**LINK ANALYSIS**

Link analysis has been used successfully for deciding which web pages to add to the collection of documents

(i.e., which pages to *crawl*), and how to order the documents matching a user query (i.e., how to *rank* pages). It

has also been used to categorize web pages, to find pages that are related to given pages, to find duplicated web

sites, and various other problems relate d to web information retrieval.

**PAGE RANKING**

Page rank algorithm used by search engine displays the web page according to their page rank. Page rank algorithm is non- keyword specific and link structure based algorithm. The major disadvantage of page rank algorithm is that it is calculated and stored at the time of indexing and not at the time of query. The Search Engine Ranking Positions of any website depends upon the actual current status of that website whereas page rank calculated by using page ranking algorithm depends upon the stored database which is updated only once in a period of two-three months. The page rank Algorithm divides the page rank value equally to all the outlinking web pages but all outlinks are not equally important or relevant to user query. This problem can be solved by considering an additional weight factor in the calculation of page rank and gives birth to a new algorithm known as Weighted Page Rank algorithm.

𝑃𝑅 𝑋 = 1−𝑑 +𝑑 𝑃𝑅(𝑌1)𝐶(𝑌1)+...…+ 𝑃𝑅(𝑌𝑛)𝐶(𝑌𝑛)

where,

PR (X) = Page Rank of web page X,