SHL Assessment Recommendation Engine — 1■Page Summary

Problem Statement:
Enable recruiters to quickly find the most relevant SHL assessments by entering free-text queries, replacing slow manual filtering.

Solution Overview:
A retrieval-based recommendation engine powered by LLM embeddings. The pipeline includes:

1. Scraping
- Site: https://www.shl.com/solutions/products/product-catalog/
- Tool: requests + BeautifulSoup
- Data extracted: assessment name, description, URL, duration, remote-testing, IRT support

2. Indexing
- Embedding Model: text-embedding-3-small via OpenAI
- Vector Store: FAISS
- Framework: LangChain
- Fields embedded: name + description

3. Serving
- Backend: FastAPI
- Endpoint: /recommend
- Querying: top-K semantic retrieval based on cosine similarity

4. Demo UI (optional)
- Frontend: Streamlit
- Query box + ranked assessment suggestions

Technologies Used:
- Scraping: requests, beautifulsoup4
- Embedding + Indexing: LangChain, OpenAI, faiss-cpu
- API: FastAPI, Uvicorn
- UI: Streamlit
- Deployment: Render, Streamlit Cloud

Evaluation Plan:
Sample queries (Appendix 1) are tested manually to evaluate Recall@3 and MAP@3.
More rigorous testing can be added with real recruiter logs.

Next Steps:
- Add structured filters (duration, test type)
- Log query results to fine-tune responses
- RAG-based or classification-enhanced hybrid recommendations