
📦 Dependencies Explained

1. `pandas`

- **What it does**: Reads and manipulates data from the Excel file (`employees.xlsx`).
- **Why it's important**: It allows you to easily extract and work with rows, columns, and data types from spreadsheets using Python.
- **Example use**:

```python
import pandas as pd
df = pd.read_excel("employees.xlsx")
```

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2. `fpdf` or `reportlab`

- **What it does**: These libraries are used to generate **PDF files**.
- **Why it's important**: You'll use this to create a professional-looking **payslip** for each employee.
- **Example (`fpdf`)**:

```python
from fpdf import FPDF
pdf = FPDF()
pdf.add_page()
pdf.set_font("Arial", size=12)
pdf.cell(200, 10, txt="Payslip", ln=True, align='C')
```

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3. `smtplib`

- **What it does**: This built-in Python library is used for **sending emails** via the **SMTP protocol**.
- **Why it's important**: It enables you to automate the process of sending each PDF to the employee via email.
- **Example**:

```python
import smtplib
server = smtplib.SMTP('smtp.gmail.com', 587)
```

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4. `email` module

- **What it does**: Helps you structure the email content (subject, body, attachments).
- **Why it's important**: Required for creating a proper email with the PDF attached.
- **Example**:

```python
from email.message import EmailMessage
```

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5. `yagmail` *(optional alternative to smtplib)*

- **What it does**: Simplifies email sending in Python. It's easier and cleaner than setting up `smtplib` and `email` manually.
- **Why it's important**: It’s beginner-friendly and takes care of a lot of the email structure automatically.
- **Example**:

```python
import yagmail
yag = yagmail.SMTP("your_email@gmail.com")
yag.send(to="recipient@example.com", subject="Payslip",
contents="Attached", attachments="payslip.pdf")
```

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6. `os` *(optional but useful)*

- **What it does**: Allows you to interact with your operating system, like creating folders (`payslips/`) or checking file paths.
- **Why it's important**: Helps automate file saving and directory management.
- **Example**:

```python
import os
if not os.path.exists("payslips"):
    os.mkdir("payslips")
```

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7. Environment Variables or Config Files

- **What they are**: A secure way to store sensitive data like your email password or SMTP details.
- **Why they're important**: Never hardcode credentials in your script!
- **How to use** (with `.env` file and `os`):

```python
import os
EMAIL = os.getenv("EMAIL_ADDRESS")
PASSWORD = os.getenv("EMAIL_PASSWORD")
```
