Documentation Report : Attendance Report Generator

1. Overview:

- The Python script generates a detailed attendance report in the PDF format based on the user's Student ID and an Excel file containing attendance data. The script utilizes the pandas library to process Excel data and the fpdf library to create a PDF document.

2. Key Features and Functions:

- **PDF Class Extension (PDF):** Extends the FPDF class to customize the appearance of the PDF, including a customized footer.
- **get_user_id Function:** Prompts the user to input their Student ID, performs input validation, and returns the user ID as an integer.
- **create_letterhead Function:** Add a letterhead image to the PDF.
- **create_title Function:** Sets the font, adds a title to the PDF, includes the date of the report, and adds a line break.
- **create_pdf Function:** Processes Excel data, selects relevant information based on the provided user ID, and generates a detailed attendance report in PDF format.

3. Code Structure:

- The script defines a custom PDF class that extends the FPDF class.
- The create_letterhead and create_title function enhance the appearance of the PDF.
- The main functionality is in the create_pdf functions, which loads data from an Excel file, selects user-specific information, and generates a PDF report.

4. Dependencies:

- **time:** Used for obtaining the current date.
- **pandas:** Required for data manipulation and analysis.
- **fpdf:** Used for creating PDF documents.

5. Usage Instructions:

- Run the script in a Python environment.
- Enter the Student ID as prompted.
- The script will generate a PDF report based on the provided Excel file.

6. Testing and Validation:

- The script reads data from the specified Excel file.
- It validates the user ID input to ensure it is numeric.
- The generated PDF report includes relevant attendance information.

7. Known Issues and Limitations:

- No known issues reported.

8. Future Work:

- Consider adding additional customization options for the appearance of the PDF.
- Enhance error handling for cases such as missing Excel files.

9. Source Code:

- **GitHub repository link:**
  https://github.com/bookerTee05/Attendance-Report-Generator-using-python