Installation Report : Payroll Management System

Platform: Web and Mobile

Backend Setup (Django):

➢ **Technologies Used:**

- Language: Python 3.11.9
- Framework: Django 5.2.1
- Database: PostgreSQL

➢ **Backend Dependencies (requirements.txt):**

- Django==5.2.1
- django-cors-headers==4.7.0
- djangorestframework==3.16.0
- djangorestframework_simplejwt==5.5.0
- PyJWT==2.9.0
- python-decouple==3.8
- pytz==2023.3.post1
- regex==2023.8.8
- reportlab==4.4.1
- sqlparse

➢ **Backend Installation Steps:**

1. Navigate to Payroll_Backend folder
2. Create virtual environment:
       python -m venv env
3. Activate it:
       Windows: env\Scripts\activate
        macOS/Linux: source env/bin/activate
4. Install dependencies:
       pip install -r requirements.txt
5. Create PostgreSQL database using pgAdmin

6. Update DATABASES section in
   Payroll_Backend/payroll_management_system/settings.py:

```
DATABASES = {
    'default': {
        'ENGINE': 'django.db.backends.postgresql',
        'NAME': 'your_db_name',
        'USER': 'your_db_user',
        'PASSWORD': 'your_db_password',
        'HOST': 'localhost',
        'PORT': '5432',
    }
}
```

7. Run migrations: python manage.py makemigrations
                    python manage.py migrate
8. Create superuser:
        python manage.py createsuperuser
9. Run server:
        python manage.py runserver 0.0.0.0:8000

➢ **Automated Weekend & Public Holiday Entries:**

Once you've provisioned user accounts for employees, managers, and administrators, you can automatically insert attendance records for every weekend and official public holiday by running the following command:

        python manage.py mark_holidays --year=2025

This command will scan the calendar for the specified year and creates rows in the Attendance table for each Saturday, Sunday, and recognized public holiday—ensuring non-working days are tracked automatically.

Frontend Setup (React Native + Expo):

➢ **Technologies Used:**

- Node.js: 19.6.0
- Expo CLI: 6.3.10
- React Native: 0.79.5
- Expo SDK: 53.0.17

➢ **Frontend Installation Steps:**

1. Navigate to Payroll_Frontend folder
2. Install Dependencies:
   Run npm install
3. Start the server:
   npx expo start
4. Run the App
   - On Mobile: Install Expo Go and scan the QR code displayed.
   - On Web: Choose the "open web" option from the Expo Metro Bundler.

API & Environment Config:

➢ API Base URL: Payroll_Frontend/config.js

Note: In this project, a best practice was followed by centralizing the API base URL in a config file (config.js). However, some modules developed by teammate include the base URL directly in each file.

➢ Backend uses .env with python-decouple. Key variables include:
   - SECRET_KEY: Django's secret key.
   - DB_PASSWORD: Password for the PostgreSQL database user.
   - EMAIL_HOST_USER: Email address used for sending emails from the system.
   - EMAIL_HOST_PASSWORD: Password for the configured email account.

Logs & Media Handling:

All generated Logs, reimbursement proofs and payslips are stored in: Payroll_Backend/media/