**Exercise**

**Retrieval-Augmented Generation (RAG) for Product Managers**

***Why This Exercise Is Important***

* ***Helps Product Managers design AI features that give accurate and reliable answers grounded in real company data.***
* ***Shows how AI agents can retrieve information, make decisions, or take actions within safe boundaries.***
* ***Prepares PMs to build smarter, more trustworthy AI tools that truly help users.***
* ***Ensures products deliver real business value, for example in platforms like NetSuite.***
* ***Strengthens understanding of responsible AI design and governance in enterprise applications.***

**NOTE: Try to do this entire Exercise without referring GPT or any content**

**Section A: Conceptual Understanding**

1. What is the primary purpose of RAG?  
   a) To fine-tune large language models  
   b) To combine retrieval of external data with generation for more accurate responses  
   c) To increase model speed  
   d) To summarize documents
2. In RAG architecture, the retriever component is responsible for:  
   a) Generating human-like text  
   b) Storing user feedback  
   c) Fetching relevant information from a knowledge base  
   d) Tokenizing the text
3. Which of the following best describes the generator in RAG?  
   a) A search engine  
   b) A neural network that uses retrieved data to produce a final response  
   c) A data cleaning tool  
   d) A summarization model only
4. What type of data source is typically used for retrieval in RAG?  
   a) Static databases only  
   b) Dynamic knowledge bases, vector databases, or document repositories  
   c) Only structured tables  
   d) Only APIs
5. RAG helps reduce hallucinations in LLMs because:  
   a) It replaces model reasoning with data lookup  
   b) It grounds responses in factual, retrieved information  
   c) It uses smaller models  
   d) It removes token limits
6. Which of the following is an example of RAG in a product feature?  
   a) Predicting customer churn using regression  
   b) Providing contextual answers from internal documents in a chatbot  
   c) Translating text into another language  
   d) Generating random questions
7. The retrieval step in RAG typically involves:  
   a) Embedding queries and comparing with document embeddings  
   b) Tokenizing input text  
   c) Performing sentiment analysis  
   d) Generating answers directly
8. What is a vector database used for in RAG?  
   a) To store numeric vectors representing semantic meaning of text  
   b) To store relational data in tables  
   c) To process model outputs  
   d) To train models
9. If a product manager wants to use RAG for a customer support bot, what should be the first step?  
   a) Write prompts manually  
   b) Identify and prepare the company’s knowledge base  
   c) Collect customer satisfaction ratings  
   d) Integrate with social media
10. Which of the following is a potential risk when deploying RAG systems?  
    a) Increased factual accuracy  
    b) Slow response times due to retrieval latency  
    c) Improved contextualization  
    d) Better grounding

**Section B: Scenario-Based Questions (Short Answer – 5 Questions)**

1. You are building a sales assistant chatbot that answers product-related queries. How would you design the RAG system workflow at a high level?
2. A finance team wants an internal RAG assistant to answer policy-related questions. What data governance steps should a PM consider before implementation?
3. What KPIs would you track to measure the success of a RAG-enabled chatbot in your product?
4. Your retrieved documents are large and noisy. What retrieval improvement techniques could you suggest to your data team?
5. How can RAG be integrated with existing analytics or Copilot tools to improve business decision-making?

**Section C: Application Thinking (Case Study)**

Case:  
Your company provides ERP solutions using Oracle NetSuite. Product managers have observed that users often struggle to locate relevant configuration details, workflow automation steps, and troubleshooting guidance within the system’s extensive documentation. The company wants to build an AI-powered assistant that retrieves NetSuite product documentation, support articles, and implementation guides to provide accurate, context-based answers using Retrieval-Augmented Generation (RAG).

Questions:

1. Define the problem statement in business terms from a product management perspective.
2. List the data sources you would integrate for retrieval (for example, knowledge base, implementation guides, community discussions, support tickets).
3. Outline the RAG architecture components that would support this NetSuite assistant.
4. Describe how you would ensure data accuracy, security, and governance, especially for enterprise customers.
5. Suggest two measurable success metrics for evaluating the performance and user adoption of this RAG-powered assistant.

**Section D: Reflection (Short Essay)**

Prompt:  
“As a Product Manager, how would you explain the value of RAG to a non-technical stakeholder, emphasizing business impact and user experience?”  
*(Answer in 150–200 words)*