

Search Engine: Simple, Semi And Full Electronic Evaluation

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ABSTRACT: Search engines are programs that enable a person to find the documentation or media, other means designed to search for information on the World Wide Web. While the internet collection the amount of data the search engine is the most effective way to find your information. In this Working Paper in order to explain the search engine and to provide three types, there is a Simple search engine, Semi search engine and Full (restricted) Search Engine. As a result, containing a full search engine is the best because it exactly gives one record of data after the search.

Keywords: Search Engine, Simple Search Engine, Semi Search Engine, Full Search Engine

1. INTRODUCTION

A search engine is a basic tool for the web, allows a user on the internet finds the information. Some of the special program search document used to depend on the keywords and go to the list to the document while the keyword located.[1] There is a more common search engine, for example, Google and Yahoo. In the search engine has some of basic as robots and spider across the web moved from page to page or site to site follows the link. Collect all information by using crawlers finally created a searchable index to the web. [2] The search engine is difference to web browser because search engine used information in a specific web site depend of the keyword while the web browser used to see websites such as Firefox. [3]As a browser search engine is different of the data base while the data base used for the data maybe searched maybe not. There are several formula mathematically used to search engine generation and used the specific query to get a best result of the page. The algorithm of search engine contains some basic element such as title, content and keyword. Then come up with a ranking based on the results that show on the pages, yahoo and Google are a top ranking. [4] The search engine on the internet today is more successful. Because there are various search engine on the internet search engine more than of the south, it is difficult to use for the user while not now for the web and don't know how to use it. There are some machine using the search engine and design, for example computer, smartphone, tablet, or other device.

[5] The new browser that contains the text box at the top of the page displays. [6] Use the search engine Covenant on economic and is the retrieval of relevant electronic commerce links. [7] In general search engine divided in to two parts: [8],[9] First, all of the words: result searches to all word are more accurate. For example if "Whippany River Club" entered, the results maybe include only those items that contain the phrase "Whippany River Club" not retrieval the item just include the word "Club". Second, Any of the word: by using the Boolean logic, searches for word. For example if "Whippany River Club" entered, the result may be includes items that contain with only "Whippany" or "River" or "Club". [10] In this paper designed three different types of search engine: First simple search engine, from this type search on the one filed in the database, second semi search engine, search on more than one field but not all of them, third full (restricted) search engine, search on all fields on the database. [11] After compassion between three types presented the last type is more accurate and has more security while it gives only one record. [12]. The search engine is difference to web browser because search engine used information in a specific web site depend of the keyword while the web browser used to see websites such as Firefox. [3]. as a browser search engine is different of the data base while the data base used for the data maybe searched maybe not. There are several formula mathematically used to search engine generation and used the specific query to get a best result of the page. The algorithm of search engine contains some basic element such as title, content and keyword. Then come up with a ranking based on the results that show on the pages, yahoo and Google are a top ranking. [4]. The search engine on the internet today is more successful. Because there are various search engine on the internet search engine more than of the south, it is difficult to use for the user while not now for the web and don't know how to use it. There are some machine using the search engine and design, for example computer, smartphone, tablet, or other device. [5] The new browser that contains the text box at the top of the page displays [6]. Use the search engine Covenant on economic and is the retrieval of relevant electronic commerce links. [7]. In general search engine divided in to two parts: [8], [9]. First, all of the words: result searches to all word are more accurate. For example if "Whippany River Club" entered, the results maybe include only those items that contain the phrase "Whippany River Club" not retrieval the item just include the word "Club". Any of the word: by using the Boolean logic, searches for word. For example if "Whippany River Club" entered, the result may be includes items that contain with only "Whippany" or "River" or "Club". [10] In this paper designed three different types of

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search engine: First simple search engine, from this type search on the one filed in the database, Second semi search engine, search on more than one field but not all of them, third full (restricted) search engine, search on all fields on the database. [11] After comparison between three types presented the last type is more accurate and has more security while it gives only one record. [12]

2. LECTURER REVIEW

S. Gauch et al (1996) [2] Discussed Distributed Search Engines and explosive was growth by overloading information. So for search engine and World Wide Web must be mini explosion. Performance can be comparison to the individual search engines and other Meta searchers. S. Brin and L. Page (1998) [11] Discussed about the Anatomy of a Large-Scale Web Search Engine, The primary goal by declining rapidly World Wide Web the quality search engine must be growing. Nowadays the best search engine is Google because it is high search quality including page rank and completing architecture for collection web pages, search query performing and indexing is the better if comparison each other. M. Gordon and P. Pathak (1999) [8] Decided to retrieve the electronic data from search engines, and how can you find information on the World Wide Web. L. Finkelstein et al (2001) [9]. Descript algorithm and processing queries system. For the user must be searcher for item directly. The marked query enable to system while inexperienced web searchers to obtain satisfactory results. Generating augmented queries automatically and select which query is target, text and context captured by client and sent to the server for processing. S. B. Boughton (2005) [12] Search engine marketing (SEM), the best way to audience acquisition strategy, dissimilar traditional online advertising because SEM is including multiple search engines so it is more common. SEM can generate tremendous return on investment (ROI) and stable traffic levels. SEM can provide more suitable returns if comparison other marketing channel. Search engine should be a part any developer company. E. Agichtein (2006) [13] Search engines are more common and successful applications on the web today. Sometime user doesn't know what topic to the best address. Meta search engines decreasing the user problem by dispatching queries to multiple search engines in parallel. And determine which search engine for particular queries are better. P. L. S. le (2006) [5] A computer network is using for search engine, and identify one or more themes to represent cluster for networking in the search engine. In addition present a graphic of cluster, each graphic maybe one or more cluster. The cluster is depending of ranking list. And each ranking list maybe changing according to attributes of a Selected Search result. Y. Chen (2009) [14] keyword search on structured must be supported for art techniques for on structured and semi-structured data. By art techniques structure or semi structure can give the high performance to ranking functions, analytical processing query must depended keyword search, for example keyword database selection. R. Baeza-Yates et al (2006) [15] Discussed the method for query, that are the cluster is used for extracting information form the query log. The query recommendation automatically keyword of cluster used for directory query while by only one click can answer and retrieved the documents

3. SEARCH ENGINE OPERATIONAL

The search engine has three basic operational tasks ; the first is collecting the pages and searched for World Wide Web (www). The second find word by keeping index to the word. The last one is a third task: using software allows the user to search and combination with index. [13] For three tasks search engine performed three parts to: Crawler, index and software search engine. A. Crawler is a program that visits Web sites and reads those pages and other information in order to create entries for a search engine index. Of millions web pages you can find on the web page using the 'crawler or Spider' while searching on the WWW, a page group is available Robot computer, Spider or Clawer. [14] Depend of spider choose the popular web page; the index refers to the word found also a link to the relevant web page. Crawler determines each step that related of page and index. For crawler need protect something they are: 1. which page to download for select the policy? 2. When want to change website need to reconsider policy. 3. To avoiding overloading web site need to Politeness policy 4. For distrusted Politeness policy need to Parallelization policy. [17] B. Index: Keeping index for find the word in this part need to described Meta tags. Meta tags is a way to owner web pages to refer key word and understand which page may be indexed and used to popular topic for the pages. Correlation of the Meta tags page content depends of the crawlers, after collection information user can useful. Finally the information stores just the word and Universal Resource Locator (URL) that is a simple way to storage. In this case cannot relevant ranking; for providing must appoint to the word arrive in the location to the page. After collecting the information you need to store useful by the user's encoding while saving storage space. After that there are two important things about this group: 1. the only search engine in the word resources global positioning 2. For faster access to the data you need to index. [15], [17] C. Search engine software: A result search engine depend of the software and contains some principle or factors as: The basic important to a web page there is something of software such as the location of the keyword, term HTML (Hyper Text Markup Language) The Mark contains the start page, links, title and meta tags are more important for the search engine. Finally, another of the factors determining importance is the frequency of the keywords. All the factors are a way to increase the ranking of web pages. However each search engine is different with another because there are different query methods [17]

4. SEARCH ENGINE OPTIMAZATION

In this section is described search engine optimization (SEO). Search engine optimization is a process of maximizing the number of site visit. [18] One of the best examples of SEO is a Google. The Google continues and far away from the user for the search engine. In 2004 some of researcher collection data to test comparison between Google and Yahoo, the result presented the user use Google nearly %47 and yahoo nearly % 26. However the use of the Google search engine increased dramatically, so today, 83 percent of people use Google to search the document or file. [12] Quality of information is basic thing for search engine optimization, Many search engine it is the higher quality and confidently. So it is important the user believe that search engines are fair, unbiased and important to think believe results are accurate and trustworthy. [13] There are 9 steps (SEO) to get the best

chance to give the web page optimization. Because all of the important steps taken to better the web page, so don't skip any step to create the site: [17][18]

Step 1: Choose Keywords

Keywords are simply targeted words that determine which category your site will be listed in search engines and directories, as well as words that searchers input to search engines in order to find relevant sites you can't identify one primary keyword for a page, you'll need to create new website pages to separate the different content.

Step 2: Page Title

Use a page title that appears with some characters such as bold, blue, for the Google illustrate in the page result, and for the browser bar appears in the top left. In addition need first appear primary keyword but should separate by pipes (|) each keyword. Other properties should unique page title for the website, and should not include name business for each page title.

Step 3: Meta Description

Meta for search Google result appears under the title page. For deciding whether page Meta description helps to click on your result. The Meta description should be between 100 and 150 characters, the primary keyword should be incorporate and keyword is discussed format.

Step 4: URL

The URL must include primary key and for each word in URL by using dash (-) separated.

Step 5: Heading Tags

The page need to one heading tags H1, it appear top for the pages and people see the first thing while the page arrived.

Step 6: Page Content

Page Content Use your primary keyword a few times throughout the page's content.

Step 7: Add a Call to Action

Each and every website page, add a call to action that contains your blog. On the pages of the times which include at least one call. The procedure call helps SEO by internal link to a specific page and the image you need to make the call. As a result, has taken the name of the image optimization

Step 8: Internal Links

Using internal links to the primary keyword for the pages in the sites and the links as the anchor text for example should use anchor text "inbound marketing software" for the inbound marketing software, taking one or two links

Step 9: Images

To improve the search engine you need to read images using the keyword and secondary keyword for any other image. Depends of the direction of the image can be improved first: the name of the file, you must separate each word dashes (-). The second alternative text: in this case you must collect the file name and alt text but don't use the dashes. Basic SEO opportunity to help the webmaster of the site owner to determine access to the search engine and access to the installation

5. METHODOLOGY

A search engine is a software program identifies items in a database or searched a file or document by the keyword, and the result of any file depended of the keyword. Nowadays there are more thousands a search engine all of them it has properties and abilities. In this paper after discussed about what is search engine and how dose work search engine to given best result, explain three types of search engine there are simple search engine, semi search engine and full search engine.

5.1 Comparison between Simple, Semi and Full search engine

Search engine is a program to find any information in the database, that corresponded to keyword or character specified by the user, used especially for finding particular sites on the World Wide Web. In this section classified for three types of search engine for reason create a search engine to search information of student in one of the university that contain one table and including seven fields, this database created by PHP(Hypertext Preprocessor) and MYSQL and using HTML for creating form search engine. HTML is hypertext markup language it used creating web page while representing the client content. PHP is a Hypertext Preprocessor and used to creating web page and embedded to HTML code. PHP is a free on the web available and open source program. MySQL is a base for Structured Query Language (SQL), it is an open source relational database management system (RDBMS). For this project webserver is apache In this paper, there is an example web page and creating for testing three types, for this reason create data base depend of MYSQL this database named "Student". Inside the database there is one table "information student" that consist seven fields as Department, Name student, Project, Age, Address, Stage, supervisor. In this methodology present installing and creating these three types of search engine as Figure 1: This figure is a process for working and presenting three types search engine will be explained step by step: Step1: Create database that name "student" as Figure2



Figure 2: Show the Database in the search engine

Step2: Create a table as "Information Table" From the database student that constituted seven fields those fields includes all information about student for university. Do not using command line for the table because this table creates directly in the easy PHP as Figure3:

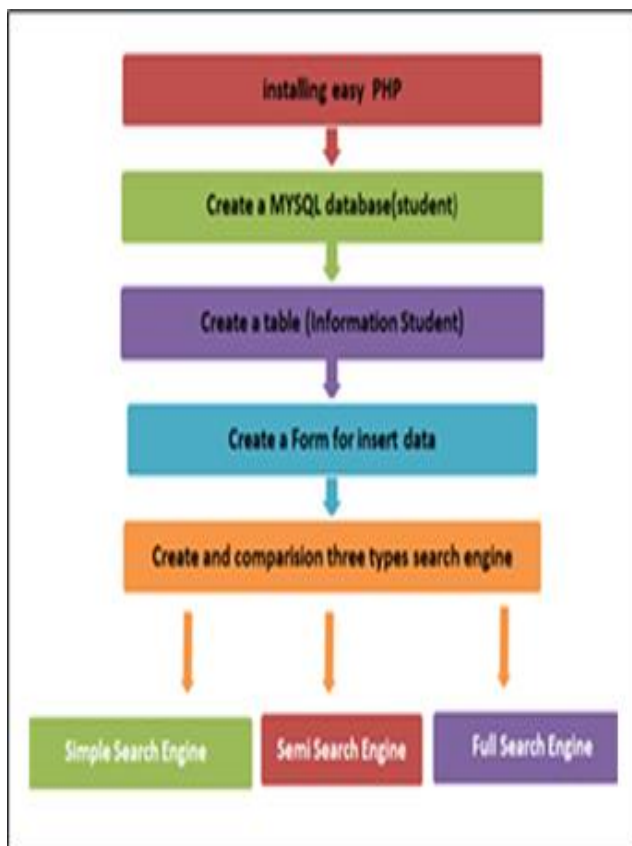


Figure 1: process for creating three types search engine

Field
<input type="text" value="name"/>
<input type="text" value="depeartment"/>
<input type="text" value="age"/>
<input type="text" value="project"/>
<input type="text" value="supervisor"/>
<input type="text" value="level"/>
<input type="text" value="address"/>

Figure 3: Create a table for "information student"

Step 3: After crating table, create An HTML Form to Insert Data into the Database by using PHP. There are some steps for creating HTML form as figure4.

- 1: Open your text editor
- 2: Create a new document and insert the BODY tag
- 3: Between the BODY tags create "action form" to tell the server witch page will receive the data from the form.
- 4: Every HTML has begins and ends with the <FORM></FORM> tags.
- 5: adding your form fields
- 6: Make sure that you close the form and include the submit button within it.
- 7: Save the page as form.html.

Figure 4: Show Steps for creating HTML Form

As a Figure 4 after creating new document, used <body> tag is defining the main content of the HTML document. Between the body tag insert "action form". The action attribute specifies where to send the form-data when a form is submitted. After that as line 5 in the figure 4 Create a text box for each field, for example <input type="text" name="name" size="20"/>. After Create HTML form, create PHP file that contain a code to insert and connect with this form to database. Creating insert form for this paper as figure5

INSERT DATA FOR STUDENT

Department	Name student	Age	Project	Supervisor	Stage	Address
Computer science						

Insert

Figure 5: Illustrate insert data for table

5.1.1 Simple search engine

Simple search engine: Search in one field in the database. The table in the database consists of seven fields, but specifies only one field as the domain partition in order to create the search engine. The search result may include further information. For example, if a research student in the Department of Computer Science, the search result may contain all students in Computer Science. Some time it is not a comfortable genre for the user because the user may need only one or two students not every student, so this type is not accurate. Figure 6 simple search engine practices.

Simple Serach Engine

Department

Computer science	search
Mathmatic	
English	
Biological and Medical Sciences	
Biochemistry	
History&Geography	
Architecture	

Figure 6: Illustrates simple search engine:

As Figure 6, if a search of the computer since, and if this department has 200 students, after the search completed result given 200 students because it is a simple search engine and believe in the one field. In order to create a simple search engine, have some steps as shown in Figure 7

1. Create a simple search form using HTML.
2. Using PHP which contain search engine code
3. Select the four fields of the search engine bellow
 Select * from student information where (depart = "._\$_POST['depart'].")
4. Given the result and retrieve all the information related a department your chose

Figure 7: clarify the steps to create a simple search engine

This figure7 view model creation a simple html search. The line 3 illustrated search for just department field. After that used `<input type=submit name="submit" value="search" >` for submit the value and `<select name="depart">` select the field that you want to send. After that you need a PHP file that contains code to display the search engine, and it uses structure Query Language (SQL) to written in PHP code.

5.1.2 Semi Search Engine:

earch for data depend four fields in the database this the search engine between simple and full search engine so called Semi-search engine. In this paper offer a choice of these types depend on Department, Name student, Project and Supervisor, it means you think of half of a number of fields such as figure8:

Figure 8: Present Semi Search Engine

For this type used Boolean logic “AND “help to multiple search term. Depend AND logical retrieve the result while containing all condition in the search. Create a semi-search engine, have some steps as in Figure 9

1. Create a semi search form usingHTML.
2. Using PHP which contain search engine code
3. Select four fields to search engine as bellow
 Select * from student information where (depart = "\$_POST['depart'].") and name like "%".\$name."%' and project like "%". \$ project."%' and Supervisor like "%".\$Supervisor."%')";
4. In the second type for engine is a semi search retrieved fewer records than the first type of the search

Figure 9: illustrate steps to creating Semi Search engine

The figure 9 presents all steps to creating semi search engine. In this example if you have 200 students you may be able to recover 10 or 20 students because it is semi search engine and searched depend some of fields. It is not used all fields as full search and not one field as simple.

5.1.3 Full search engine:

The search on all fields in the database, it called Full search engine. In this paper test this types depend on Department, Name student, Project, Age, Supervisor, Address and Stage (all field in database student) as figure10.

Figure 10: Determine Full search engine

This type in search engine, search for data depend all fields in the database and used Boolean logic operation "AND". It is difference simple or semi search engine while this type used all fields for search engine and may retrieve only one record. This type is more accurate if compare with each other and it has more security while it gives only one record. For creating full search engine have some steps as a figure 11:

1. Create a full search form using HTML.
 2. Using PHP which contain search engine code
 3. Select all fields to search engine as bellow
- ```
Select * from student information where
(depart = "'.$_POST['depart'].' and name like
'".$name."' and age like "'.$age.'" and project
like "'.$project.'" and Supervisor like "'.$
Supervisor.'" and level like "'.$level.'" and address
like "'.$address.'")";
```
4. Given a result maybe one or two record not all record as the first types

Figure 11 illustrate steps to creating Full Search Engine

As a line 3 in figure11 used all field for post data so if in the table contain 200 students for one department may be retrieved exactly one recorded because it is full search engine.

### 5. RESULTES EVALUATION

After the comparison of three types of current search engine result to restore for each one is difference as figure12

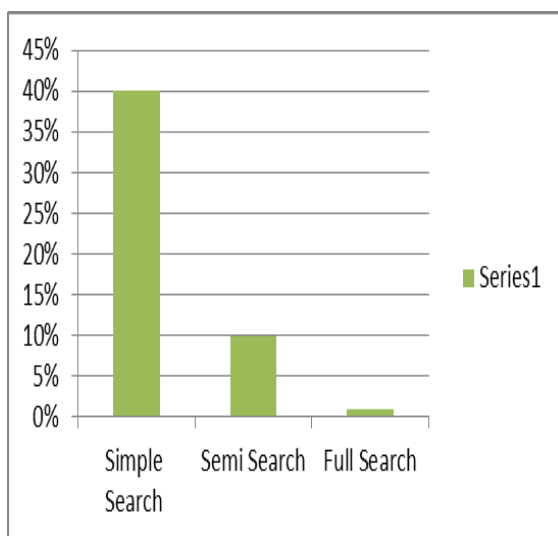


Figure12: This result recovers the data of these three types of search engine

As a result, if the database contains 200 Records, a simple search may return 40 percent since the search over one field "selection". Semi-almost 10% because the search considered more than one field and another type return the data exactly %1 because all fields partner to the search engine and it is more accurate. Even if the data in the database is more sensitive need administer of the database choose a full search engine. The Quality of Improvement in full search engine is much better because advanced search engine is improved [19]. The four direction neighbors are directly founded from the query block without depending on transformation method in search engine [20]. The search engine are directly related to computer communication that become an essential part of our infrastructure. Networking computer are everywhere and used in Government, Education, Commerce, military [21] and etc. The computing devices has progressed to as it has become necessity, as well as, human being cannot live without it. Now, the technology became embedded into human's daily life such as for work, shopping, communicating and entertainment [22], which is why? Search engine is very popular in our daily life.

### CONCLUSION:

Search Engine is a tool to find item or information you want. There are many kinds of the search Engine, but the most popular is Google search engine. In this paper for understanding search engine worked to create three form of search engine. After construed each of them, it appears the first one simple search engine not suitable because eject more record after a search, the second is better than the first, but the last one

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