Programming Intergration Project (CO3101)

Group 4:
"Research and build AI chatbots using Retrieval-Augmented Generation for a music-related website, with Speech-to-Text and Text-to-Speech integration"

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Member list & Workload

No.	Fullname	Student ID	Problems	% done
1	Nguyễn Thiện Minh	2312097	- Exercise 1: 1.2 - Exercise 2 - Exercise 3: 3.2	100%
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3	Phạm Trần Minh Trí	2313622	- Exercise 1: 1.1 - Exercise 4 - LaTeX	100%

Table 1: Member list & workload

1 Introduction

2 Prerequisite: ANN, Transformer, LLM

3   Agent, URAG, LangChain

4 Retrieval-Augmented Generation for Large Language Models: A Survey

5   Reranking, RAG-Reasoning, RAG-RL

6 Implementation: LangChain, Text-to-speech, Speech-to-text

7   Evaluation

8 Conclusion

References

[1] LangChain Documentation. *Build a RAG agent with LangChain*. Accessed: 2026-01-05. LangChain. 2025. URL: https://docs.langchain.com/oss/python/langchain/rag.