The Four Main Components, each member should be responsible for one component:

1. Input Preprocessing

a. System overview
b. Intent Classification
c. Entity extractions
d. Input Embedding (depending on 2.b)
e. Error analysis and Improvement attempts

2. Graph retrieval layer

a. Baseline

1. Use Cypher queries to retrieve relevant information.
2. At least 10 queries that answer 10 questions, based on the user input
3. Pass the extracted entities from the input to query the KG and retrieve the answer

b. Embeddings:

For this experiment, you should pick one of the following options, with each choice you need to experiment with at least two embedding models

1. Either Node embeddings
2. Features vector embeddings

3. LLM layer

a. Combine the KG results from both the baseline and the embeddings
b. Use structure prompt: context, persona, task.
c. You must compare at least three models (examples):
d. The comparison must include **qualitative and quantitative** impressions.

4. Build a UI (e.g., Streamlit)

a. The use case/task is reflected in the interface.
b. View the KG-retrieved context
c. View the final LLM answer
d. The user can write their question and/or select one of the questions
e. The integration with the RAG pipeline/backend
f. The interface is still functional after receiving an answer from the LLM

Each member should be aware of the limitations of their component.