
Software Requirements Specification

**for
EasySearch**

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1.0 Introduction

The purpose of this document is to give a systematic description of the service API “Easy Search” and the reason why this application is considered as required and needed.

The Easy Search API is based on managing search mechanisms in server-side applications.

With Easy Search, customers or people who will use this API will work and think less about managing their search components in their projects, apps or products.

The project aims to reduce the load of custom search components in server-side applications by providing an API for this specific functionality.

The primary goal is to reduce this load of custom search components is to help people to improve their application performance, reducing code complexity and numbers of lines of codes by providing stable API for search mechanism.

1.1 Description

Easy search is a service API that can store and process documents for the user to easily search through thousands of documents.

Easy search can be used for applications and websites that has a lot of data and needs a way to find the documents according to their search.

Performing such search operation needs a lot of preparation and setting up, easy search simplifies the operation into just uploading the documents and sending search requests.

1.2 Constraints

Because of Easy Search is API system, this project doesn’t cover any economic, social or political constraints. However, manufacturability, sustainability and ethics are very important constraints for this project. Also, there will be so many fields to think about, safety and privacy. They are listed below as follows:

- 1.2.1 According to manufacturability, easy search should provide an open API and easy implementation support for all types of server systems. For

example, the API should work with every server-side framework without any trouble.

- 1.2.2 Tests and developments are very important about meet user's needs according to sustainability so the API will develop by creating unit test.
- 1.2.3 Preparing and presenting a guide for API implementation is also very important. Therefore, project's web site will include a detailed guide for implementation.
- 1.2.4 For sustainability, our API should work 24/7 without any connection errors.
- 1.2.5 Security is also very important for easy search API because system will gather and hold target customers data. Therefore, our API should provide a secure connection and safe databases for holding related documents.
- 1.2.6 There will be a customer support panel to gather further usage reports or new ideas about users wishes.
- 1.2.7 According to ethical values, customer will be accepted that to share their data by using this API. Also, the customer's data will hold in our databases as encrypted to avoid unpleasant circumstances like hacks or cyber-attacks, however this doesn't apply for documents.

1.3 Professional and Ethical Issues

Because of the project will be used by people, it should meet requirements of professional and ethical issues. Therefore, project will be interacting with people and different communities. These ranges of communications and differing qualities of parties makes the proficient on social values mainly. Understanding each party and displaying them the leading quality work in terms of both money related and ethical sides are points that will be centered all through the method.

On specialized duties and standards, the group is dependable for building vigorous stage with a secure base for everybody. The target is to attain tall quality work, keep up its quality and include inventive arrangements anytime needed.

2.0 Requirements Specification

2.1 External Interface Requirements

System shall provide two ways of interacting with itself, first through the web application, second through the API.

Web application will be meant for tweaking the settings of the API, viewing analytics of the API, and for easy and user friendly way of storing viewing and editing your documents.

System as an API is self-sufficient as a document storage and search solution, however it is best used with other software to provide the capabilities of this API to that software. The software can communicate through the http requests to the API, using an API key provided on the creation of an account.

The software will make an http request to the endpoint, that will be specified, for specific functionality that contains the API key, and the body of the request. The API will send back a response according to the functionality requested.

2.2 Functional Requirements

- 2.2.1 Users shall be able to sign up through the website of the API in order to access the API.
- 2.2.2 Users shall be able to sign in through the website in order to access and interact with the settings of their configuration, and their data.
- 2.2.3 Users shall be able to create new API keys and can select specific permissions to be given to the key.
- 2.2.4 Users shall be able to add new dictionaries in order to perform search only on the documents registered for that dictionary.
- 2.2.5 Users shall be able to refresh the dictionaries, in order to update the dictionary to be equal to the documents contained inside it.
- 2.2.6 The system shall be able to refresh the dictionaries at periods designated by the user.
- 2.2.7 Users shall be able to delete dictionaries.

- 2.2.8 Users shall be able to add documents to their dictionaries, in order to perform search and store their documents.
- 2.2.9 Users shall be able to get their individual documents.
- 2.2.10 Users shall be able to get their documents multiple at a time with a specified number of documents and the page number.
- 2.2.11 Users shall be able to sort their documents in specified ways.
- 2.2.12 Users shall be able to edit their documents.
- 2.2.13 Users shall be able to delete their documents.
- 2.2.14 Users shall be able to perform search on their documents using the algorithms provided by the API as they prefer.
- 2.2.15 The search function shall take into account every word of each document in the dictionary to thoroughly evaluate the result to be sent back.
- 2.2.16 Users shall be able to change their preferred searching algorithm through the website.
- 2.2.17 Users shall be able to change the number of search results to be sent back in order to limit the results received.
- 2.2.18 Users shall be able to view various analytics gathered from the usage of the API in order to analyze their document storage and search solution.

2.3 Non-Functional Requirements

- 2.3.1 The platform should only store documents that is meant to be viewed by the public, as the main goal for this platform is to provide advanced searching capabilities for applications and websites easily and the platform doesn't encrypt the documents.
- 2.3.2 The platform is not responsible for the loss of data in a scenario where an unknown third party gets access to the API key.
- 2.3.3 The platform is not responsible for the security of the API key in the scenario where the user exposes the API key.
- 2.3.4 The platform should scale accordingly with the increasing number of documents and the performance should not decrease severely.

- 2.3.5 The platform should not store any credit card information of the user and shall only interact with payment service implemented to the platform.
- 2.3.6 The platform overall shall be user friendly to be able to reach any kind of user in need of a solution the platform offers.

2.4 System Requirements

- 2.4.1 The platform's website can be accessed through any modern desktop or mobile web browser that supports interactive web applications.
- 2.4.2 The platform's API can be used by any software that can perform http requests, and receive responses.

3.0 References

- <https://www.acm.org/code-of-ethics>
- <https://www.ieee.org/about/corporate/governance/index.html>