



Project Name : ETMS application

Employee Task Management System

Android App: Daily Task Assignment & Progress Tracking

1. Objective

Develop an Android application that allows managers/admins to assign daily tasks to employees, track task progress in real time, and generate productivity reports

2. User Roles & Permissions

2.1 Admin / Manager

Create & manage employees

Assign daily tasks

Set task priority & deadlines

Track task progress

Approve/reject completed tasks

View reports & analytics

2.2 Employee

View assigned tasks

Update task status

Add comments / notes

Upload proof (images, documents)

Track personal task history

3. Functional Modules





4. Authentication & User Management

4.1 Login & Registration

Email + Password login

Optional: Mobile OTP login

Role-based access (Admin / Employee)

4.2 Profile Management

Name

Employee ID

Designation

Department

Profile picture

Contact details

5. Dashboard

5.1 Admin Dashboard

Total employees

Tasks assigned today

Tasks completed

Tasks pending

Overdue tasks

Quick actions:

Assign Task

View Reports





5.2 Employee Dashboard

Tasks for today

Task status summary:

Pending

In Progress

Completed

Notifications for new tasks

6. Task Management Module

6.1 Create Task (Admin)

Fields:

Task title

Task description

Assigned employee

Priority (Low / Medium / High)

Start date

Due date

Estimated time

Task category (optional)

Actions:

Save draft

Assign task

Reassign task





6.2 Task Listing

Filters:

By date

By employee

By status

By priority

Sort:

Due date

Priority

Status

6.3 Task Details Screen

Task information

Assigned employee

Status timeline

Comments section

Attachments

Progress percentage

7. Task Progress Tracking

7.1 Status Flow

Assigned

In Progress

On Hold

Completed

Approved (by Admin)

Rejected (if rework needed)





7.2 Employee Actions

Start task

Update progress (0–100%)

Add remarks

Upload files/images

Mark task as completed

8. Notifications

8.1 Push Notifications

New task assigned

Task deadline reminder

Task rejected

Task approved

8.2 In-App Notifications

Notification center

Read/unread status

9. Reports & Analytics (Admin)

9.1 Daily Reports

Tasks assigned vs completed

Employee-wise performance

9.2 Monthly Reports

Productivity trends

Delay analysis

Average completion time





9.3 Export Options

PDF

Excel

10. Attendance (Optional Enhancement)

Daily check-in / check-out

Link tasks with attendance

GPS-based location (optional)

11. Technology Stack (Recommended)

Frontend

Android (Kotlin)

MVVM Architecture

Material UI

Backend

Node.js / Spring Boot

REST APIs

JWT Authentication

Database

Firebase Firestore / PostgreSQL

Cloud Storage for files

Notifications

Firebase Cloud Messaging (FCM)





12. Database Structure (High-Level)

Users Table

user_id

name

role

email

department

status

Tasks Table

task_id

title

description

assigned_to

assigned_by

status

priority

start_date

due_date

progress

Task Updates Table

update_id

task_id

comment

progress

timestamp





13. Security Requirements

Role-based access control

Encrypted passwords

Secure API calls

Data validation

14. Non-Functional Requirements

App should support offline mode (sync later)

Fast load time (<3 sec)

Scalable to 1000+ users

Crash reporting (Firebase Crashlytics)

15. Development Phases

Phase 1: Core Features

Login

Task assignment

Task update

Notifications

Phase 2: Reporting & Analytics

Reports

Export features

Phase 3: Enhancements

Attendance

GPS tracking

Chat module





16. Future Enhancements

AI-based workload suggestions

Task auto-prioritization

Voice-based task updates

17. Deliverables

Android APK

Source code

API documentation

Database schema

Admin user manual

