Payslip Generator Documentation

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Introduction

A payslip, also known as a pay stub, is a document issued by an employer to an employee that outlines the employee's earnings, deductions, and net pay for a specific period. This payslip generator application allows users to generate a detailed payslip in PDF format based on data from an Excel file. The application uses Python libraries such as `gradio`, `pandas`, and `fpdf` to achieve this functionality.

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Required Libraries

The application requires the following Python libraries:

1. `gradio`: For creating the user interface.
2. `pandas`: For reading and manipulating Excel data.
3. `fpdf`: For generating PDF documents.
4. `os`: For file path operations.

python

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```
import gradio as gr
import pandas as pd
from fpdf import FPDF
import os
```

Code Breakdown

Class Definition: PDF

The `PDF` class inherits from `FPDF` and customizes the header and footer of the PDF document.

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```
class PDF(FPDF):
    def header(self):
        self.set_font("Arial", 'B', 12)
        self.cell(0, 5, "SYMBIOSYS TECHNOLOGIES", ln=True, align='C')
        self.cell(0, 5, "Plot No 1&2, Hill no-2, IT Park,", ln=True,
align='C')
        self.cell(0, 5, "Rushikonda, Visakhapatnam-45", ln=True,
align='C')
        self.cell(0, 5, "Ph: 2550369, 2595657", ln=True, align='C')
        self.ln(10)

    def footer(self):
        self.set_y(-15)
        self.set_font('Arial', 'I', 8)
        self.cell(0, 10, f'Page {self.page_no()}', 0, 0, 'C')
```

Function: `create_payslip`

The `create_payslip` function generates the payslip PDF for a given employee.

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```
def create_payslip(employee):
    pdf = PDF()
```

```
    pdf.add_page()

    # Add the payslip title
    pdf.set_font("Arial", 'B', 12)
    pdf.cell(0, 10, "SALARY STATEMENT FOR THE MONTH OF "
f"{employee['Statement for the month']}" " 2024", ln=True, align='C')
    pdf.ln(5)

    # Table 1: Employee Code, Name, Designation
    pdf.set_font("Arial", 'B', 10)
    pdf.cell(65, 8, "Employee Code", border=1)
    pdf.cell(65, 8, "Employee Name", border=1)
    pdf.cell(65, 8, "Designation", border=1)
    pdf.ln()
    pdf.set_font("Arial", size=10)
    pdf.cell(65, 8, f"{employee['Employee Code']}", border=1)
    pdf.cell(65, 8, f"{employee['Employee Name']}", border=1)
    pdf.cell(65, 8, f"{employee['Designation']}", border=1)
    pdf.ln(10)

    # Table 2: Date of Joining, Employment Status, Statement for the
month
    pdf.set_font("Arial", 'B', 10)
    pdf.cell(65, 8, "Date of Joining", border=1)
    pdf.cell(65, 8, "Employment Status", border=1)
    pdf.cell(65, 8, "Statement for the month", border=1)
    pdf.ln()
    pdf.set_font("Arial", size=10)
    date_of_joining = pd.to_datetime(employee['Date of
Joining']).strftime('%d-%m-%Y')
    pdf.cell(65, 8, f"{date_of_joining}", border=1)
    pdf.cell(65, 8, f"{employee['Employment Status']}", border=1)
    pdf.cell(65, 8, f"{employee['Statement for the month']}",
border=1)
    pdf.ln(10)

    # Table 3 and 4: Classified Income and Deductions side by side
    pdf.set_font("Arial", 'B', 10)
```

```
    pdf.cell(70, 8, "Classified Income", border=1, align='C')
    pdf.cell(30, 8, "Amount (Rs.)", border=1, align='C')
    pdf.cell(60, 8, "Deductions", border=1, align='C')
    pdf.cell(30, 8, "Amount (Rs.)", border=1, align='C')
    pdf.ln()
    pdf.set_font("Arial", size=10)

    income_items = [
        "Basic Pay (Rs.)", "House Rent Allowance (Rs.)",
        "City Compensatory Allowance (Rs.)", "Travel Allowance (Rs.)",
        "Food Allowance (Rs.)", "Performance Incentives (Rs.)"
    ]
    deduction_items = [
        "Professional Tax (Rs.)", "Income Tax (Rs.)",
        "Provident Fund (Rs.)", "ESI (Rs.)",
        "Leaves-Loss of Pay (Rs.)", "Others (Rs.)"
    ]

    for income, deduction in zip(income_items, deduction_items):
        pdf.cell(70, 8, f"{income.replace('(Rs.)', '').strip()}",
border=1)
        pdf.cell(30, 8, f"Rs. {employee[income]:.2f}", border=1,
align='R')
        pdf.cell(60, 8, f"{deduction.replace('(Rs.)', '').strip()}",
border=1)
        pdf.cell(30, 8, f"Rs. {employee[deduction]:.2f}", border=1,
align='R')
        pdf.ln()

    # Add spacing before the Totals section
    pdf.ln(10)

    # Totals section
    pdf.set_font("Arial", 'B', 10)
    pdf.cell(70, 8, "GROSS PAY", border=1)
    pdf.cell(30, 8, f"Rs. {employee['Gross Pay (Rs.)']:.2f}",
border=1, align='R')
    pdf.cell(60, 8, "DEDUCTIONS", border=1)
```

```
    pdf.cell(30, 8, f"Rs. {employee['Deductions (Rs.)']:.2f}",
border=1, align='R')
    pdf.ln()
    pdf.cell(100, 8, "NET PAY", border=1)
    pdf.cell(80, 8, f"Rs. {employee['Net Pay (Rs.)']:.2f}", border=1,
align='R')
    pdf.ln(20)

    # Footer section with added spacing
    pdf.cell(0, 8, "AUTHORIZED SIGNATORY", ln=True)
    pdf.ln(20)  # Added more spacing here
    pdf.cell(0, 8, "Durgaaprasadh,", ln=True)
    pdf.cell(0, 8, "H.R Executive", ln=True)
    pdf.ln(10)
    pdf.set_font('Arial', 'I', 8)
    pdf.cell(0, 8, "We request you to verify employment details with
our office on email: hr@symbiosystech.com. (+91-0891-2550369)",
ln=True)

    return pdf
```

Function: `generate_payslip`

The `generate_payslip` function reads employee data from an Excel file and generates the payslip PDF for a specific employee.

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```
def generate_payslip(file, emp_id):
    df = pd.read_excel(file.name)
    emp_id = int(emp_id)
    employee = df.loc[df['Employee Code'] == emp_id].squeeze()

    if not employee.empty:
        payslip_pdf = create_payslip(employee)
        output_filename = f"payslip_{emp_id}.pdf"
        payslip_pdf.output(output_filename)
        return output_filename
    else:
```

```
        return "Employee ID not found in the uploaded file."
```

Function: `download_payslip`

The `download_payslip` function facilitates the downloading of the generated payslip PDF.

python
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```
def download_payslip(file, emp_id):
    payslip_file = generate_payslip(file, emp_id)
    if payslip_file != "Employee ID not found in the uploaded file.":
        return payslip_file
    else:
        return None
```

Gradio Interface

The Gradio interface defines the user interface for the payslip generator application.

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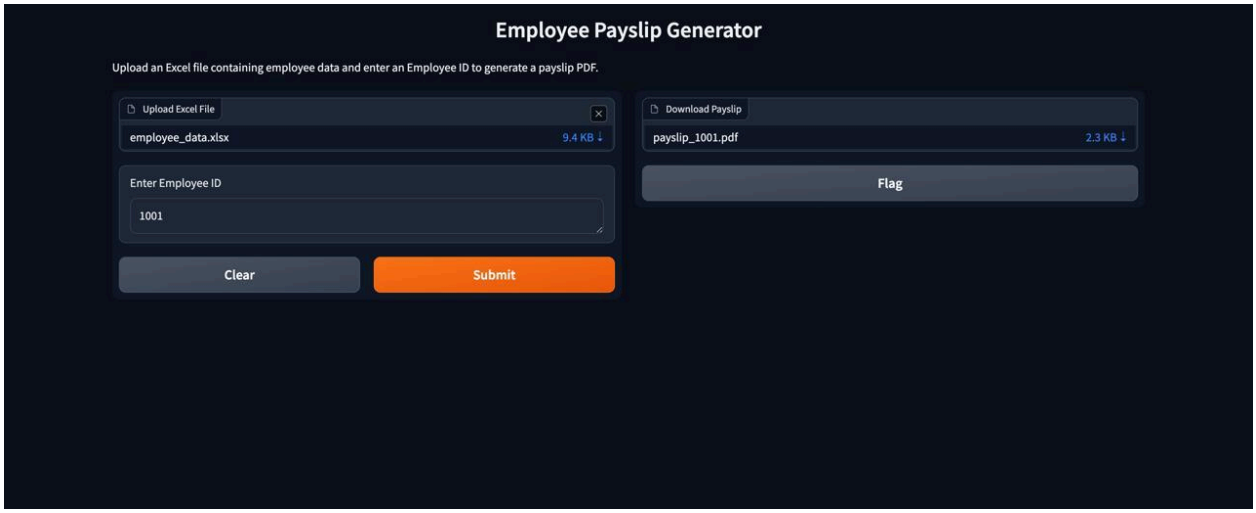
```
iface = gr.Interface(
    fn=download_payslip,
    inputs=[gr.File(label="Upload Excel File"),
gr.Textbox(label="Enter Employee ID")],
    outputs=gr.File(label="Download Payslip"),
    title="Employee Payslip Generator",
    description="Upload an Excel file containing employee data and
enter an Employee ID to generate a payslip PDF."
)

# Launch the Gradio interface with sharing enabled
iface.launch(share=True)
```

How to Use the Application

1. Run the Script: python payslip_st.py
2. As we used gradio for the interface, the public link expires in 72 hours. By running the code again, we get a new public link.
3. Example: Running on local URL: http://127.0.0.1:7860 Running on public URL: https://820853339360baeb72.gradio.live
4. Upload an Excel file containing employee data.
5. Enter the Employee ID for which you want to generate the payslip.
6. Click on the "Download Payslip" button to download the generated payslip PDF.



Conclusion

This payslip generator application provides a simple and efficient way to generate payslips in PDF format. By leveraging the capabilities of `gradio`, `pandas`, and `fpdf`, it ensures accurate and professional documentation of employee earnings and deductions.

Output

SYMBIOSYS TECHNOLOGIES
Plot No 1&2, Hill no-2, IT Park,
Rushikonda, Visakhapatnam-45
Ph: 2550369, 2595657

SALARY STATEMENT FOR THE MONTH OF JULY 2024

Employee Code	Employee Name	Designation
1001	Sriram	Software Engineer

Date of Joining	Employment Status	Statement for the month
01-01-2023	Full Time	JULY

Classified Income	Amount (Rs.)	Deductions	Amount (Rs.)
Basic Pay	Rs. 50000.00	Professional Tax	Rs. 0.00
House Rent Allowance	Rs. 15000.00	Income Tax	Rs. 0.00
City Compensatory Allowance	Rs. 8000.00	Provident Fund	Rs. 0.00
Travel Allowance	Rs. 2000.00	ESI	Rs. 0.00
Food Allowance	Rs. 1500.00	Leaves-Loss of Pay	Rs. 0.00
Performance Incentives	Rs. 3000.00	Others	Rs. 0.00

GROSS PAY	**Rs. 99500.00**	**DEDUCTIONS**	**Rs. 0.00**
NET PAY		**Rs. 99500.00**	

AUTHORISED SIGNATORY

Durgaaprasadh,

H.R Executive

We request you to verify employment details with our office on email: hr@symbiosystech.com. (+91-0891-2550369)