Lab 11 Task:

# 1. LangChain

LangChain is a framework designed to help developers build applications that use large language models (LLMs). It makes it easier to manage prompts, memory, and integrations with tools like databases and APIs.

# 2. RAG (Retrieval-Augmented Generation)

RAG is a technique that combines the power of language models with external knowledge sources. It retrieves relevant information from a database or documents and uses that to generate more accurate and relevant responses.

# 3. LLMs (Large Language Models)

LLMs are AI models trained on large amounts of text data. They can understand and generate human-like language. Examples include GPT, BERT, and LLaMA.

# 4. FAISS

FAISS (Facebook AI Similarity Search) is a library for efficient similarity search and clustering of dense vectors. It helps in quickly finding similar items in a large dataset.

# 5. Vector

A vector is a list of numbers used to represent data like text or images in a way that machines can understand. It is often used in machine learning for comparison and search.

# 6. VectorDB (Vector Database)

A VectorDB is a special type of database designed to store and search vectors efficiently. It is used in AI applications to find similar content quickly.

# 7. Generative AI

Generative AI refers to systems that can create new content such as text, images, or music. These systems learn patterns from existing data and generate original output.

# 8. GANs (Generative Adversarial Networks)

GANs are a type of generative AI that use two neural networks: a generator and a discriminator. The generator creates data, and the discriminator tries to detect if it's real or fake, improving the results over time.