Snippet Visualization System

MINI PROJECT (IT86011) REPORT

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Submitted for the university project viva voce to be held on …….

INTERNAL EXAMINER

EXTERNAL EXAMINER

ACKNOWLEDG

At the outset, we would like to express our gratitude to our beloved and respected Almighty, for his support and blessings to accomplish the project. We would like to express our thanks to our Honourable Chairman **Dr.S.ZIAUDDIN AHMED SAHEB (B.A.**,) and to our beloved

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Our thanks to all faculty and non-teaching staff members of our department for their constant support to complete this project.

ABSTRACT

We propose a visualization technique to display the results of web queries aimed at overcoming such limitations. It combines the neighborhood preservation capability of multidimensional projections with the familiar snippet-based representation by employing a multidimensional projection to derive two dimensional layouts of the query search results that preserve text similarity relations, or neighborhoods. Similarity is computed by applying the cosine similarity over a “bag-of-words” vector representation of collection built from the snippets.

If the snippets are displayed directly according to the derived layout they will overlap considerably, producing a poor visualization. We overcome this problem by defining an energy functional that considers both the overlapping amongst snippets and the preservation of the neighborhood structure as given in the projected layout. Minimizing this energy functional provides a neighborhood preserving two-dimensional arrangement of the textual snippets with minimum overlap. The resulting visualization conveys both a global view of the query results and visual groupings that reflect related results, as illustrated in several examples shown.

சுருக்கம்

இணைய வினவல்களின் முடிவுகளைக் காண்பிக்க ஒரு காட்சிப்படுத்தல் நுட்பத்தை நாங்கள் முன்மொழிகிறோம்

அத்தகைய வரம்புகளை கடப்பதை நோக்கமாகக் கொண்டது. இது சுற்றுப்புறத்தை ஒருங்கிணைக்கிறது

தெரிந்தவர்களுடன் பல பரிமாண கணிப்புகளை பாதுகாக்கும் திறன் பல பரிமாணத் திட்டத்தைப் பயன்படுத்துவதன் மூலம் துணுக்கு அடிப்படையிலான பிரதிநிதித்துவம்

உரையைப் பாதுகாக்கும் வினவல் தேடல் முடிவுகளின் இரு பரிமாண தளவமைப்புகளைப் பெறவும் ஒற்றுமை உறவுகள் அல்லது சுற்றுப்புறங்கள். பயன்படுத்துவதன் மூலம் ஒற்றுமை கணக்கிடப்படுகிறது

கட்டமைக்கப்பட்ட சேகரிப்பின் "பேக்-ஆஃப்-வார்ட்ஸ்" வெக்டார் பிரதிநிதித்துவத்தின் மீது கொசைன் ஒற்றுமை

துணுக்குகளில் இருந்து. பெறப்பட்ட தளவமைப்பின்படி துணுக்குகள் நேரடியாகக் காட்டப்பட்டால் அவை

ஒரு மோசமான காட்சிப்படுத்தலை உருவாக்கும், கணிசமாக ஒன்றுடன் ஒன்று. இதை நாங்கள் கடக்கிறோம்

ஒன்றுடன் ஒன்று கருதும் ஆற்றல் செயல்பாட்டை வரையறுப்பதன் மூலம் சிக்கல்

துணுக்குகள் மற்றும் அக்கம் பக்க கட்டமைப்பைப் பாதுகாத்தல் திட்டமிடப்பட்ட தளவமைப்பு. இந்த ஆற்றல் செயல்பாட்டைக் குறைப்பது ஒரு சுற்றுப்புறத்தை வழங்குகிறது குறைந்தபட்சம் உரை துணுக்குகளின் இரு பரிமாண ஏற்பாட்டைப் பாதுகாத்தல்

ஒன்றுடன் ஒன்று. இதன் விளைவாக வரும் காட்சிப்படுத்தல் வினவலின் உலகளாவிய பார்வை இரண்டையும் வெளிப்படுத்துகிறது

பலவற்றில் விளக்கப்பட்டுள்ளபடி, தொடர்புடைய முடிவுகளைப் பிரதிபலிக்கும் முடிவுகள் மற்றும் காட்சிக் குழுக்கள் எடுத்துக்காட்டுகள் காட்டப்பட்டுள்ளன.

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INTRODUCTION

Searching for information on the web is routine task to millions of users. The typical procedure consists in providing textual queries to a search engine, which returns a ranked list of textual snippets each containing a content summary and a link to the referred document (or web page). A ranked list of snippets is quite simple, straightforward to interpret, and it turns out to be effective in focused search tasks that require locating a particular web page or document. None the less ,it also has limitations likely to hamper user experience when exploring and analysing search results in other scenarios. In fact, ranked lists fail to provide an overview of the collection retrieved, making it difficult and time consuming to figure out how documents relate content wise. For example, if a user queries Google's search engine on the keywords "jaguar features", the first page returned includes snippets on at least four distinct subjects, namely, the animal, the car brand, a fan club of old Jaguar cars, and a video game console. Surely users may refine the search, however, if he/she needs a global picture there is no other option but navigating through the pages in the list and manually group the snippets according to their topic.

Scope and Limitations

This project requires a very simple pre-processing step, but some tricky issues remain. For example, setting appropriate values for Luhn's lower and upper cuts in scenarios where little information is available, as it is the case here, is not straightforward and deserves further investigation. In our examples we typically employed a lower cut of three and no upper cut and removed the query terms from the vector representation. Finally, clustering in visual space will produce good results as long as the projection technique does a good job of preserving the relevant neighborhood. Our choice of the LSP method is justified by its being known to perform quite well in terms of neighborhood preservation, which is confirmed by the results. Nonetheless, if this is not the case, the visualization of groups may be misleading. Users may investigate alternatives playing with the number of clusters while observing the visualization.

Need of the project with motivating example

The standard approach of displaying query results as a linear list of snippets is quite effective for most tasks performed by users of search engines. However, when users carry out an exploratory search on a broad topic or subject, linear lists are not so helpful, demanding additional effort towards gathering and mentally organizing the relevant information. The visualization technique introduced in this article, this project, has been designed to assist users in these exploratory scenarios. As such, it is not intended as a substitute for lists of snippets, but rather as an additional resource to improve user experience in specific situations. Therefore, the proposed visualization system aims at helping users to gain a more comprehensive view of the query results, highlighting related documents and web pages while still retaining, as much as possible, the good properties of the conventional list-based paradigm, namely, the rank information and the summary content provided by the snippets.

OBJECTIVE

- To provide visualization based technique to make the navigation easy and more friendly.
- To provide multidimensional projection which helps in greater visualization by plotting the snippets on 2D layout.
- To calculate similarity among document contents.
- To optimize placement of snippets so as to avoid overlapping.

LITERATURE OVERVIEW

Erick Gomez-Nieto [1]obtained a BSc degree(2009) in Informatics Engineering from San Pablo Catholic University - Arequipa, Peru. He holds a MSc degree (2012) in Computer Science from University of São Paulo - SP, Brazil. He was lecturer/researcher at Computer Science School of San Pablo Catholic University, in 2012/2013.Currently, he is working toward the PhD degree eat University of São Paulo. His research interests are in Interactive Visualization and Geometry
Processing.

Frizzi San Roman[2]received her Informatics Engineering degree from the San Pablo Catholic University, Peru, in 2013, and her MSc degree in Computer Science from the University of São Paulo, Brazil, in 2012. She is currently an Assistant Professor at the Computer Science Department of the San Pablo Catholic University. Her research interests are in Visual Text Analytics, Visual Data Mining and Information Visualization.

Paulo Pagliosa[3] received the Ph.D. degree instructural engineering from the Escola de Engenharia of São Carlos at Universidade de São Paulo (1998). He is currently an associate professor of computer science in the Faculdade de Computação at Universida de Federal de Mato Grosso do Sul. He research interests include geometric processing, visualization, physics-based animation and general-purpose computation on graphics hardware.

Maria Cristina F. de Oliveira[4] received the BScin computer science from the University of São Paulo, Brazil, in 1985, and the PhD degreein electronic engineering from the University of Wales, Bangor, in 1990 (now Bangor University).She is currently a Professor at the Computer Science Department of the Instituto de Ciências Matemátic as e de Computação, at the University of São Paulo, Brazil, and has been a visiting scholar at the Institute for Visualization and Perception Research at University of Massachusetts, Lowell, in 2000/2001. Her research interests are in Visual Analytics, Visual Data Mining and Information Visualization.
She is currently the head of the Computer Science Department at ICMC, and the chief editor of the Journal of the Brazilian Computer Society, published by Springer. She is a member of the ACM, IEEE and of the Brazilian Computer Society.

SYSTEM REQUIREMENT

Software Requirement

- **Language used and technology :** php5.x, java script , AJAX

  Visual Studio Code

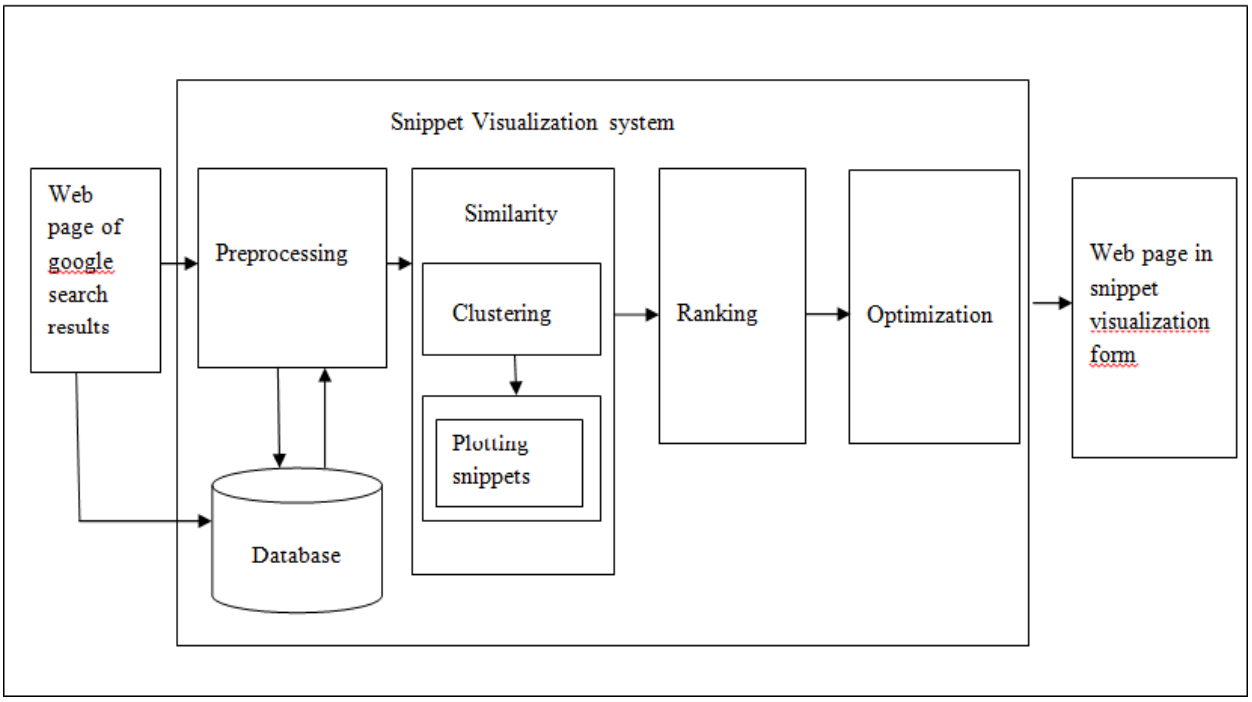
- **Server** **:** XAMPP
- **Database** **:** phpMyAdmin

Hardware Requirements :

- **Processor** **:** 800MHz Intel Pentium III or equivalent
- **RAM** **:** 2 GB
- **Disk space** **:** 750 MB of free disk space
- **Internet connectivity**

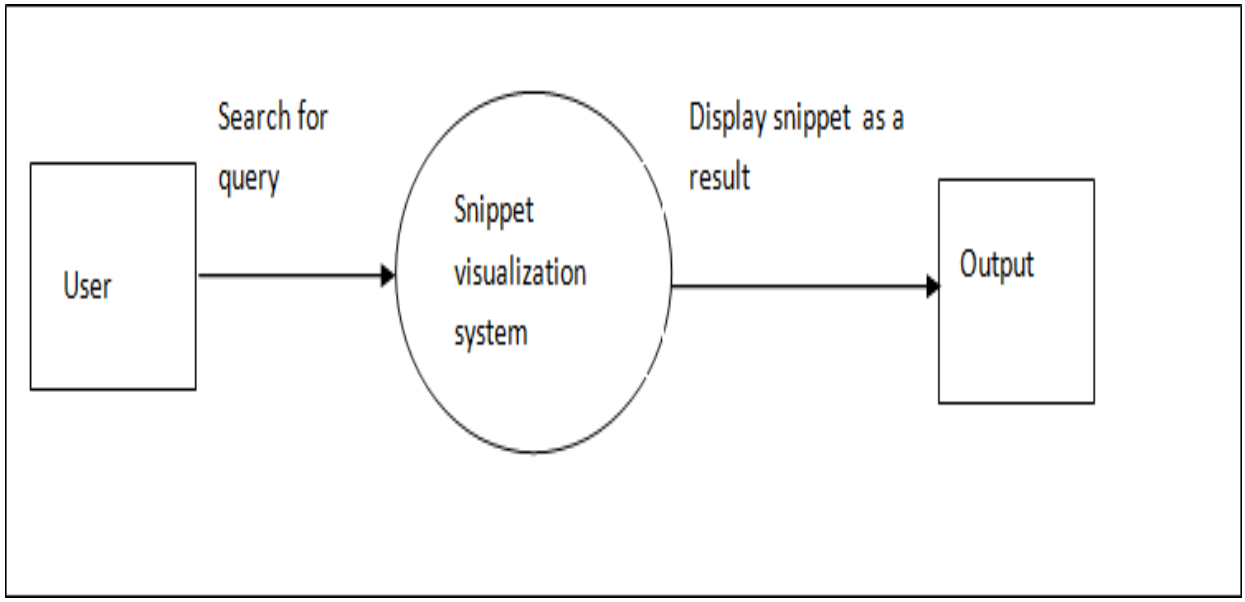
SYSTEM DESIGNS

Architectural Diagram :-

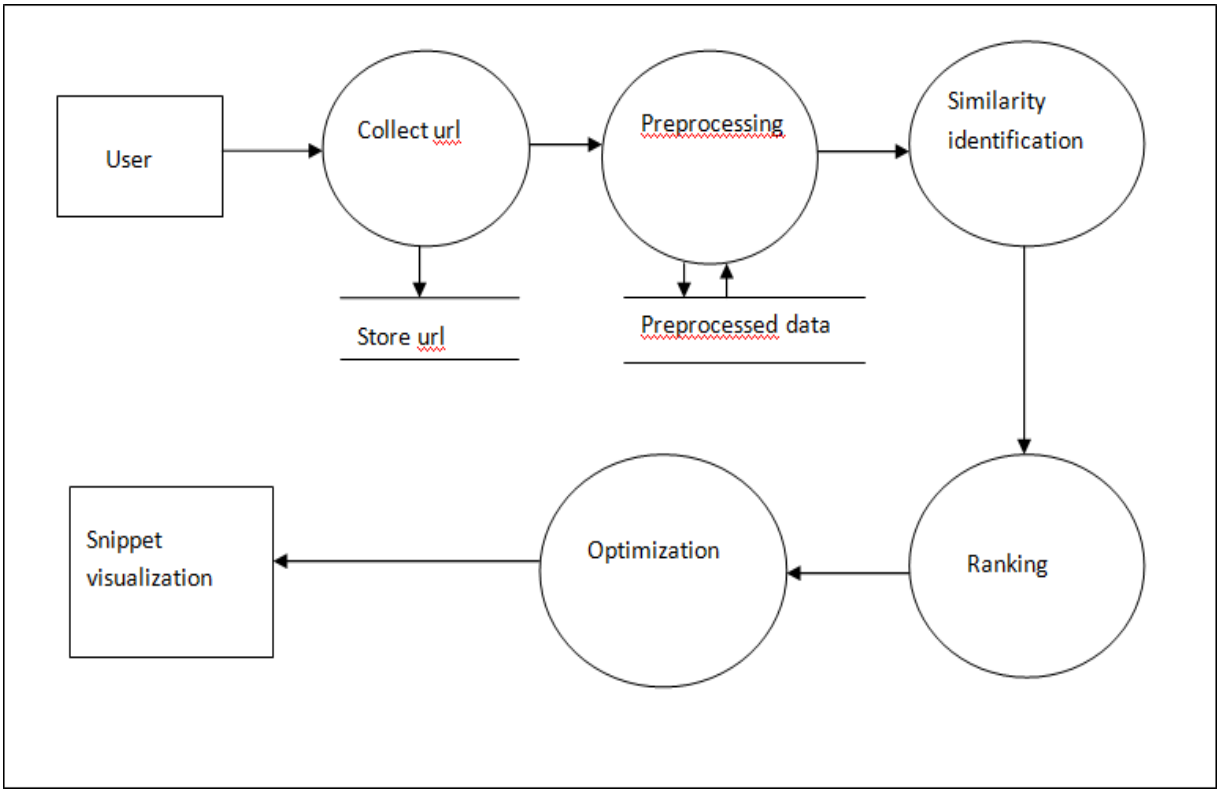


DATA FLOW DIAGRAM

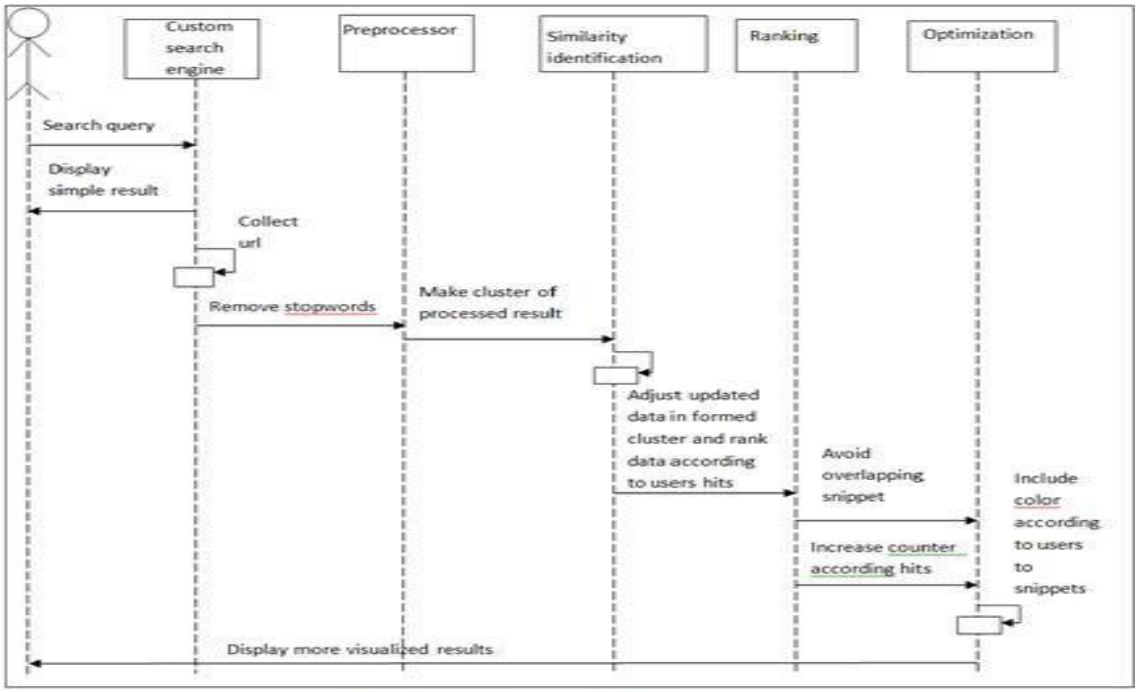
DFD 0:-



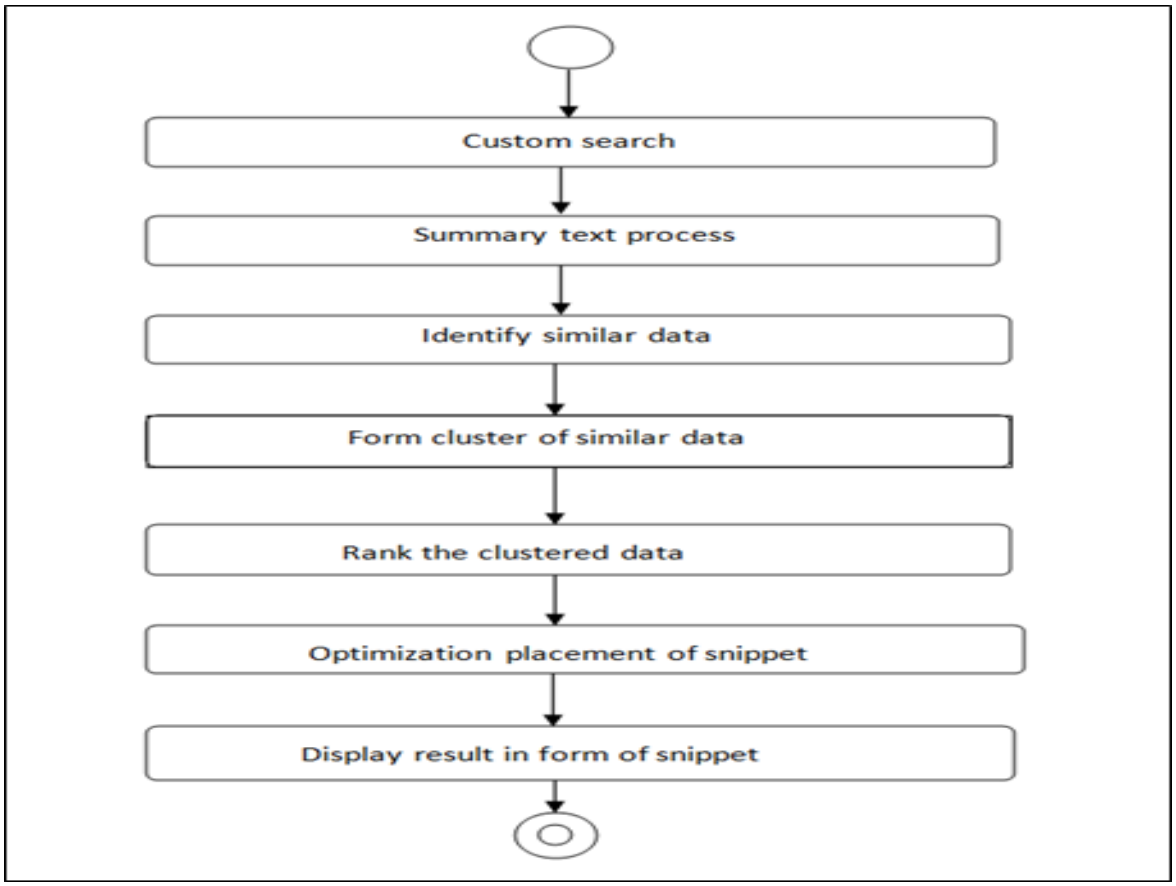
DFD 1:-


User
Collect url
Preprocessing
Similarity identification
Store url
Preprocessed data
Snippet visualization
Optimization
Ranking

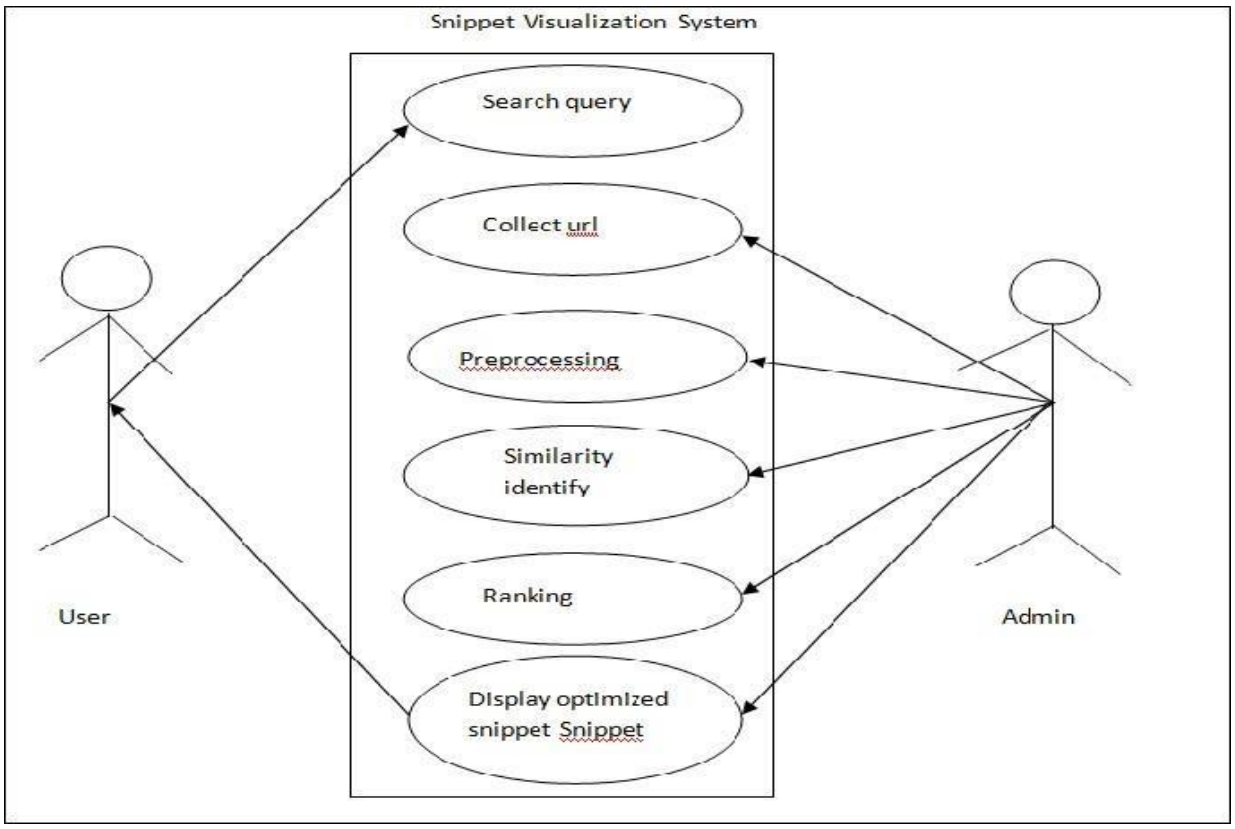
SEQUENCE DIAGRAM :-



ACTIVITY DIAGRAM



USE CASE DIAGRAM



IMPLEMETATION

Once the design is approved technical implementation begins. This often the shortest phase because research and design have been done in advance.
For implementation we have used different web technology ie., php, javascript, ajax and open source database i.e., MySQl

MODULES

1. Collecting information:

Admin will search for query in the search engine. The URL Will be displayed in the form of snippets by most viewed snippets at the top. Then Admin will save all that queries by clicking on save URL button then all that queries will be saved in the database in the form of text. Also, in the database, the queries will be saved in the specific manner with the respective table and column. After collecting all the URL from the search engine, when user wants some information the resulted queries will be displayed directly which are saved into the database.

2. Pre-processing:

It is the second step where each entry returned from a textual query is processed and its term frequency vector extracted. The resulted queries get extracted from the database and get counted by how many number they are get visited. Here we remove all stop wards (i.e. common words) present in search results. This is necessary to get only exact keywords.

3. Similarity Identification:

Multidimensional projection techniques may be employed to generate visualization that favour the perception of groups of similar documents. Here we have implemented the K Means++ algorithm to plot similar results close to each other. A straight forward way to build layouts where similar documents recovered by a search engine are placed close to each other. This minimization

Process is likely to spoil the neighborhood structure snippets fat apart in the final visualization.

Ranking:

In database we have written one field as counter it increases as user clicks on particular results. As users hits a results it automatically increase counter.Those snippet results has highest counter means that user visited this more time than those has less counter. Here, Rectangles height and width are settled to reflect the rank of its corresponding snippets in the retrieved documents list so that better ranked snippets are assigned larger rectangles.

5 .Optimization:

Here snippet has colored based on ranking module results as who as highest count has to displayed in darker color than those who have less count.Hence it make easy navigation to user while searching. Here, the high dimensional data is mapped to the visual space and snippets are embedded into rectangles. Optimization is applied to avoid overlap while preserving neighborhood. Smoothness is an important property here as it allows resorting to simple and efficient optimization methods which are mandatory for quick generation of the final visualization.

TESTING AND INTEGRATION

Testing Performed

Methods	Time Required
Admin Login	5 sec
Searching Query	10sec
Collecting URL	5 sec
Data Pre-processing	10sec
Similarity Identification	7 sec
Optimization	6 sec

Output

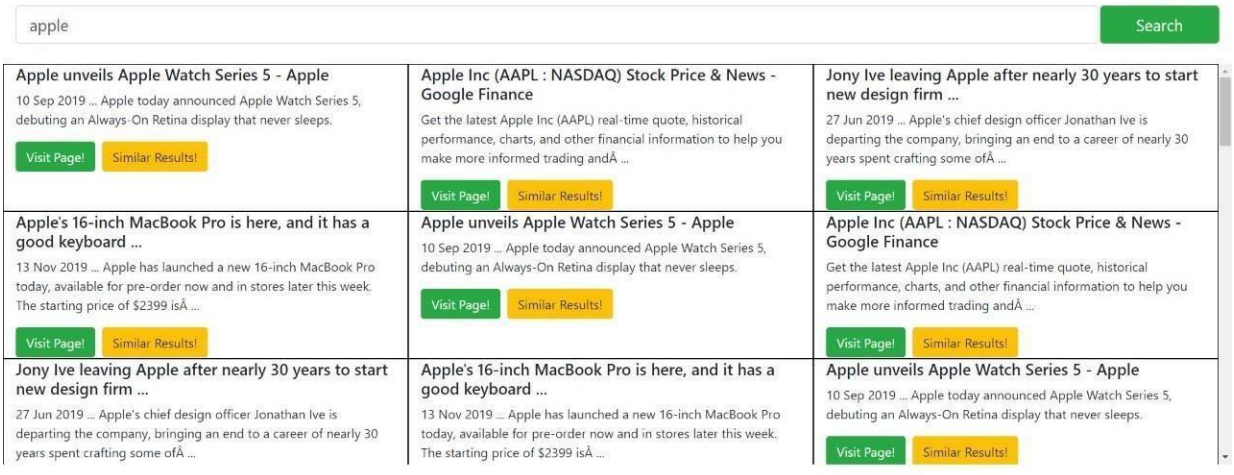
Collecting URL :- The snippets which are displayed by searching a query get collected in the database by clicking a collect URL button.

Data Pre-processing :- The collected present in the database get pre-precessed and get displayed by the number of visits.

Similarity Identification :- The Similar queries get removed in the database if there are some keyword similar to each other.

SrNo	Title	Pre Title	Pre URL	Visite Count
1	Exposure Notifications: Helping fight COVID-19 - Google	Exposure Notifications: Helping fight COVID-19 - Google	https://www.google.com/covid19/exposurenotifications/	0
2	Google	Google	https://www.google.com/	0
3	Apple's 16-inch MacBook Pro is here, and it has a good keyboard ...	Apple's 16-inch MacBook Pro is here, and it has a good keyboard ...	https://www.google.com/.../AFnwnKXmMEulHgLJLL3JdvxLpNVtLxgaXfju24dKIwaNZSoBR8YViaa...	0
4	Google Alerts - Monitor the Web for interesting new content	Google Alerts - Monitor the Web for interesting new content	https://www.google.com/alerts	0
5	â€ŽGoogle Podcasts on the App Store	â€ŽGoogle Podcasts on the App Store	https://www.google.com/.../AD-FnEzlxeUb4twVuug5zJcFwcVoF3FVOs5kfib2O3SUNE1TFDYPzQponK6...	0
6	Google Drive - Cloud Storage & File Backup for Photos, Docs & More	Google Drive - Cloud Storage & File Backup for Photos, Docs & More	https://www.google.com/drive/	0
7	Safari User Guide for Mac - Apple Support	Safari User Guide for Mac - Apple Support	https://www.google.com/.../AFIPhzU5AxhVrncWPrMr0qJDjtokZKHfgABinZ9CJj18KeZu3o5ENDrGt...	0
8	Google My Business - Get Your Free Business Listing Stand Out on ...	Google My Business - Get Your Free Business Listing Stand Out on ...	https://www.google.com/business/	0
9	Intelligent Tracking Prevention | WebKit	Intelligent Tracking Prevention | WebKit	https://www.google.com/.../APDk4sN48rCev8UYlnfrGpLGiqB3TuU5mpMq4UrxyCq6pLBsxSs5lGm1...	0
10	Google Earth	Google Earth	https://www.google.com/earth/	0
11	Shoes Zone, 114 BanegÃ¥rdsvej, Glostrup - Google Maps	Shoes Zone 114 Banegrdsvej Glostrup - Google Maps	https://www.google.com/.../search/?...Shoes%20Zone%2C%20114%20BanegÃ¥rdsvej%2C%20Glostrup...	0
12	Google Webmasters - Resources to Track Website & Search ...	Google Webmasters - Resources to Track Website & Search ...	https://www.google.com/webmasters/	0
13	Liberty Shoes Ltd. (526596 : BOM) Stock Price & News - Google ...	Liberty Shoes Ltd 526596 BOM Stock Price News - Google	https://www.google.com/finance/quote/526596:BOM	0

Optimization :- The queries which are collected in the database get optimized and ranked according to the number of visits to that query.



INSTALLATION GUIDE AND USE MANUAL

Installation :-

1) First Install VS Code IDE.

2) Then install the XAMPP Server

3) Then use phpMyAdmin database in admin panel of Xampp Server.

1) Steps to install VS Code-

1) download the Visual Studio Code installer for Windows. Once it is downloaded, run the installer.

2) accept the agreement and click on next.

3) click on "***create a desktop icon***" so that it can be accessed from desktop and click on Next.

4) click on the install button.

5) after installation completes, click on the finish button, and the visual studio code will get open.

2) Steps to download XAMPP Server

1) To download the XAMPP server, visit the "Apache Friends" website in your web browser.

2) Click on "XAMPP for Windows". Then, navigate the downloading location and the file will be automatically downloaded.

3) Double-click the downloaded file to launch the XAMPP installer.

4) "Setup" window will appear on the screen. Then, click on the "Next" button.

5) Select the components that you want to install and click on the "Next" button.

6) Choose a folder to install the XAMPP and click on the "Next" button.

7) "Ready to Install" window will appear on the screen, then click on the "Next" button.

8) Click on the "Finish" button.

3) Steps to use phpMyAdmin database –

1) Navigate to XAMPP in your system or simply launch it by clickingthe XAMPP.

2) Click on the **"Start"** button corresponding to **Apache** and **MySQL** modules.

3) Now click on the **"Admin"** button corresponding to the **MySQL** module

4) Click on the **"Database"** tab. Here you can see the **Create** option.

COST ESTIMATION

Project Cost

a. Hardware Cost:

Hardware	**Cost**
Computer System	**Rs. 46000/-**
Internet	**Rs.800/-**
Light Source	**Rs. 300/-**
Total	**Rs.47100/-**

In this project the Cost Estimation based on COCOMO (Constructive Cost Model) the formula for the this Model isfollows

Effort = Constant ×(Size) scale factor× Effort Multiplier

Effort in terms of person-months

Constant: 2.45 in 1998 based on Organic Mode –

Size: Estimated Size in KLOC–

Scale Factor: combined process factors

Effort Multiplier (EM): combined effort factors

The basic COCOMO equations take the form

Effort Applied (E) = ab(KLOC)b b [man-months]

Development Time (D) = cb(Effort Applied)d b[months]

People required (P) = Effort Applied / Development Time[count]

Where, KLOC is the estimated number of delivered lines (expressed in thousands) of code for project. The coefficients ab, bb, cb and db are given in the following table.

ETHICS

Declaration of Ethics

As A Information Technology Student, I believe it is Unethical To,

1. Surf the internet for personal interest and non-class related purposes during classes
2. Make a copy of software for personal or commercial use
3. Make a copy of software for a friend
4. Loan CDs of software to friends
5. Download pirated software from the internet
6. Distribute pirated software from the internet
7. Buy software with a single user license and then install it on multiple Computers
8. Share a pirated copy of software
9. Install a pirated copy of software

Technologies Used

1 .PHP:

PHP (recursive acronym for php: Hypertext Preprocessor) is a widely-used open source general-purpose scripting language that is especially suited for web development.

2. JavaScript:

JavaScript is a lightweight, interpreted programming language. It is designed for creating network-center applications. JavaScript is very easy to implement because it is integrated with HTML.

3. AJAX:

AJAX stands for Asynchronous JavaScript and XML. AJAX is a new technique for creating better, faster, and more interactive web applications with the help of XML, HTML, CSS, and Java Script.

4. phpMyAdmin Database :

phpMyAdmin database is used to save the url after searching a query and also used to retrieve the collected queries. Each table is connected with each other in the database. This database is used by accessing the Xampp server MySQL Admin tab.

SOURCE CODE

Index.php

```
<?php
	$search = "";
	if(isset($_GET["search"]))
	{
		$search = $_GET["search"];
	}
?>
<link href="//maxcdn.bootstrapcdn.com/bootstrap/4.0.0/css/bootstrap.min.css"
rel="stylesheet" id="bootstrap-css">
<script
src="//maxcdn.bootstrapcdn.com/bootstrap/4.0.0/js/bootstrap.min.js"></script>
<script src="//cdnjs.cloudflare.com/ajax/libs/jquery/3.2.1/jquery.min.js"></script>
<!------ Include the above in your HEAD tag ---------->

<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/4.7.0/css/font-awesome.min.css">
<style>


#header.header-scrolled {
   background: #fff;
   padding: 20px 0;
   height: 72px;
   transition: all 0.5s;
```

```
}
#header {
    padding: 30px 0;
    height: 92px;
    position: fixed;
    left: 0;
    top: 0;
    right: 0;
    transition: all 0.5s;
    z-index: 997;
    background-color: #fff;
    box-shadow: 5px 0px 15px #c3c3c3;
}
#header #logo h1 {
    font-size: 34px;
    margin: 0;
    padding: 0;
    line-height: 1;
    font-family: "Montserrat", sans-serif;
    font-weight: 700;
    letter-spacing: 3px;
}
#header #logo h1 a, #header #logo h1 a:hover {
    color: #000;
    padding-left: 10px;
    border-left: 4px solid grey;
```

```
}
#nav-menu-container {
    float: right;
    margin: 0;
}
.nav-menu > li {
    margin-left: 10px;
}
.nav-menu > li {
    float: left;
}
.nav-menu li {
    position: relative;
    white-space: nowrap;
}
.nav-menu, .nav-menu * {
    margin: 0;
    padding: 0;
    list-style: none;
}
.header-scrolled .nav-menu li:hover > a, .header-scrolled .nav-menu > .menu-
active > a {
    color: #18d26e;
}
.header-scrolled .nav-menu a {
    color: black;
```

```
}
.nav-menu li:hover > a, .nav-menu > .menu-active > a {
    color: #18d26e;
}
.nav-menu a {
    padding: 0 8px 10px 8px;
    text-decoration: none;
    display: inline-block;
    color: #000;
    font-family: "Montserrat", sans-serif;
    font-weight: 700;
    font-size: 13px;
    text-transform: uppercase;
    outline: none;
}
#mobile-nav-toggle {
    display: inline;
}
#mobile-nav-toggle {
    position: fixed;
    right: 0;
    top: 0;
    z-index: 999;
    margin: 20px 20px 0 0;
    border: 0;
    background: none;
```

```
    font-size: 24px;
    display: none;
    transition: all 0.4s;
    outline: none;
    cursor: pointer;
}
#mobile-body-overly {
    width: 100%;
    height: 100%;
    z-index: 997;
    top: 0;
    left: 0;
    position: fixed;
    background: rgba(0, 0, 0, 0.7);
    display: none;
}
body.mobile-nav-active #mobile-nav {
    left: 0;
}
#mobile-nav {
    position: fixed;
    top: 0;
    padding-top: 18px;
    bottom: 0;
    z-index: 998;
    background: rgba(0, 0, 0, 0.8);
```

```
    left: -260px;
    width: 260px;
    overflow-y: auto;
    transition: 0.4s;
}
#mobile-nav ul {
    padding: 0;
    margin: 0;
    list-style: none;
}
#mobile-nav ul li {
    position: relative;
}
#mobile-nav ul li a {
    color: #fff;
    font-size: 13px;
    text-transform: uppercase;
    overflow: hidden;
    padding: 10px 22px 10px 15px;
    position: relative;
    text-decoration: none;
    width: 100%;
    display: block;
    outline: none;
    font-weight: 700;
    font-family: "Montserrat", sans-serif;
```

```
}
#mobile-nav ul .menu-has-children i.fa-chevron-up {
    color: #18d26e;
}
#mobile-nav ul .menu-has-children i {
    position: absolute;
    right: 0;
    z-index: 99;
    padding: 15px;
    cursor: pointer;
    color: #fff;
}
#mobile-nav ul .menu-item-active {
    color: #18d26e;
}
#mobile-nav ul li li {
    padding-left: 30px;
}

.menu-has-children ul
{display: none;}

.sf-arrows .sf-with-ul {
  padding-right: 30px;
}
```

```
.sf-arrows .sf-with-ul:after {
  content: "\f107";
  position: absolute;
  right: 15px;
  font-family: FontAwesome;
  font-style: normal;
  font-weight: normal;
  color:black;
}

.sf-arrows ul .sf-with-ul:after {
  content: "\f105";
}


.nav-menu li:hover > ul,
.nav-menu li.sfHover > ul {
  display: block;
}
.nav-menu ul {
    margin: 4px 0 0 0;
    padding: 10px;
    box-shadow: 0px 0px 30px rgba(127, 137, 161, 0.25);
    background: #fff;
}
.nav-menu ul {
```

```
    position: absolute;
    display: none;
    top: 100%;
    left: 0;
    z-index: 99;
}

.sf-arrows .sf-with-ul {
    padding-right: 30px;
}
.nav-menu li {
    position: relative;
    white-space: nowrap;
}


@media (max-width: 768px){
#nav-menu-container {
    display: none;
}

#mobile-nav-toggle {
    display: inline;
}
}
```

```
</style>

<header id="header">
<title>Snippet Visualization System </title>
   <div class="container">

    <div id="logo" class="pull-left">
      <h1><a href="index.php" class="scrollto">Snippet Visualization
System</a></h1>
    </div>

    <nav id="nav-menu-container">
      <ul class="nav-menu">
                <li><a href="login.php">Admin Login</a></li>
      </ul>
    </nav>
   </div>
        <br />
        <br />
        <br />
        <br />
        <form action="index.php" method="GET">
              <div class="col-lg-12">
                    <table style="width:100%;">
                          <tr style="width:100%;">
                                <td style="width:90%;">
```

```
                                        <input type="text" id="search"
name="search" class="form-control btn-lg" value="<?php echo $search; ?>"  />

                                    </td>
                                    <td style="width:10%;">
                                        <input type="submit" class="btn btn-lg btn-
block btn-success" value="Search" />
                                    </td>
                                </tr>
                            </table>
                        </div>
                </form>
  </div>
  </header>
  <!DOCTYPE html>
<html lang="en">
<head>
        <title>Login V14</title>
        <meta charset="UTF-8">
        <meta name="viewport" content="width=device-width, initial-scale=1">
<!--
===============================================================
=====================================-->
        <link rel="icon" type="image/png" href="images/icons/favicon.ico"/>
<!--
===============================================================
```

```
==========================================-->
    <link rel="stylesheet" type="text/css"
href="vendor/bootstrap/css/bootstrap.min.css">
<!--
============================================================
==========================================-->
    <link rel="stylesheet" type="text/css" href="fonts/font-awesome-
4.7.0/css/font-awesome.min.css">
<!--
============================================================
==========================================-->
    <link rel="stylesheet" type="text/css" href="fonts/Linearicons-Free-
v1.0.0/icon-font.min.css">
<!--
============================================================
==========================================-->
    <link rel="stylesheet" type="text/css" href="vendor/animate/animate.css">
<!--
============================================================
==========================================-->
    <link rel="stylesheet" type="text/css" href="vendor/css-
hamburgers/hamburgers.min.css">
<!--
============================================================
==========================================-->
    <link rel="stylesheet" type="text/css"
```

```
href="vendor/animsition/css/animsition.min.css">
<!--
===============================================================
=====================================-->
	<link rel="stylesheet" type="text/css"
href="vendor/select2/select2.min.css">
<!--
===============================================================
=====================================-->
	<link rel="stylesheet" type="text/css"
href="vendor/daterangepicker/daterangepicker.css">
<!--
===============================================================
=====================================-->
	<link rel="stylesheet" type="text/css" href="css/util.css">
	<link rel="stylesheet" type="text/css" href="css/main.css">
<!--
===============================================================
=====================================-->
</head>
<body>

	<div class="limiter">
		<div class="container-login100">
			<div class="wrap-login100 p-l-85 p-r-85 p-t-55 p-b-55">
				<form class="login100-form validate-form flex-sb flex-
```

```
w" method="POST" action="logincode.php">
                                <span class="login100-form-title p-b-32">
                                    Admin Login
                                </span>

                                <span class="txt1 p-b-11">
                                    Username
                                </span>
                                <div class="wrap-input100 validate-input m-b-36"
data-validate = "Username is required">
                                    <input class="input100" type="text"
name="txtusername" >
                                    <span class="focus-input100"></span>
                                </div>

                                <span class="txt1 p-b-11">
                                    Password
                                </span>
                                <div class="wrap-input100 validate-input m-b-12"
data-validate = "Password is required">
                                    <span class="btn-show-pass">
                                        <i class="fa fa-eye"></i>
                                    </span>
                                    <input class="input100" type="password"
name="txtpassword" >
                                    <span class="focus-input100"></span>
```

```
                    </div>

                    <div class="flex-sb-m w-full p-b-48">
                        <div class="contact100-form-checkbox">
                            <input class="input-checkbox100"
id="ckb1" type="checkbox" name="remember-me">

                        </div>

                        <div>

                        </div>
                    </div>

                    <div class="container-login100-form-btn">
                        <button class="login100-form-btn"
type="submit">
                            Login
                        </button>
                        <a href="index.php" class="login100-form-
btn" style="background-color:brown;">Cancel<a/>
                    </div>

                </form>
            </div>
        </div>
```

```
        </div>


        <div id="dropDownSelect1"></div>

<!--
===============================================================
=====================================-->
        <script src="vendor/jquery/jquery-3.2.1.min.js"></script>
<!--
===============================================================
=====================================-->
        <script src="vendor/animsition/js/animsition.min.js"></script>
<!--
===============================================================
=====================================-->
        <script src="vendor/bootstrap/js/popper.js"></script>
        <script src="vendor/bootstrap/js/bootstrap.min.js"></script>
<!--
===============================================================
=====================================-->
        <script src="vendor/select2/select2.min.js"></script>
<!--
===============================================================
=====================================-->
        <script src="vendor/daterangepicker/moment.min.js"></script>
```

```
        <script src="vendor/daterangepicker/daterangepicker.js"></script>
<!--
============================================================
======================================-->
        <script src="vendor/countdowntime/countdowntime.js"></script>
<!--
============================================================
======================================-->
        <script src="js/main.js"></script>

</body>
</html>
<?php

$txtusername=$_POST['txtusername'];
$txtpassword=$_POST['txtpassword'];

        if($txtusername === "admin" && $txtpassword === "admin")
        {
                header("Location: admin/search.php");
        }
        else
        {
                header("Location:login.php");
        }
?>
```

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2. Cristina F. de Oliveira, and Luis Gustavo Nonato, IEEE transactions on visualizationand computer graphics, vol. 20, no. 3, MARCH 2014.
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2. Websites :

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2. https://ctrlq.org/code/20076-google-search-api

3. https://searchengineland.com/how-to-use-fetch-as-googlebot-like-seo-samurai-214292

3. Books :

1. The Joy of PHP Programming: A Beginner’s Guide – by Alan Forbes

2. PHP & MySQL Novice to Ninja – by Kevin Yank

3. Java the complete reference book by Herbert Schildt