PROJECT TITLE- Search engine

**Concept note-**

What is your application and what is its use?

* My application is a search engine, it is **a software program that helps people find the information they are looking for online using keywords or phrases**.
* Search engines essentially act as filters for the wealth of information available on the internet. They allow users to quickly and easily find information that is of genuine interest or value, without the need to wade through numerous irrelevant web pages. With so many online users, search engines determine which information online customer’s access. Being easy to find on search engines is just as important as advertising, direct marketing, or print media.

Why Your application needs cloud?

* Scalability: Cloud computing allows a search engine to quickly scale up or down its resources as demand changes, without the need for significant investments in hardware.
* Real time availability- Real-time availability in cloud computing refers to the ability of cloud-based systems to respond to user requests and provide access to data and services in a fast and timely manner. Thus the work of a search engine.
* Resource pooling- Cloud computing enables search engines to dynamically allocate resources as needed, ensuring that the search engine can meet the real-time demands of users at all times.
* Monitoring and management- Cloud providers offer centralized management tools that allow search engine projects to easily manage and monitor their infrastructure, ensuring that all components of the search engine are configured consistently and uniformly.
* Homogeneity- Cloud providers offer standardized infrastructure, enabling search engine project  a consistent and uniform computing environment.

**Literature review-**

Web search engines can differ from one another in three ways – crawling reach, frequency of updates, and relevancy analysis. Therefore, the performance capabilities and limitations of web search engines, and the differences between single and metasearch engines, is an important and significant research area

The authors of [1] proposed a technique which makes user search data quite efficient. This method provides a relationship between searches, document, and user query. Also consider the semantic document structure and user query. The proposed approach, results are better one from previous approaches.

The authors in [2] presented a modified page ranking algorithm and also observed that page which has more visits of incoming links is carrying more rank value than less visited pages.

The authors in [3] algorithm for calculating web page rank according to different parameters that include engagement, visits, and several other parameters.

**Flowchart-**

1. Define the project requirements: Determine the goals and objectives of the search engine project, and identify the specific features and functionality that the search engine must provide.

1. Choose a cloud platform: Choose a cloud platform that provides the necessary resources and features to implement the search engine project, such as scalable storage, high-performance computing, and advanced networking capabilities.

1. Design the architecture: Design the overall architecture of the search engine, including the indexing, ranking, and query processing components, and decide on the technology stack to be used.

1. Implement the search engine: Develop and implement the search engine, following the architecture and design that have been defined. This may involve indexing and processing data, developing algorithms for ranking and relevance, and implementing the user interface.

1. Test the search engine: Test the search engine thoroughly to ensure that it meets the requirements and provides the desired functionality.

1. Deploy the search engine: Deploy the search engine to the cloud platform, making sure to configure it for high availability, performance, and scalability.

1. Monitor and optimize performance: Continuously monitor the performance of the search engine, and make adjustments and optimizations as needed to ensure that it continues to meet the needs of users.