootstrap 5-based responsive design with mobile-optimized interfaces

Vendor/Employee Features

Daily Status Submission

Intuitive form for WhatsApp-like save submissions with location tracking

Status History & Tracking

Complete calendar view of submitted statuses with approval status

Real-time Validation

Smart form validation preventing duplicate submissions and conflicts

Personal Dashboard

Predictive analytics for monthly statistics and pending actions

Manager Features

Team Dashboard

Real-time overview of team attendance with visual status indicators

Advanced Mismatches Table

Admin-style table interface with APIAA code explanations and filtering

Bulk Approval System

Efficient bulk approval/reject functionality with comment capabilities

AI-Powered Insights

Predictive analytics for attendance patterns and team optimization

Conflict Resolution

Smart priority classification (High/Medium/Low) for mismatch handling

Team Performance Analytics

Comprehensive reporting with attendance trends and insights

Admin Features

System Administration

Complete user management, role assignments, and system configuration

Data Import/Export

Excel/CSV file processing for swipe data and bulk operations

Reconciliation Engine

Automated mismatch detection between claimed status and swipe records

Audit Trail System

Comprehensive logging of all user actions and system events

Holiday Management

Flexible holiday calendar with business rule configuration

System Health Monitoring

Real-time system status, performance metrics, and error tracking

AI & Integration Features

Power Automate Integration

Real-time Excel table updates and workflow automation

Multi-Channel Notifications

Email, SMS, and Microsoft Teams integration with smart templates

Predictive Analytics

ML-based attendance prediction and risk assessment algorithms

Behavioral Analysis

Pattern recognition and anomaly detection for attendance compliance

Real-time Sync

Live Excel file synchronization with change detection and webhooks

Smart Recommendations

AI-generated suggestions for policy optimization and team management

Technical Excellence

Security Architecture

Multi-layered security with session management, CSRF protection, and audit trails

Performance Optimization

Efficient database queries, caching strategies, and background processing

Scalable Design

Modular architecture ready for cloud deployment and horizontal scaling

Data Processing Excellence

Pandas-based analytics engine with advanced data transformation pipelines

API Documentation

Interactive Swagger UI with comprehensive endpoint testing capabilities

Cross-Platform Compatibility

Responsive design working seamlessly across desktop, tablet, and mobile devices

★ Innovation Highlights for Judges

AI Integration

Machine learning integrated into core attendance management with predictive capabilities

Advanced UX Design

Manager mismatches table with APIAA code explanations and initiative conflict resolution

Full Automation

End-to-end workflow automation from attendance capture to management reporting

🔥 Ready to Showcase Innovation Excellence!

Complete enterprise-grade solution with cutting-edge AI, seamless integrations, and exceptional user experience