Lab 11 task

Describe the Difference between:

1. Lang-Chain

2. RAG

3. LLMs

4. FAISS

5. Vector

6. VectorDB

7. Generative AI

8. GANs

**Lang-chain:**

Lang-chain is a python framework for building apps powered by LLMs. It helps you chain together LLMs with tools like retrievers, APIs, or memory.

**RAG:**

RAG stands for Retrieval Augmented Generation, and it combines retrieving external knowledge and LLM generation. It makes LLMs more accurate. It is used in Lang-Chain, common in production-grade AI apps.

**LLMs:**

LLMs stands for Large Language Models. They can be used via API or libraries like Lang-Chain or Transformers. They are models like GPT, Claude, LLaMA that understand/generate text.

**FAISS:**

FIASS stands for Facebook Artificial Intelligence Similarity Search. It is a tool to search for similar vectors efficiently. It is used in vector-based search (e.g. Find me documents like this).

**Vector:**

Vector is a list of numbers that represents meaning from text (generated by models like sentence-transformers). It is used in semantic search, vector databases, etc.

**VectorDB:**

A database (like Chroma and FIASS) that stores vectors and allows fast similarity search. It is essential in RAG pipelines.

**GenAI:**

GenAI stands for Generative Artificial intelligence. It is a broad term for AI that creates new content like text, images, code, audio. It includes LLMs, GANs, diffusion models, etc.

**GANs:**

It stands for Generative Adversarial Networks. It is a type of generative model mostly used in image/video generation. It is not used in LLMs or text-based chatbots.