This task is crucial because it gives you first-hand experience with the challenges of processing mortgage documents manually—challenges that AI is designed to solve. In later projects, you'll be testing AI models to understand their power in classifying documents, extracting key details, and automating workflows. By experiencing these challenges now, you'll be better positioned to critically analyze how different AI models process documents.

## **Steps to Follow:**

- 1. Download the sample blob file from the following link: sample blob 1.pdf
- 2. Review the contents and identify missing or problematic documents. Take note of:
  - **a. Missing documents** (e.g., pay slips, tax forms, or bank statements).
  - **b.** Irrelevant documents (e.g., a utility bill included in a mortgage application).
  - **c.** Formatting challenges (e.g., blurry scans, handwritten notes, or mismatched document labels).
- 1. Missing Documents: What key mortgage documents are absent? Investment account statements and list of monthly debts are absent.
- 2. Irrelevant Documents: What files shouldn't be included in the mortgage package?

The Zylker Electronics Hub document should be excluded from the mortgage package, as it is merely a receipt for an order and is not relevant to the mortgage application.

- **3.** Challenges Identified: What issues make manual processing difficult?

  Manual processing is time-consuming and prone to errors. This increases the risk of overlooking required documents during the mortgage review process.
- 4. How would an AI-powered system (using Computer Vision, NLP, and LLMs) help resolve these issues? Explain in 150-200 words.

An AI-powered system using Computer Vision, NLP, and LLMs can resolve mortgage document processing challenges by accurately reading, understanding, and interpreting a wide range of document formats. Computer Vision enables the system to "see" and process scanned images or photos of documents, while NLP and LLMs extract and interpret key information, even from unstructured or handwritten text. This eliminates manual errors caused by misreading or misclassifying documents.

For instance, the system can distinguish between a W-2 and a pay stub or identify income details from differently formatted bank statements across various financial institutions. AI can extract structured data such as income, account numbers, and employment history regardless of format differences, making it adaptable to all banks' statement layouts. It also detects inconsistencies, such as mismatched income across documents, flagging potential fraud.

AI can even identify missing documents and automatically prompt borrowers to provide them, ensuring complete applications. By automating classification, extraction, validation, and gap detection, the system enables faster, error-free decisions. Loan officers can then focus only on exceptions, rather than reviewing every document, accelerating the entire approval process. This reduces delays, improves accuracy, and enhances both lender efficiency and borrower satisfaction.