Course: Guided Research Methods
Submitter: Sokrat Bashirov
Reviewer: Eljan Mahammadli
Title: Proposal Review of "The comparative study of indexing techniques in different database systems, analyzing their performance for various query types".

Introduction
The proposal aims to conduct a comprehensive comparative analysis of indexing techniques in different database systems, focusing on their performance for various query types. It recognizes the importance of understanding the strengths and weaknesses of different indexing methods, their impact on query performance, and their suitability for different data and workloads. The proposal highlights the trade-offs and limitations of popular techniques such as B-trees, hash-based indexing, and bitmap indexing.

Strong Parts
1. Clear objective: The proposal clearly states the objective of the study, which is to analyze and evaluate the performance and characteristics of various indexing techniques in different database systems.
2. Comprehensive approach: The proposal acknowledges the need to consider different indexing techniques and their trade-offs. It aims to provide insights into the strengths and weaknesses of each technique, helping administrators, developers, and researchers make informed decisions.
3. Practical relevance: The study addresses a practical issue faced by database administrators and software developers. It seeks to optimize indexing strategies, improve performance, and inform decision-making in the selection of indexing techniques.
4. Potential improvements: The proposal recognizes the opportunity to explore potential improvements and optimizations based on the findings. This could lead to advancements in indexing techniques and database optimization.

To be Improved
1. Methodology details: The proposal lacks specific details regarding the methodology to be employed. It would be beneficial to outline the experimental design, datasets to be used, and specific metrics to evaluate performance.
2. Risk assessment: While the proposal briefly mentions potential risks, it would be useful to provide a more comprehensive risk assessment. This could involve identifying potential challenges, developing backup plans, and implementing strategies to address risks related to limited resources and time constraints.
3. Literature review: Although the proposal mentions completing the literature review by the midterm, it does not elaborate on the scope or extent of the review. Providing more information on the key studies and existing knowledge in the field would strengthen the proposal.
4. Justification of database systems: The proposal mentions using free versions of PostgreSQL and NoSQL DBMSs but does not explicitly justify the choice. Providing a clear reason for choosing these specific systems would make the proposal more trustworthy.
5. Consideration of diverse query workloads: Incorporating a variety of query types and workloads in the experiments may be beneficial. This will provide a more comprehensive evaluation of indexing techniques and their performance across different scenarios.

Conclusion
The proposal outlines a valuable study that addresses the comparative analysis of indexing techniques in different database systems. By focusing on the strengths and weaknesses of various techniques, the study can contribute to the optimization of indexing strategies and aid decision-making for software developers and administrators. However, the proposal would benefit from further development in terms of methodology details, risk assessment, literature review scope, and justification for the chosen database systems. These improvements would strengthen the overall proposal and provide a solid foundation for the final study.