

# Search Engines and SEO: Need and Working

Simarjeet Kaur

Assistant Professor

Department of Computer Science and Applications,

<sup>1</sup>MindTrek College, Jalandhar, India

Email - jacksgirl64@gmail.com

**Abstract:** We use search engines for finding out any item or result for a particular query given by us to the search engines. They designed in such a way that they can find out the results relevant to the user's query. The another important thing that is going to be discussed in this research paper is SEO. SEO means search engine Optimizations. SEO is collections of multiple techniques to improve the ranking of any specific website in the search engine. This paper focuses on all the important aspects of the Search engine optimization and search engines.

**Key Words:** SEO, Ranking , Optimization, Search engine .

## 1. INTRODUCTION:

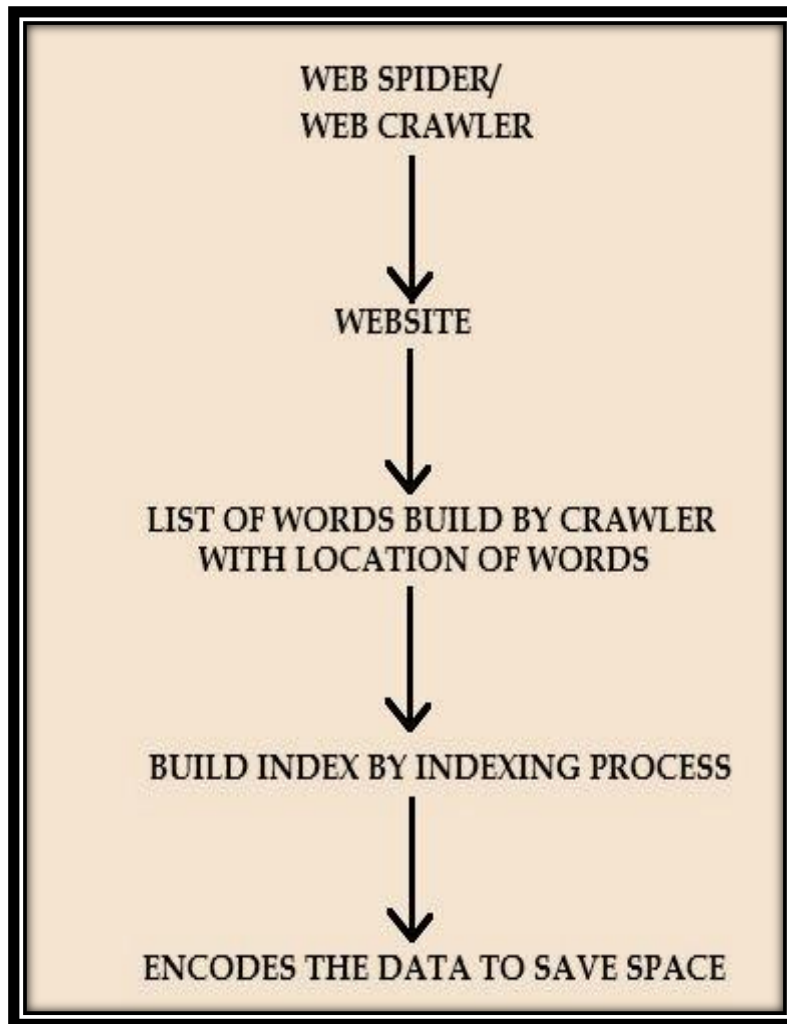
Search engines are helpful for giving the answers of user's queries who use these engines for searching the answer or result for any particular thing.[1] That's why these are known as search engines. Search engine should be designed in such a way that they can provide results with accuracy and efficiently on same time. Search engine is script or program based on web that is present on the internet. [2] Lots of search engines available online like beidu, google, bing and so on. [3] Each of these engines have different methods and techniques.[4] This helps to find the various files including documents that matches with the keywords that are given by the user as a query or string and then returns the results to the user.[5] Search Engine optimization is used for finding out the accurate results and improving the overall visibility of the search engines. This includes collection of various techniques.

## 2. NEED:

Search engine contains collection of pages. Search Engines are used not only for searching the queries from these pages but also used for getting the results relevant to these pages with their importance. Now the question is how the importance is decided. The answer is that importance is decided by different types of algorithms. Search engine optimization optimizes the search results. In this way, search engines and search engine optimization reduces the time to search the pages and helps to display important pages relevant to string to be searched. That's why search engines and SEO both are needed.

## 3. WORKING:

The concept of search engine's working has two parts. First part includes the process of crawling. The second part includes the process of indexing. Both of these parts are necessary for getting the accurate results. Most of search engines uses the process of crawling. The pages are included in the search that will be searched by the program named Crawler .Contents of pages are grabbed by the crawler. When crawling process is completed, indexing process get started. Indexing process works in the database. Both of steps crawling and indexing involves the process of finding the relevant words from search string with words in the database to stop the search process whenever match occurs. Search engine checks that page is should be display in the search results or not. The pages of search results are shown in particular order. This order of displaying the pages is set the ranking system. For improving the ranking of the pages to shown, various search optimizations tools are used. The process of improving the ranking of the pages is known as search engine optimization. Most of search engines uses the crawler methodology for searching any query string given by the user to be search. The crawler program uses the links for indexing the content from one page to another. But, there are some limitations of the crawler methodology .There are some problems with crawler method because it works on static procedure means to say it does not work on real time. To remove such kind of limitations search algorithms can be used .Various types of search algorithms are used for making the searching experience better and for improving the search results. That's why famous search engines like Google uses the real time based algorithms that are better than crawler methodology. Working of crawler or spider methodology is given below:



**Fig. 1: WORKING OF SEARCH ENGINES WITH CRAWLER METHOD**

**Classification of Search Engines:** Search engines can be classified into these categories:

- **Vertical:** Vertical Search Engine work on particular field to be search and particular string to be search on demand.
- **Full Text:** This type of search engine gets the data via internet. After Getting the information search engine build database and get the records that matches with the search string.
- **Directory:** This type of search engine gets all the listing directory information and records.
- **Meta:** This type of search engine get the information from multiple search engines on same time.

**Categories of Search Engine Optimization Techniques:** Various types of search engine optimization is given below:

- **Gray Hat:** Some times, some websites buy the techniques or uses another websites for exchanging the links. This is done only for optimizing and improving the ranking of the website. But this type of method is only when needed , otherwise it is less preferable than other types. This type is known as Gray Hat SEO.
- **White Hat:** This is most commonly used technique for improving the ranking of the website. This technique is considered as the well suited way of optimization. In this technique no spamming method is used for improving the ranking of the website. Only genuine ways are used to improve the ranking like proving the content of the website with uniqueness .
- **Black Hat:** This type of technique is not considered as ethical because in this technique cheating and spamming is used by some websites to improve their ranking. This type of method is avoided by good and genuine websites.

#### **4. ACKNOWLEDGMENT:**

While making this research paper, I have put all of my best and possible efforts for making this research paper. I hope this research paper will be useful and helpful for the authors who want to do further research Related to Search engines and search engine optimization .

#### **5. CONCLUSION:**

There is no doubt that search engine help us to get any type of useful information which we want to retrieve like distance between source and destination, information about products, history of any famous person ,study material and so on. But sometimes search results are not accurate. For example if we want to search on a particular disease like cough, then sometimes search results are shown in such a way that user thinks that he/she suffering from major disease because sometimes search results are shown by the relevancy to some major disease while user is only searching for the causes of minor disease. So, nobody should blindly trust on the search engines for making any decision related to any problem like medication of patients.

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