**Project:** PDF\_Protector  
**Student / Intern:** Meet Pandit

**Internship:** [Inlighn Tech]

**Objective:**

The objective of this project is to create a Python-based tool that allows users to add password protection to PDF files. This project will help students understand file handling, encryption, and command-line arguments in Python.

**Project Overview:**

PDF files often contain sensitive information, and protecting them with a password adds an extra layer of security. This project focuses on building a tool that encrypts PDF files using Python's PyPDF2 library. The script takes an input PDF file, applies password protection, and saves the encrypted version as a new file.

**How the Project Works:**

1. **Input Handling:** The script accepts three command-line arguments: the input PDF file, the output (protected) PDF file, and the password.

2. **Reading the PDF:** The script opens the input PDF in read mode.

3. **Creating a New PDF:** A new PDF file is created, and each page from the original PDF is added to it.

4. **Applying Encryption:** The encrypt() function is used to apply password protection to the new PDF file.

5. **Saving the Encrypted File:** The password-protected PDF is saved with the specified output file name.

6. **Error Handling:** The script handles cases where the input file is missing, invalid, or unreadable.

**Key Concepts Covered:**

● File handling in Python

● Working with PDFs using PyPDF2

● Implementing encryption for security● Using command-line arguments in Python scripts

● Exception handling for robust code execution

**Step-by-Step Implementation:**

1. Install the PyPDF2 library if not already installed.

2. Create a Python script that accepts command-line inputs.

3. Open and read the input PDF file.

4. Copy the content of the original PDF to a new PdfWriter object.

5. Apply encryption using the encrypt() method.

6. Save the encrypted file and provide user feedback.

7. Implement error handling to manage missing or corrupt PDF files.

**Expected Outcomes:**





