# Object Oriented Analysis and Design

# Preliminary Project Plan

**Project Description:**

This project aims to create a search engine system that retrieves information from the internet, based on the keyword that the user entered. It will focus on a specific domain of information to provide results confined to the knowledge space of that domain. The method for retrieving information will be easy for non-technical users.

**Components of Crawler Based Search Engine:**

1. Crawling - Crawling will systematically browse the WWW to collect data for indexing.
2. Indexing – It refers to collecting, parsing, and storing data for fast retrieval.
3. Searching - Matching the user query to provide accurate results.
4. Fronted end – Presenting the retrieved data in a convenient and accessible manner.

# Functional Requirements:

1. Case sensitive search
2. Hyperlink enforcement
3. Specifying OR/AND/NOT Search
4. Multiple search engines to run concurrently
5. Deletion of out-of-date URL
6. Listing of the query result in ascending alphabetical order
7. Most frequently search query
8. Setting the number of results to show per page, and navigation between pages
9. Autofill, while correcting typographical errors
10. Filtering out symbols that are not meaningful, according to the user configuration.

# Non-Functional Requirements:

1. User Friendly: It should be easy to understand
2. Portable: Search Engine should be able to run on any system
3. Enhanceable: Can add new features and functionality as time goes
4. Responsive: The search engine should give results within a few milliseconds
5. Adaptive: It should be able to adapt any new changes in system without affecting any other functionalities.
6. Concurrency: More than one user can be able to access the search engine simultaneously.

# Team Members:

1. Manan Dalal(MUD200000)
2. Lipi Patel(LDP210000)
3. Namrata Thaker(NDT200003)
4. Akash Ramani(AXR200012)
5. Fenil Godhani(FKG210000)
6. Yash Shingvi(YXS210018)
7. Yash Kolhe(YSK210001)
8. Nishant Ramani(NXR210001)
9. Nischal Sudeep(NTS200000)

## Team organization:

All the team members will be involved in all phases of the project life cycle. The team members have been divided into 4 teams:

## Project Leader – Lipi Patel

|  |  |  |
| --- | --- | --- |
| Teams | Leader | Members |
| Front End | Manan Dalal | Manan Dalal |
| Nischal Sudeep |
| Yash Kohle |
| Back End | Namrata Thaker | Namrata Thaker |
| Manan Dalal |
| Web Scraping | Yash Shingvi | Yash Shingvi |
| Lipi Patel |
| Namrata Thaker |
| UML/Documentation | Lipi Patel | Lipi Patel |
| Fenil Godhani |
| Akash Ramani |
| Nishant Ramani |

## Deliverable:

* Interim Project I - Initial conceptualization of ideas/designs that can lead to possible solutions along with a ppt file.
* Final Project I - Reporting intermediate deliverables of code base, designs, and diagrams.
* Interim Project II - Delivering most part of the code base with final designs and implementing improvement suggestions received at the end of Project I along with a ppt.
* Final Project II - Submission of final report with complete code base.

## Team website URL

* Team Website: TBD
* Github: <https://github.com/lipi5899/OOAD>

## Tools:

## Frontend: React

## Backend: Node, Express

## Database: MongoDb

## UML: Draw.io

Might add/change more tools to the list as the project proceeds to later stages.