Assignment: Intelligent Form Agent – Read, Extract, and Explain

The purpose of this assignment is to design and implement an Intelligent Form Agent that can process and understand a wide variety of forms. The agent should be able to automatically extract information from both structured and unstructured fields, provide direct answers to questions related to individual forms, and generate holistic insights when analyzing multiple forms together. It should also be capable of producing concise summaries that highlight the most important details, reducing the need for manual review. While the main focus is on developing the QA and summarization pipeline, you are encouraged to think creatively and expand the functionality beyond these requirements. You may design innovative workflows, experiment with advanced NLP models, or introduce unique features that make the system more adaptive and intelligent. The development of a user interface is optional, but if included, it should enhance usability without being the primary focus. There are no strict limits—use this project as an opportunity to explore, innovate, and push the boundaries of what an intelligent document understanding agent can achieve.

Packaging & Submission Guidelines
- Codebase
  - Provide all source code in a structured repository.
  - Organize files logically:
    - `/src` – main agent code
    - `/data` – sample forms or test data (if sharable)
    - `/notebooks` – experiments, model training, or exploratory work
    - `/tests` - tests
  - `/docs` – documentation and instructions
  - Include a clear `requirements.txt` or `environment.yml` file listing dependencies.
- Documentation
  - A README.md that explains:
    - What the Intelligent Form Agent does
    - How to set up the environment
    - How to run the agent (step-by-step)
  - Example queries and expected outputs
  - Optional: design notes or diagrams describing your pipeline/architecture.
- Demonstration
  - Provide at least three example runs showing:
    - Answering a question from a single form.
    - Generating a summary of one form.
  - Providing a holistic answer across multiple forms.

You may include screenshots, logs, or a short screencast video (optional).

- Creativity Extensions

  If you add extra features (UI, visualization, advanced reasoning, etc.), package them separately but document how to run them.
  Clearly highlight creative additions in the README so they don't get overlooked.

- Final Deliverable

  Submit the repository link or a compressed folder.
  Ensure everything can be run end-to-end with minimal setup.