



Al-Azhar University
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WEB PAGE RANKING

SEO SUGGESTION SEARCH ENGINE PROJECT

(Software Design Report)

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Preface

The purpose of a preface is to persuade your readers that they should read the rest of your written work. Keep it short. Describe your background and credentials. Discuss what inspired the project described in this report. Explain who your target audience is, and tell the reader why this project is important to them.

Abstract

A strong abstract sums up your work in very few sentences: (i) state the problem you are addressing; (ii) say why it's an interesting problem, and which issues are hard to tackle; (iii) give your approach towards solving the problem; (iv) say why and how well your approach solves the problem.

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1. Introduction

Your introduction briefly explains the problem you address, and what you've achieved towards solving the problem. It's an edited and updated version of your context and objectives from your topic outline document.

2. User Stories

Our system has two main actors: Administrator and User.

2.1. Administrator Login

Table 1: User Story 1

User Story ID	US1
Name	Administrator login
Statement	As an administrator, I want to login into the system, So that I can enter the admin area.
Priority	HIGH
Direct actors	Administrator
Pre-Conditions	<ol style="list-style-type: none">1. Has internet access.2. Has a browser.3. Opens the login page in the browser.
Post-Conditions	<ol style="list-style-type: none">1. Feeds the database website URLs and their metadata.2. Views the page ranking.
Senario	<ol style="list-style-type: none">1. The administrator fills in username and password fields.2. The administrator clicks on the admin login button.3. The system will validate the username and password. If correct, log in; otherwise, stay on the current login page.4. The system logs both correct and wrong login.

2.2. Website URLs

Table 2: User Story 2

User Story ID	US2
Name	Website URLs
Statement	As an administrator, I want to feed the database website URLs and their metadata, So that the system can use them to search the user query.
Priority	HIGH
Direct actors	Administrator
Pre-Conditions	<ol style="list-style-type: none">1. US1.2. Opens the Feed URLs page.
Post-Conditions	-
Senario	<ol style="list-style-type: none">1. The administrator feeds the database website URLs and its metadata.2. The administrator clicks on add new website button.3. The system saves the data in a new row in the database.

2.3. Page Ranking

Table 3: User Story 3

User Story ID	US3
Name	Page Ranking
Statement	As an administrator, I want to view the page rank, So that I can optimize the search functionality.
Priority	REGULAR
Direct actors	Administrator
Pre-Conditions	<ol style="list-style-type: none">1. US1.2. Opens the Page Ranking page.
Post-Conditions	-
Senario	<ol style="list-style-type: none">1. The administrator clicks the page ranking anchor in the tab menu.2. The system lists the website URLs in the database sorted based on their number of visits and points.

2.4. User Login

Table 4: User Story 4

User Story ID	US4
Name	User login
Statement	As a user, I want to login into the system, So that I can search for specific topics.
Priority	HIGH
Direct actors	User
Pre-Conditions	<ol style="list-style-type: none">1. Has internet access.2. Has a browser.3. Opens the login page in the browser.
Post-Conditions	<ol style="list-style-type: none">1. Searches for a specific topic.2. Searches for website keywords and meta-description.
Senario	<ol style="list-style-type: none">1. The user fills in username and password fields.2. The user clicks on the login button.3. The system will validate the username and password. If correct, log in; otherwise, stay on the current login page.4. The system logs both correct and wrong login.

2.5. Search Page

Table 5: User Story 5

User Story ID	US5
Name	Search Page
Statement	As a user, I want to open the search page, So that I can use the search box.
Priority	HIGH
Direct actors	User
Pre-Conditions	<ol style="list-style-type: none">1. US4.2. Opens the search page page.
Post-Conditions	<ol style="list-style-type: none">1. Searches for a specific topic.
Senario	<ol style="list-style-type: none">1. The user clicks the search page anchor in the tab menu.2. The system opens the page of the search.

2.6. Search Box

Table 6: User Story 6

User Story ID	US6
Name	Search Box
Statement	As a user, I want a search box, So that I can write down my search query.
Priority	HIGH
Direct actors	User
Pre-Conditions	<ol style="list-style-type: none">1. US4.2. Opens the search page page.
Post-Conditions	<ol style="list-style-type: none">1. Clicks on URLs.
Senario	<ol style="list-style-type: none">1. The user write down his/her search query in the search box.2. The user clicks the search button.3. The system uses this query and matches it with the content provided in URLs fed in the database.4. The system generates a list of related URLs.5. The user can then click on any URL in the generated list, and the URL will open the corresponding website.6. The system increases the number of visits to that URL in the database.7. The system goes to the web page URL to fetch its metadata and gives points according to page errors.8. The system updates the page's rank in the database according to the points the page gains and the number of visits.

2.7. SEO Suggestions

Table 7: User Story 7

User Story ID	US7
Name	SEO Suggestions
Statement	As a user, I want to search a live URL, So that I can get suitable keywords and meta descriptions.
Priority	HIGH
Direct actors	User
Pre-Conditions	<ol style="list-style-type: none">1. US4.2. Opens the SEO Suggestions page.
Post-Conditions	-
Senario	<ol style="list-style-type: none">1. The user write down a live URL in the search box.2. The user clicks the find keywords and meta-description button.3. The system goes and scans the web page URL, extracts its meta-features.4. The system then lists out suitable keywords related to the contents of the web page URL and a meta-description.

3. Use-cases

3.1. Actors

3.1.1. Administrator

3.1.2. User

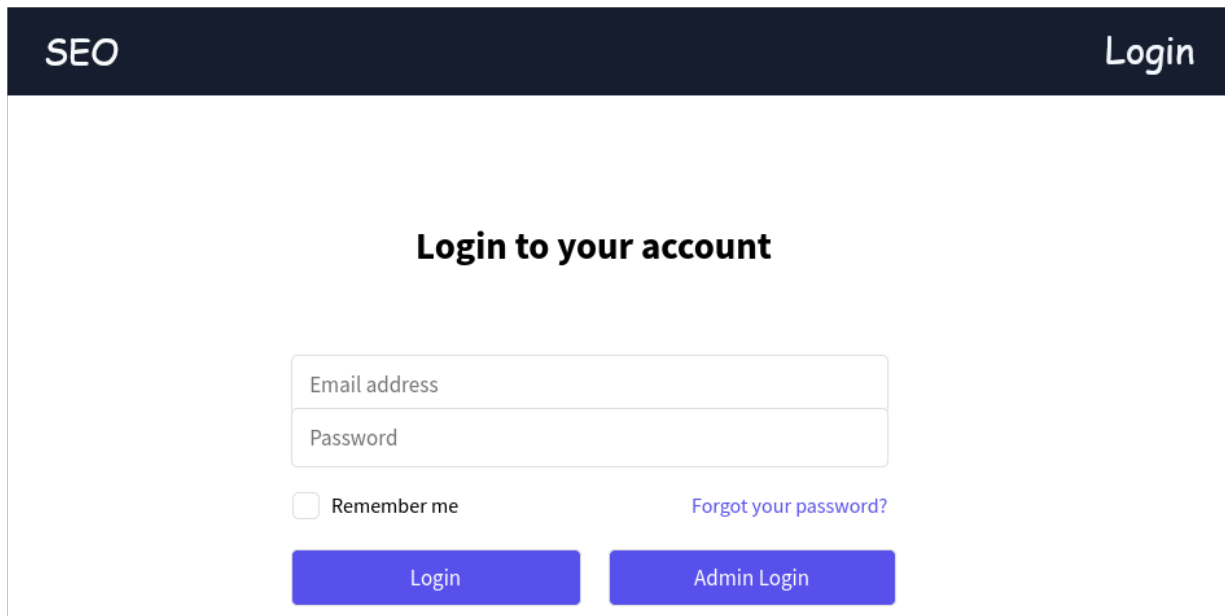
4. ERD Diagram

5. Testing Script

6. Conclusion

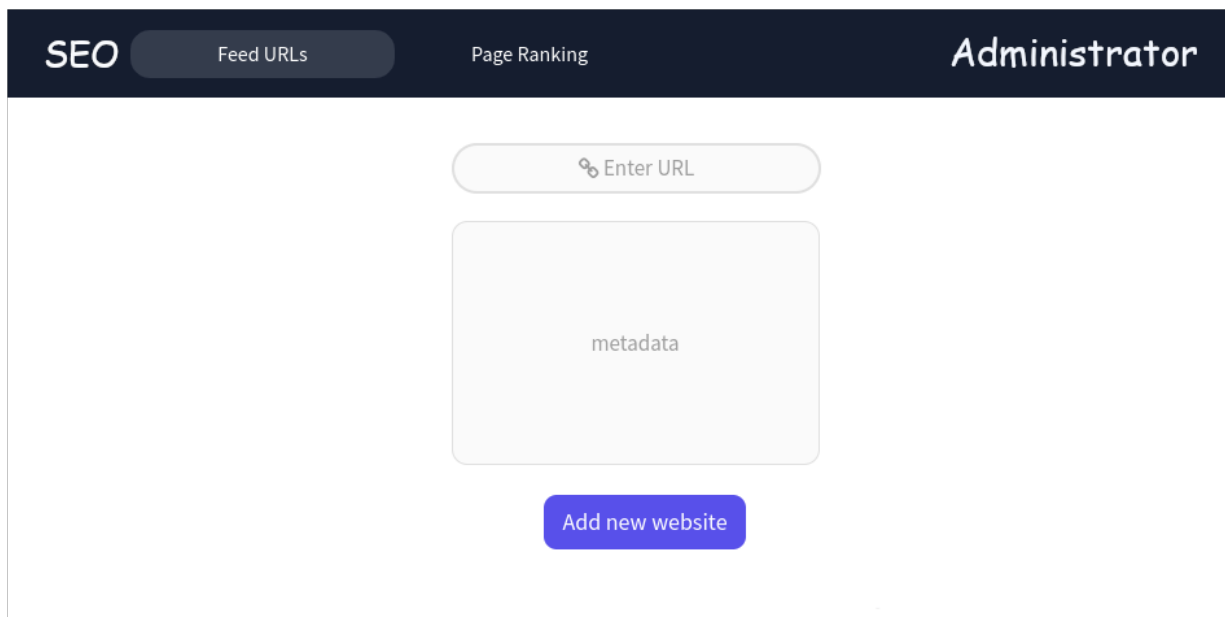
A. Appendix

A.1. Application Screenshots



The screenshot shows a login page for an application. At the top, there is a dark blue header bar with the text "SEO" on the left and "Login" on the right. Below the header, the main content area is white. In the center, there is a heading "Login to your account". Underneath the heading, there are two input fields: "Email address" and "Password". Below these fields, there is a checkbox labeled "Remember me" and a link "Forgot your password?". At the bottom, there are two blue buttons: "Login" and "Admin Login".

Figure 1: Login Page



The screenshot shows a page for managing website URLs. At the top, there is a dark blue header bar with the text "SEO" on the left, "Feed URLs" in the center, and "Administrator" on the right. Below the header, the main content area is white. In the center, there is a light gray rounded rectangle with the text "Enter URL" and a small icon. Below this, there is a larger light gray rounded rectangle with the text "metadata". At the bottom, there is a blue button labeled "Add new website".

Figure 2: Feed Website URLs

<div> <div>SEO</div> <div>Feed URLs</div> <div>Page Ranking</div> <div>Administrator</div> </div>				
URL	METADATA	VISITS	POINTS	
https://google.com	Search engine	7	13	Edit
https://github.com	Hosting service for software projects using Git	4	14	Edit
https://codeforces.com	Website dedicated to competitive programming	2	9	Edit

Figure 3: Page Ranking

SEO	Search Page	SEO Suggestions	User
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Figure 4: Search page

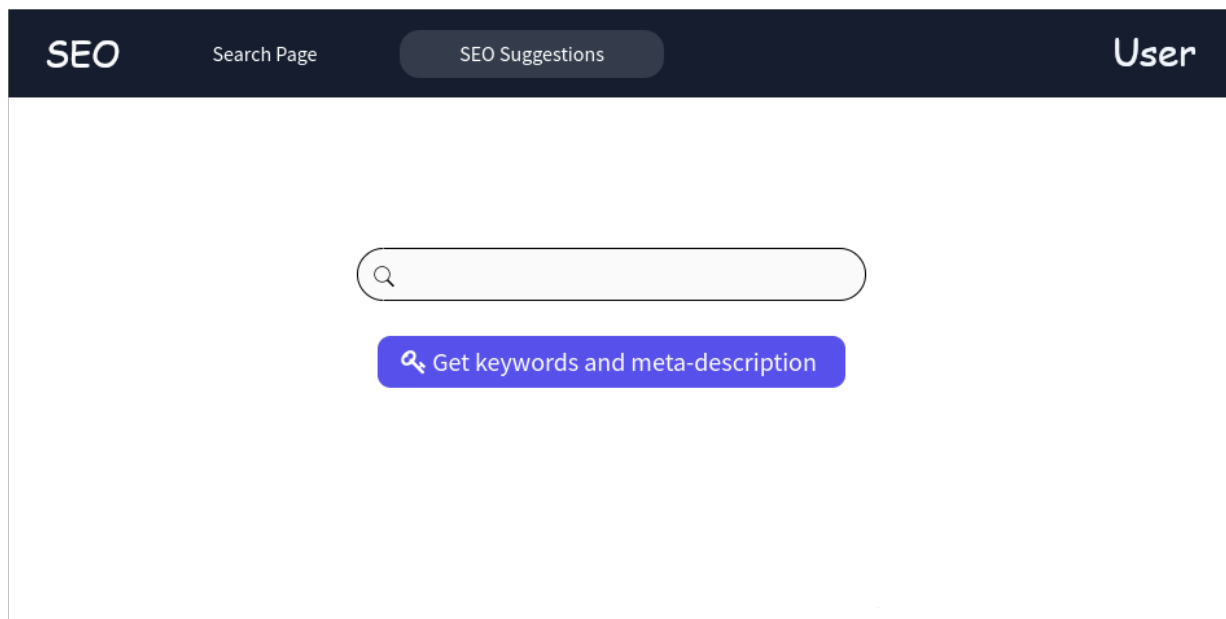


Figure 5: SEO Suggestions