

DHIRUBHAI AMBANI INSTITUTE OF INFORMATION AND COMMUNICATION TECHNOLOGY

PC 641 - MSc-IT WINTER INTERNSHIP PROJECT REPORT(2021)



Internship Start Date: January 23, 2021

Internship End Date: May 15, 2021

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Group ID: WI-2021-Three

Project Name: WritePro (Workflow Automation for content and research writing)

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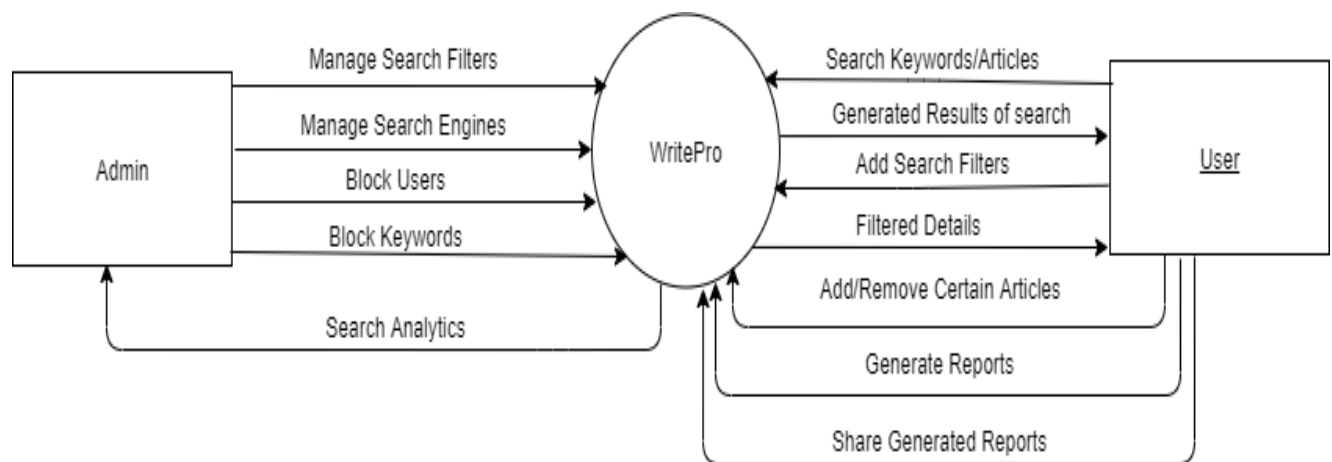
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1. Introduction

This project aims to automate hours of topic Research in a couple of minutes and helps to write better, precise, and fast content. It would save time in the content finding and research process by automating data scraping, findings, analysis, and primary recommendations. It would generate brief reports, determine readability levels, word count, and accuracy of topic with respect to content. It'd present the content in a readable format after decluttering it under a single dashboard while working in keywords from 30+ languages which will save hours of manual research.

2. Context Diagram



3. Scope of the project

The project will collect all the information related to searched keywords or articles and show the list of top viewed articles and users can generate a summary of those articles.

Deliverables

- Users of the system can search keywords and get a report of relevant articles, additional information like word count, readability, outlines, summary, references and analytics.
- The system will be able to generate the desired outcomes of the searches.
- The system will provide functionality to edit the articles/ generated reports.
- The system will be able to save the reports for the future references and maintain the logs of all the searches.
- The system will be able to send the reports to desired recipients.
- Admin of the system will be able to blacklist unwanted keywords/websites.
- The system will make the content/report writing much easier.

- System will also manage the search engines which can be done by the Admin side

4. Detailed Use Cases

UC.01 Login

Name	Login
Use case no.	01
Description	Login to system by entering email id and password
Actors	User/ Admin
Precondition	User should be registered
Post Condition	User will be directed to home page

UC.02 Signup

Name	Signup
Use case no.	02
Description	User can create account by register themselves
Actors	User
Precondition	Check for existing user
Post Condition	After successful registration user we land on dashboard/home page

UC.03 Search Keyword

Name	Search
Use case no.	03
Description	User can search keyword or articles
Actors	User
Precondition	User should have selected the filters of choice
Post Condition	User will be able to generate the report of top searched content

UC.04 Add Filters

Name	Add Filters
Use case no.	04
Description	User can add filters to the searched keyword
Actors	User
Precondition	Searched keyword should be valid
Post Condition	Shows results according to the filters applied

UC.05 Manage Article List

Name	Manage article list
Use case no.	05
Description	User can add or remove the articles from the search results
Actors	User
Precondition	List of articles should be generated
Post Condition	Only selected articles should be there in the article list

UC.06 Manage Individual Article Content

Name	Manage individual article content
Use case no.	06
Description	User can edit the articles of his choice
Actors	User
Precondition	Articles should be scrapped and availability of articles list should be there
Post Condition	displays only the content that is expected by the User

UC.07 Generate Report

Name	Generate Report
Use case no.	07

Description	User can generate report after the selection of articles
Actors	User
Precondition	Articles list should be managed and available
Post Condition	Desired report should be generated

UC.08 Download Report

Name	Download report
Use case no.	08
Description	Generated report can be downloaded to local system
Actors	User
Precondition	Report should be generated
Post Condition	Downloaded report should be available to the local system

UC.04 Share Reports

Name	Share Reports
Use case no.	04
Description	User can share the generated reports
Actors	User
Precondition	Report should be generated and saved in the user's account
Post Condition	Report will be successfully received by the appropriate recipient

UC.09 Manage User Profile

Name	Manage user profile
Use case no.	09
Description	User can edit their profile anytime
Actors	User/Admin

Precondition	User should be logged in to the system
Post Condition	Changes should be visible after editing

UC.10 Manage Search Engine

Name	Manage Search Engine
Use case no.	10
Description	Admin can manage the search engine
Actors	Admin
Precondition	Different search engine should be available to use in the system
Post Condition	User should be able to use search engine successfully

UC.11 Block User

Name	Block User
Use case no.	11
Description	Admin can block unwanted users
Actors	Admin
Precondition	User should be registered to the system
Post Condition	User should be successfully blocked

UC.12 Manage Search Filters

Name	Manage Search Filters
Use case no.	12
Description	Admin can add/remove the search filters from the system
Actors	Admin
Precondition	Availability of different filters should be there
Post Condition	Managed search filters should be ready to apply

5. User Stories

A user story is the smallest unit of work in an agile framework. It's an end goal, not a feature, expressed from the software user's perspective. A user story is an informal, general explanation of a software feature written from the perspective of the end user or customer.

User stories of the system are as follows:

ID	EPICS
E1	As a User, I want to access the website so that I can generate reports using keywords
E2	As a User, I want to do multi-factor authentication so that I can keep my data safe
E3	As a User, I want to generate the report using keywords so that I can get combined information of multiple articles in one place and save time
E4	As a User, I want to manage articles associated with the report so that I can generate the report according to my requirements
E5	As a User, I want to add comments and remarks into my report so that I can share additional information with others regarding the report.
E6	As a User, I want to download reports so that I can access them offline
E7	As a User, I want to create spaces so that I can collaborate and add multiple reports to it
E8	As a User, I want to see my past activity so that I can use the information I have found earlier
E9	As a User, I want to give feedback so that I can convey my problems regarding the website to the developers
E10	As a User, I want to change my profile details so that I can keep my profile updated
E11	As an administrator, I want to see user's feedback so that I can improve the user experience
E12	As an administrator, I want to manage available options for users regarding search engines so that I can make specific search engines to be unavailable
E13	As an administrator, I want to manage available search filters for users so that I can make specific search filters to be available
E14	As an administrator, I want to deny website access for some users so that I can stop unwanted user activity
E15	As an administrator, I want to deny search using some specific keywords so that I can stop unwanted search activity
E16	As an administrator, I want to see search analytics so that I can review things like most searched keywords, search by region, time users spend on the website

E17	As an administrator, I want to blacklist some websites so that I can stop unwanted search activity
E18	As an administrator, I want to enable/disable features of the website so that I can stop unwanted activity

ID	User stories	acceptance criteria
E1U1	As a Guest user, I want to create my website account so that I can log in using that account	<p>Given that a Guest user wants to create a website account</p> <p>When they fill out the sign-up form and click the sign-up button</p> <p>Then a new user account will be created.</p>
E1U2	As a Guest user, I want to sign-up for website using my existing Google account so that I can log in using my Google account	<p>Given that a Guest user wants to sign-up using a Google account</p> <p>When they click the 'Sign in with Google' button</p> <p>Then a new user account will be created using Google account details.</p>
E1U3	As a Guest user, I want to sign-up for website using my existing Facebook account so that I can log in using my Facebook account	<p>Given that a Guest user wants to sign-up using Facebook account,</p> <p>When they click the 'Sign in with Facebook' button,</p> <p>Then a new user account will be created using Facebook account details.</p>
E1U4	As a User, I want to Login to the website so that I can access website's features	<p>Given that a User wants to login to the website,</p> <p>When the Login details are correct and They click the 'Login' button,</p> <p>Then the user will be logged in</p>
E2U1	As a User, I want to LogIn using email and phone number so that multi-factor authentication is completed	<p>Given that a User wants to LogIn using email and phone number,</p> <p>When the Login details are correct and They click the 'Login' button,</p>

		Then the user will be logged in
E3U1	As a User, I want to search keywords and apply filters so that i can generate a report of relevant articles	<p>Given that a User wants to search keywords and apply filters, When the keyword, filters details are filled and</p> <p>They click the 'generate report' button,</p> <p>Then show them the generated report</p>
E3U2	As a User, I want to see additional information like article outlines, article word count, article readability level so that i can understand which website's article is the best	<p>Given that a User wants to see additional information like article outlines, article word count, article readability level,</p> <p>When they click the 'generate report' button,</p> <p>Then show them the article outlines, article word count, article readability level for every article inside the generated report</p>
E3U3	As a User, I want to see keyword suggestions so that i can easily search for related topics	<p>Given that a User wants to see keyword suggestions,</p> <p>When they start typing in search box,</p> <p>Then show them the keyword suggestions based on their past search history</p>
E4U1	As a User, I want to see the list of articles associated with the generated report so that I can decide which articles i should keep or remove	<p>Given that a User wants to see the list of articles associated with the generated report</p> <p>When they click on 'relevant articles' button,</p> <p>Then show them the list of articles associated with the generated report</p>
E4U2	As a User, I want to remove a article from the list of relevant articles so that I can generate report without using the information of that article	<p>Given that a User wants to remove a article from the list of relevant articles</p> <p>When they uncheck the 'checkbox' in front of the article</p> <p>Then show them the updated report without having the information from that article</p>
E4U3	As a User, I want to add a article to the list of relevant articles so that I can include	Given that a User wants to add a article to the list of relevant articles

	the information of that article into the generated report	<p>When they check the 'unchecked checkbox' in front of the article</p> <p>Then show them the updated report including the information from that article</p>
E5U1	As a User, I want to add a comment to the report so that i can share my thoughts with the other readers	<p>Given that a User wants to add a comment to the report</p> <p>When they click the 'add comment' button form the panel</p> <p>Then create a moveable comment box where they can add their comment</p>
E5U2	As a User, I want to add a remark to the report so that i can share my remarks regarding the report with the other readers	<p>Given that a User wants to add a remark to the report</p> <p>When they click the 'add remark' button form the panel</p> <p>Then create a moveable remark box where they can add their remark</p>
E5U3	As a User, I want to save the updated report so that in my next session I can see the changes I have made	<p>Given that a User wants to save the updated report</p> <p>When they click the 'save report' button</p> <p>Then save all the changes and show them the updated report</p>
E6U1	As a User, I want to download the report as PDF so that I can access them offline	<p>Given that a User wants to download the report as PDF</p> <p>When they click the 'download as PDF' button</p> <p>Then start downloading that report as pdf onto their system</p>
E6U2	As a User, I want to download the report as DOC file so that I can edit them offline	<p>Given that a User wants to download the report as DOC</p> <p>When they click the 'download as DOC' button</p> <p>Then start downloading that report as Doc file onto their system</p>
E7U1	As a User, I want to create spaces so that I can add other people to it and collaborate	Given that a User wants to create spaces

		<p>When they click the ‘create new space’ button</p> <p>Then create a new space and allow them to rename it.</p>
E7U2	As a User, I want to add other users into existing spaces so that I can share reports and collaborate	<p>Given that a User wants to add other users into existing space</p> <p>When they click the ‘add people’ button</p> <p>Then show them a text box where they can find other users and can add them into existing spaces</p>
E7U3	As a User, I want to share existing reports to a specific space so that I can collaborate with the people added into that space	<p>Given that a User wants to share existing reports to a specific space</p> <p>When they click the ‘share report’ button</p> <p>Then let them select the space to share the report</p>
E8U1	As a User, I want to see all existing reports so that I can go back and re-read them	<p>Given that a User wants to see all existing reports</p> <p>When they click the ‘my report’ Tab</p> <p>Then show them the list of all existing reports</p>
E8U2	As a User, I want to see my past search history so that I can review and use them again	<p>Given that a User wants to see the past search history</p> <p>When they click the ‘search history’ Tab</p> <p>Then show them all of the search history with the timestamps</p>
E9U1	As a User, I want to rate website’s “summary algorithm” so that I can give feedback to the developers	<p>Given that a User wants to rate website’s “summary algorithm”</p> <p>When they finish reading the generated report</p> <p>Then show them buttons to rate websites algorithm</p>
E10U1	As a User, I want to change my profile picture so that I can keep my profile updated	<p>Given that a User wants to change their profile picture</p> <p>When they click the “change profile picture” button</p>

		Then show them options to upload a new picture
E10U2	As a User, I want to change my Email id so that I can keep my profile updated	<p>Given that a User wants to change their Email id</p> <p>When they click the “change Email id” button</p> <p>Then show them a textbox to enter new Email id</p>
E10U3	As a User, I want to change my password so that I can keep my profile updated	<p>Given that a User wants to change their password</p> <p>When they click the “change password” button</p> <p>Then show them textbox to enter new password and current password</p>
E11U1	As an administrator, I want to see user’s feedback regarding “summary algorithm” so that I can tell developers to change some things	<p>Given that an administrator wants to see user’s feedback regarding “summary algorithm”</p> <p>When they click the “summary algorithm” button in the user feedback panel</p> <p>Then show them the user’s feedback regarding the “summary algorithm” in a tabular format</p>
E11U2	As an administrator, I want to see user’s feedback regarding “overall UI” so that I can tell developers to change some things in UI	<p>Given that an administrator wants to see user’s feedback regarding “overall UI”</p> <p>When they click the “overall UI” button in the user feedback panel</p> <p>Then show them the user’s feedback regarding the “overall UI” in a tabular format</p>
E12U1	As an administrator, I want to see search engines available to users so that I can manage them	<p>Given that an administrator wants to see search engines available to users</p> <p>When they click the “search engines” tab</p> <p>Then show them a list of search engines available to users</p>
E12U2	As an administrator, I want to remove a specific search engine from available search engines so that I can deny users	Given that an administrator wants to remove a specific search engine from available search engines

	from accessing that search engine	<p>When they click the “remove” button beside the search engine name</p> <p>Then that search engine will be unavailable to users</p>
E12U3	As an administrator, I want to add a specific search engine to available search engines so that I can allow users to access that search engine	<p>Given that an administrator wants to add a specific search engine to available search engines</p> <p>When they click the “Add” button beside the search engine name</p> <p>Then that search engine will be available to users</p>
E13U1	As an administrator, I want to see available search filters for users so that I can manage what filters user can use	<p>Given that an administrator wants to see available search filters for users</p> <p>When they click the “search filters” tab</p> <p>Then show them available search filters for users</p>
E13U2	As an administrator, I want to remove a specific search filter from available search filters so that I can deny users from accessing that search filter	<p>Given that an administrator wants to remove a specific search filter from available search filters</p> <p>When they click the “remove” button beside the search filter name</p> <p>Then that search filter will be unavailable to users</p>
E13U3	As an administrator, I want to add a specific filter to available search filters so that I can allow users to use that search filter	<p>Given that an administrator wants to add a specific search filter to available search filters</p> <p>When they click the “Add” button beside the search filter name</p> <p>Then that search filter will be available for users to use</p>
E14U1	As an administrator, I want to block specific user from accessing the website so that I can stop unwanted activity	<p>Given that an administrator wants to block a specific user from accessing the website</p> <p>When they click the “block” button beside the user name</p> <p>Then that user can’t access the website</p>

E15U1	As an administrator, I want to blacklist some keywords for search so that I can stop unwanted search activity	<p>Given that an administrator wants to blacklist specific keywords for search</p> <p>When they click the “add to blacklist” button after entering the keyword</p> <p>Then that keyword cannot be used for search</p>
E16U1	As an administrator, I want to see search analytics on dashboard so that I can review things like most searched keywords, search by region, time users spend on the website	<p>Given that an administrator wants to see search analytics on dashboard</p> <p>When they open the admin dashboard</p> <p>Then show them things most searched keywords, search by region, time users spend on the website</p>
E17U1	As an administrator, I want to blacklist some websites so that I can stop those website’s results from showing in the report	<p>Given that an administrator wants to blacklist some websites</p> <p>When they click the “add to blacklist” button after entering the website URL</p> <p>Then that website’s results will not be shown in any report</p>
E18U1	As an administrator, I want to see website’s features list so that I can manage them	<p>Given that an administrator wants to see a website’s features list</p> <p>When they click the “features” tab</p> <p>Then show them the features list</p>
E18U2	As an administrator, I want to enable specific feature of the website so that I can make that specific feature available for users	<p>Given that an administrator wants to enable the specific feature of the website</p> <p>When they click the “enable” button beside the feature name</p> <p>Then that feature will be enabled</p>
E18U3	As an administrator, I want to disable specific feature of the website so that I can make that specific feature unavailable for users	<p>Given that an administrator wants to disable a specific feature of the website</p> <p>When they click the “disable” button beside the feature name</p> <p>Then that feature will be disabled</p>

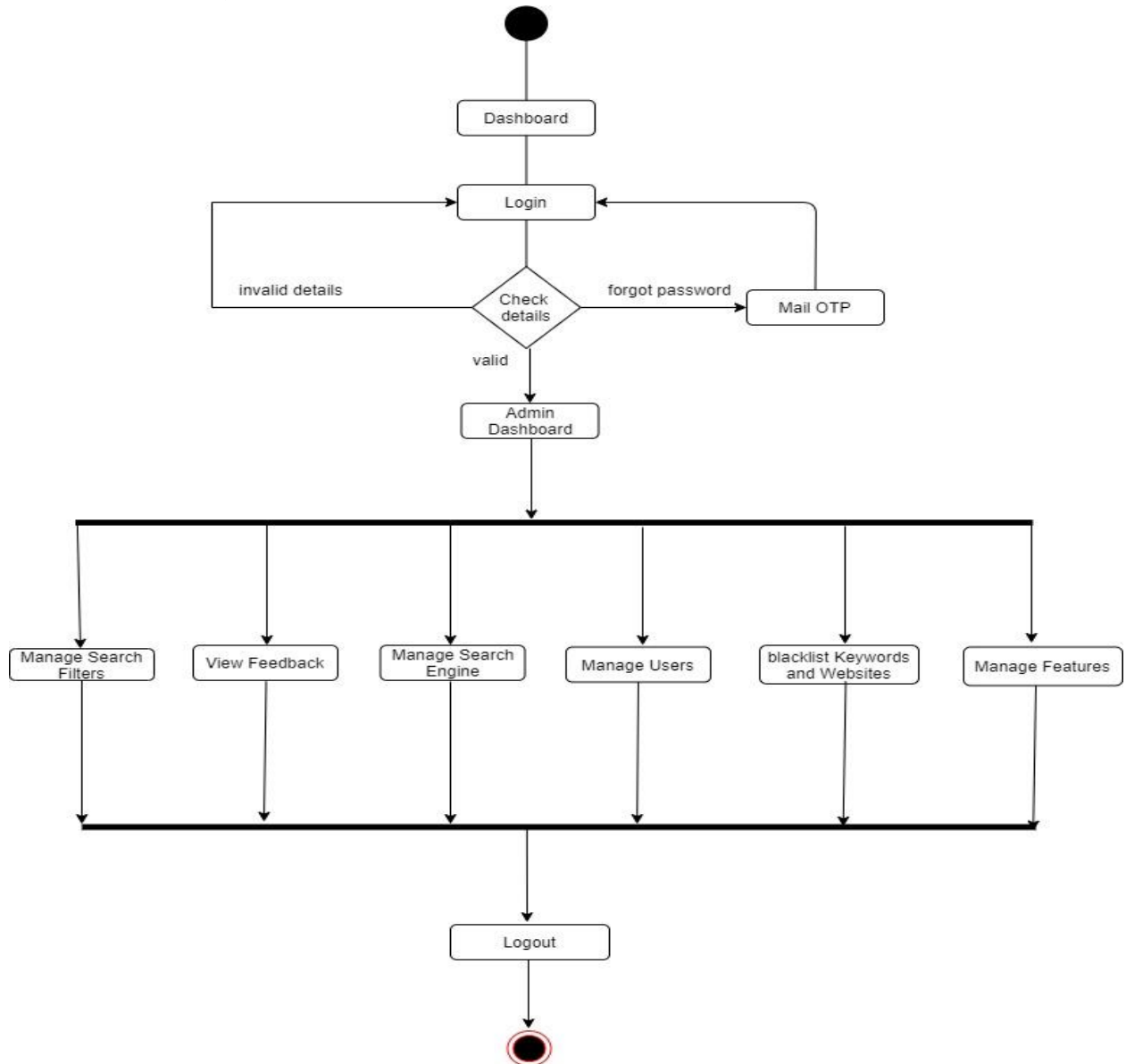
6. UML Design

- **UML Diagrams**

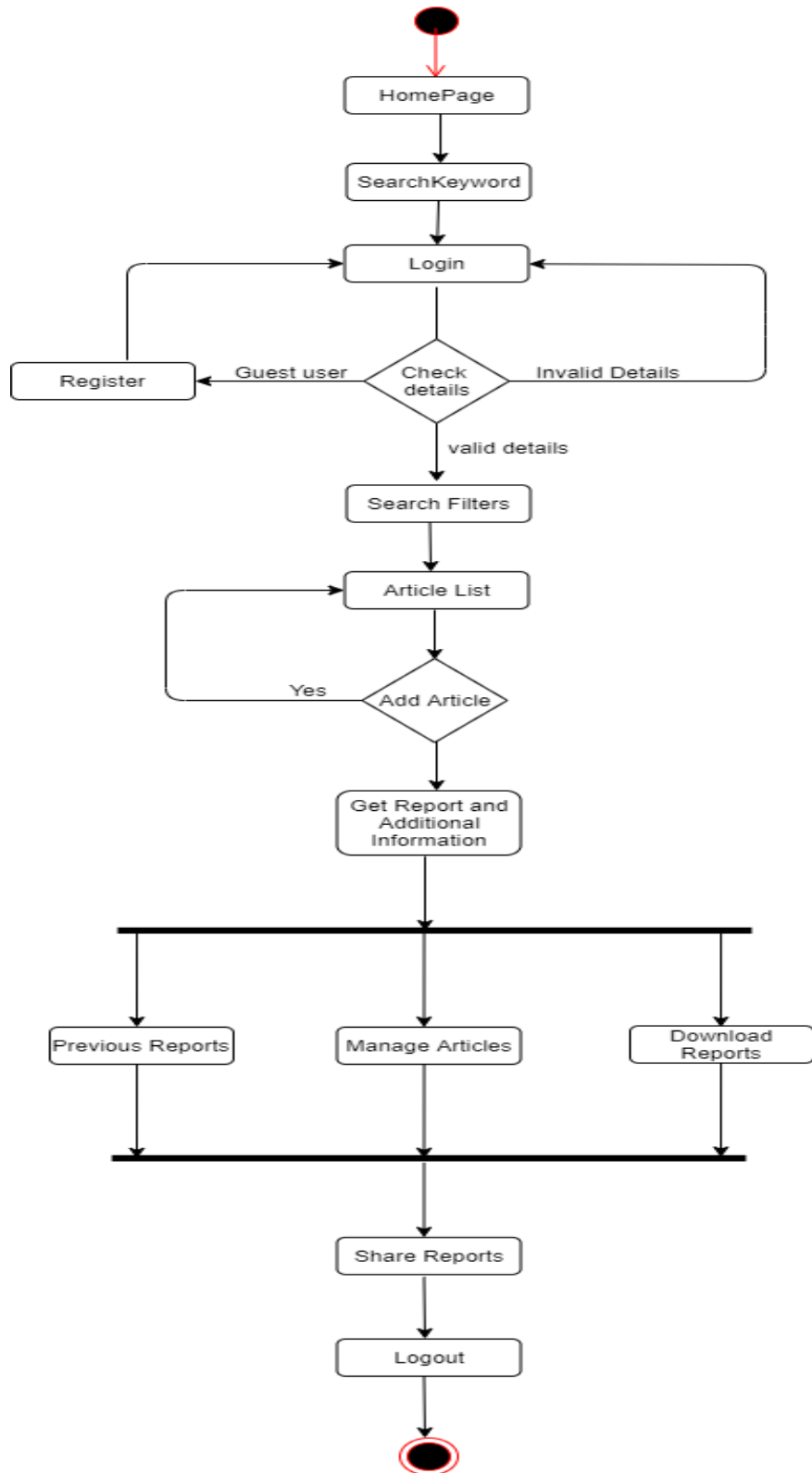
For creating UML diagrams we have used tool called Draw.io

- **Activity diagrams**

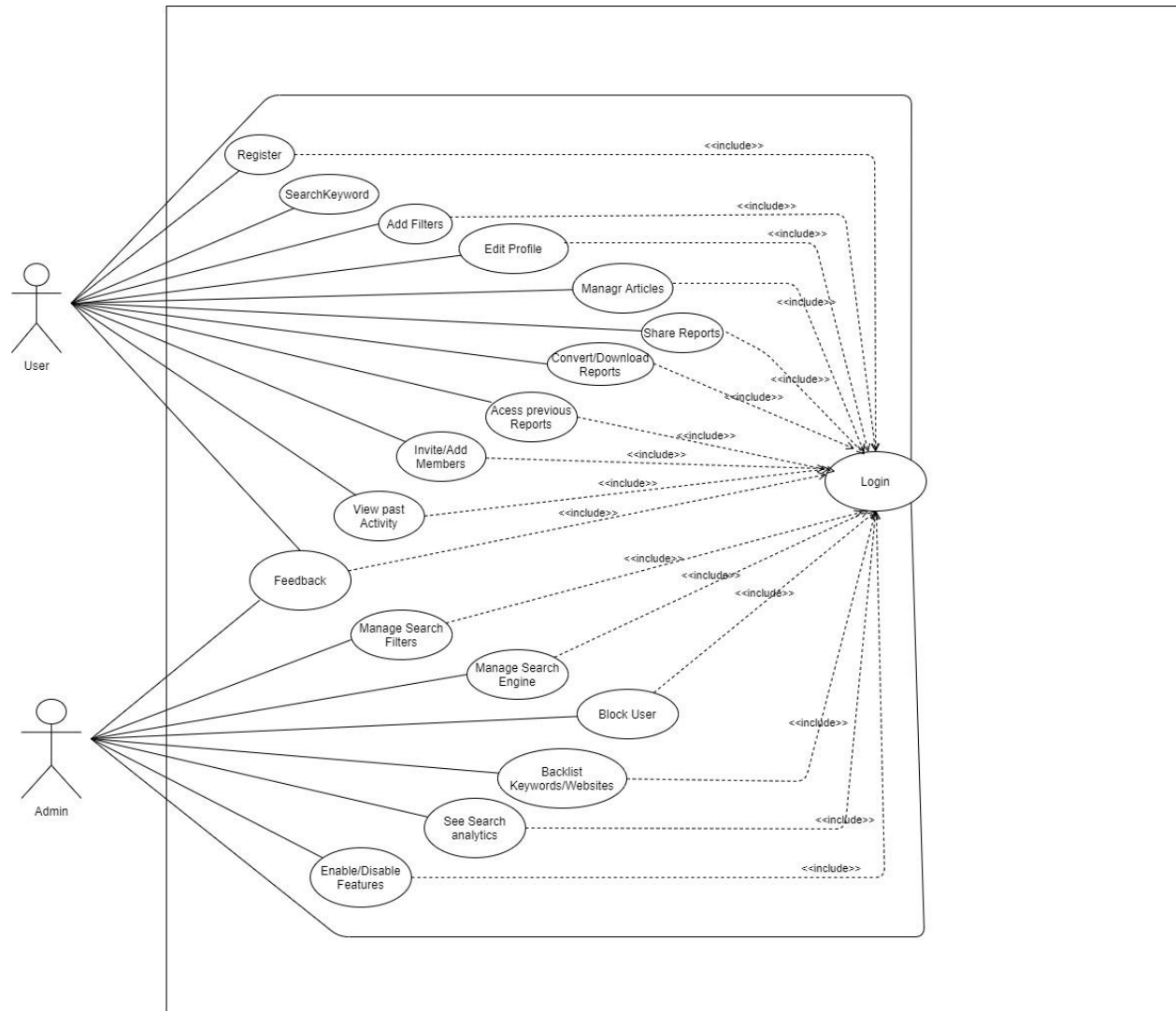
- a) **Admin**



- b) **User**



- Use Case diagram



- UI Data**

For designing wireframes we have used Figma. *Figma* is a browser-based UI and UX design application, with excellent design, prototyping, and code-generation tools. It's currently (arguably) the industry's leading interface design tool, with robust features which support teams working on every phase of the design process.

- **Login**

Motto

Welcome to
{website}

Your Email Address

or

Continue with Google

SUBMIT

- **Register**

Motto

Welcome to
{website}

user@email.com

Enter OTP

SUBMIT

Motto

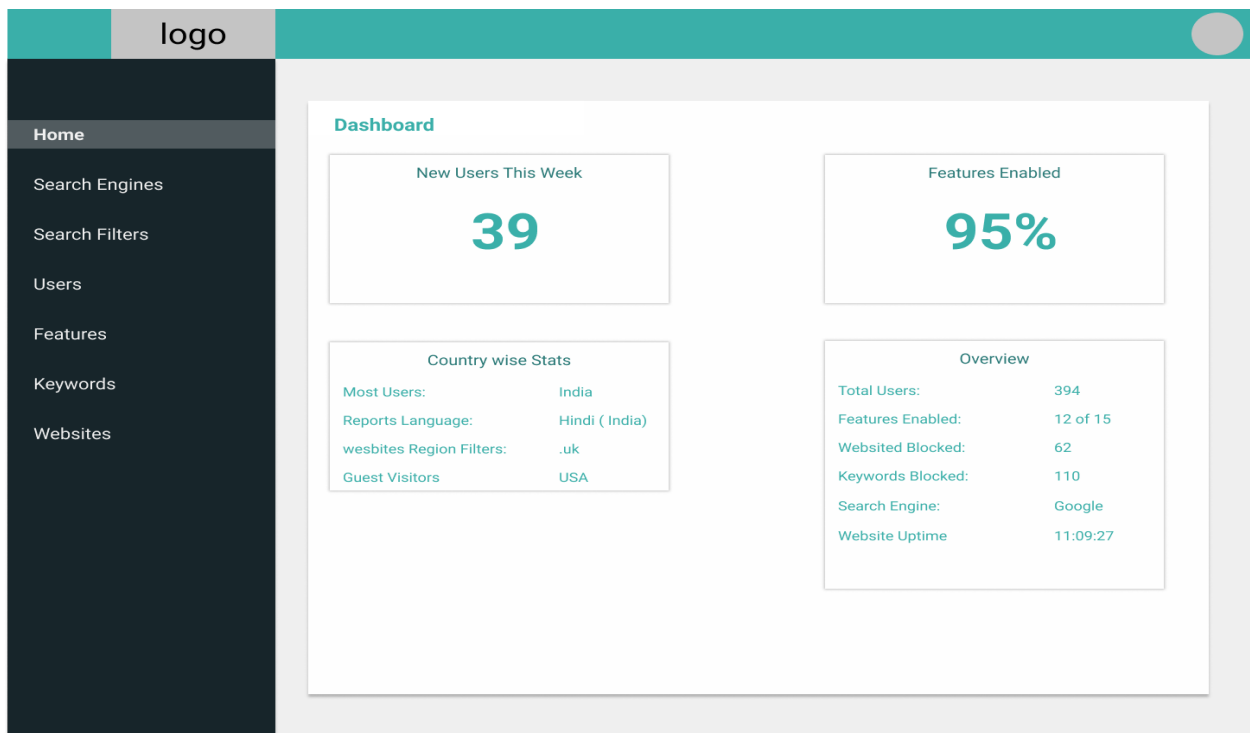
Welcome to
{website}

Create a Password

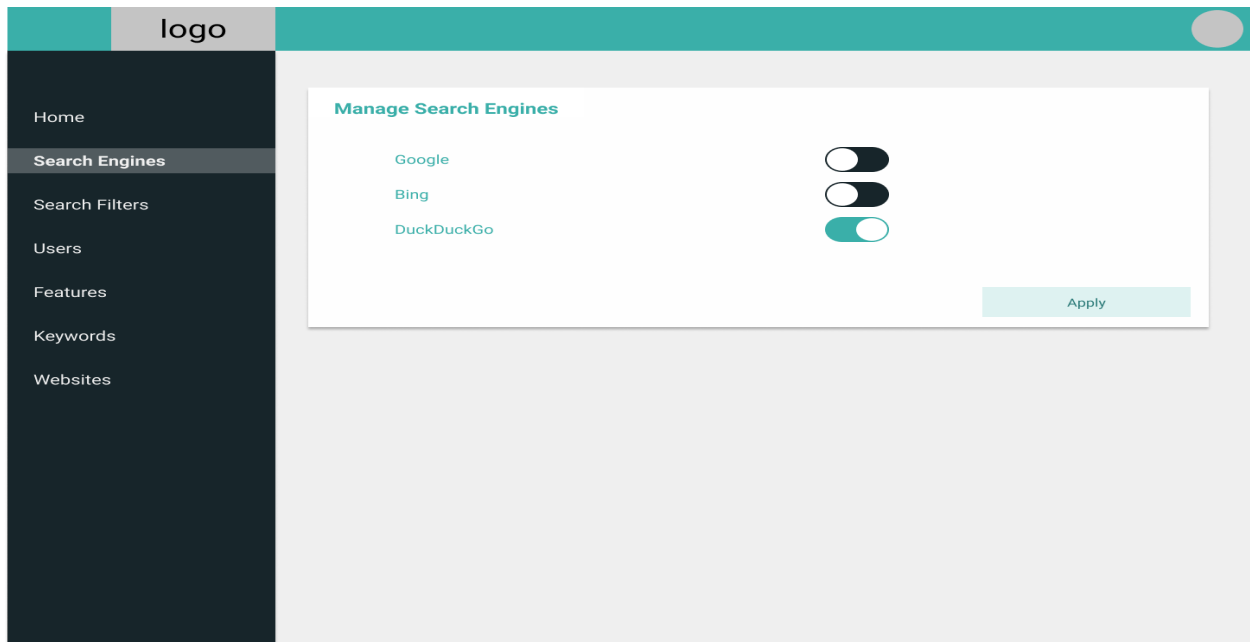
Re-Enter Password

SUBMIT

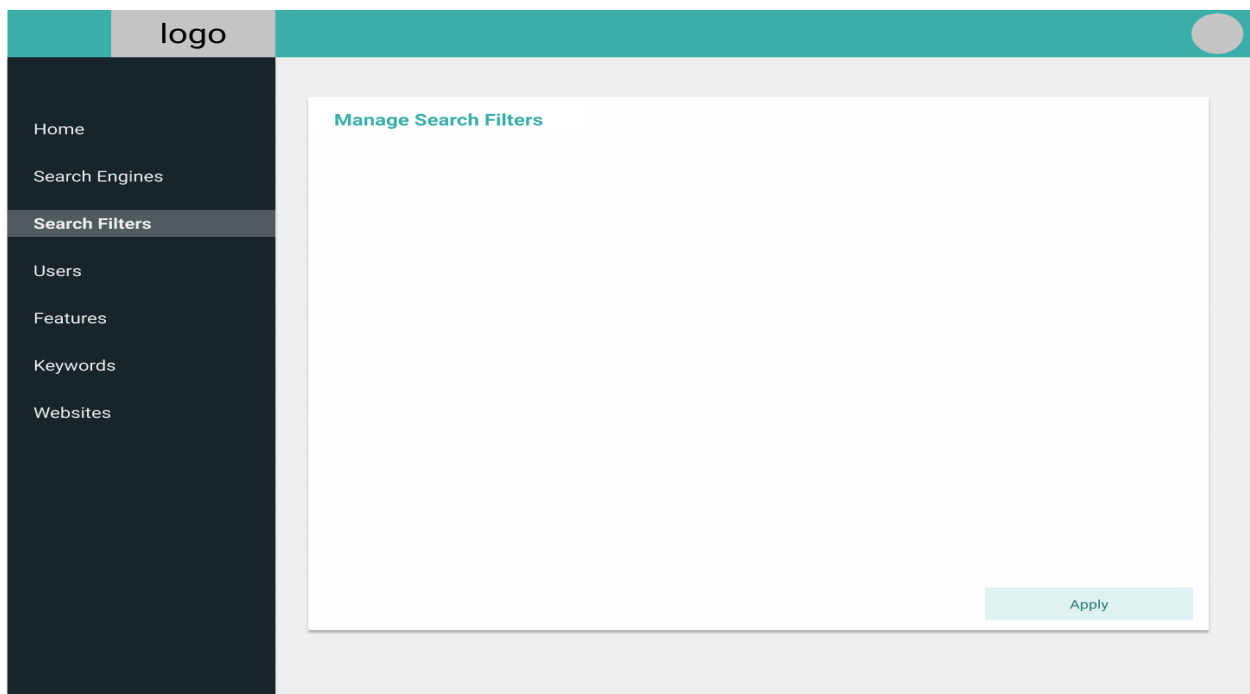
- **Admin Dashboard**



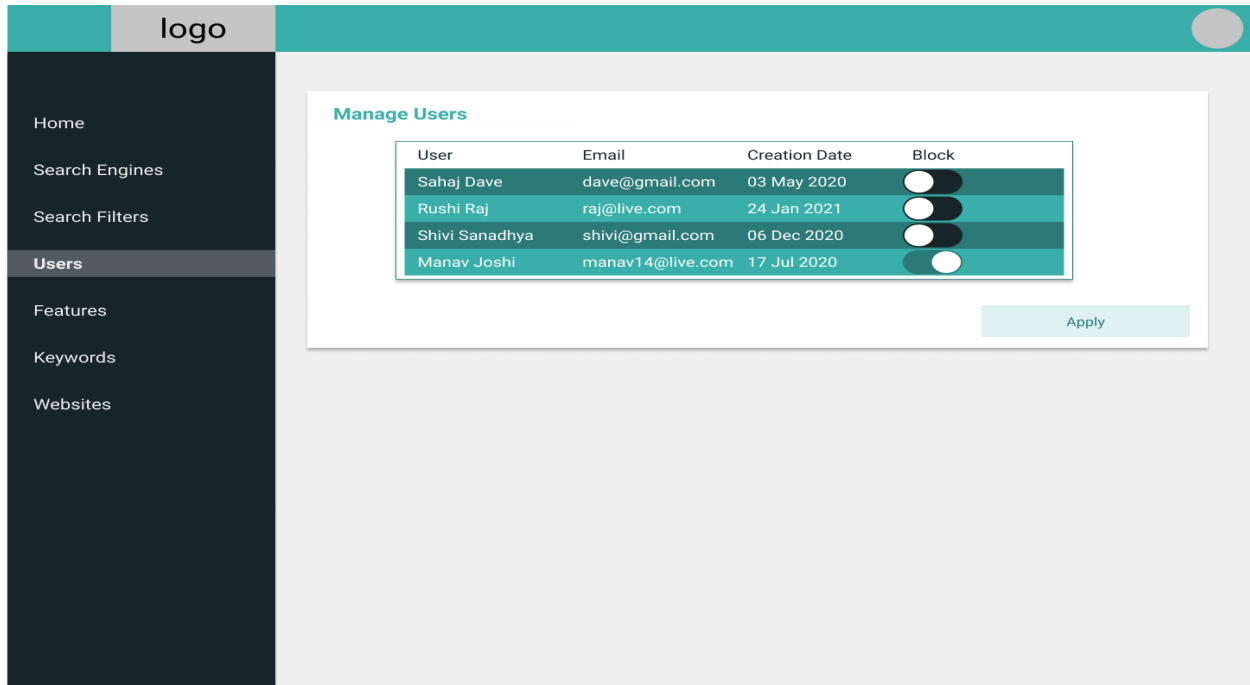
- **Manage Search Engine**



- **Manage Search Filters**



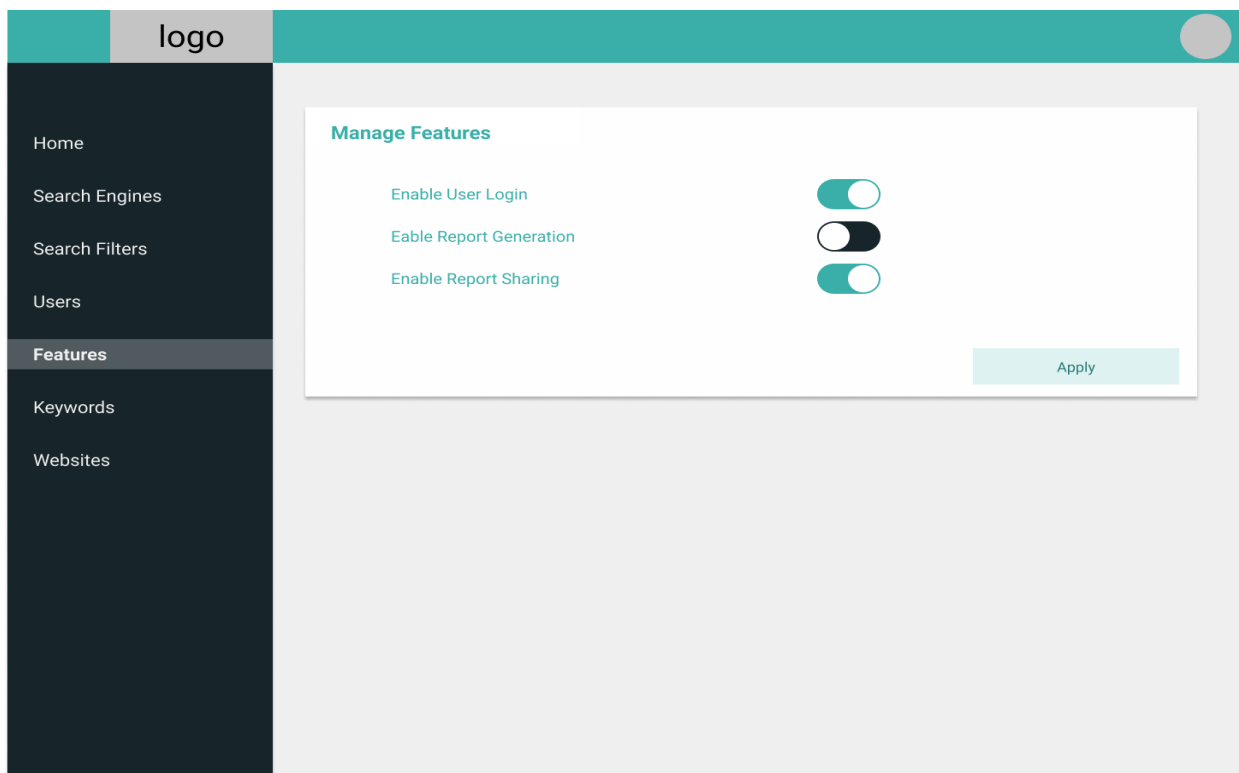
- **Manage Users**



The screenshot shows a web application interface with a teal header bar containing a 'logo' and a user profile icon. A dark sidebar on the left lists navigation options: Home, Search Engines, Search Filters, Users (highlighted), Features, Keywords, and Websites. The main content area is titled 'Manage Users' and contains a table with four columns: User, Email, Creation Date, and Block. The table lists four users: Sahaj Dave, Rushi Raj, Shivi Sanadhya, and Manav Joshi. Each user has a corresponding email address, creation date, and a toggle switch for the 'Block' status. An 'Apply' button is located at the bottom right of the table.

User	Email	Creation Date	Block
Sahaj Dave	dave@gmail.com	03 May 2020	<input type="checkbox"/>
Rushi Raj	raj@live.com	24 Jan 2021	<input type="checkbox"/>
Shivi Sanadhya	shivi@gmail.com	06 Dec 2020	<input type="checkbox"/>
Manav Joshi	manav14@live.com	17 Jul 2020	<input checked="" type="checkbox"/>

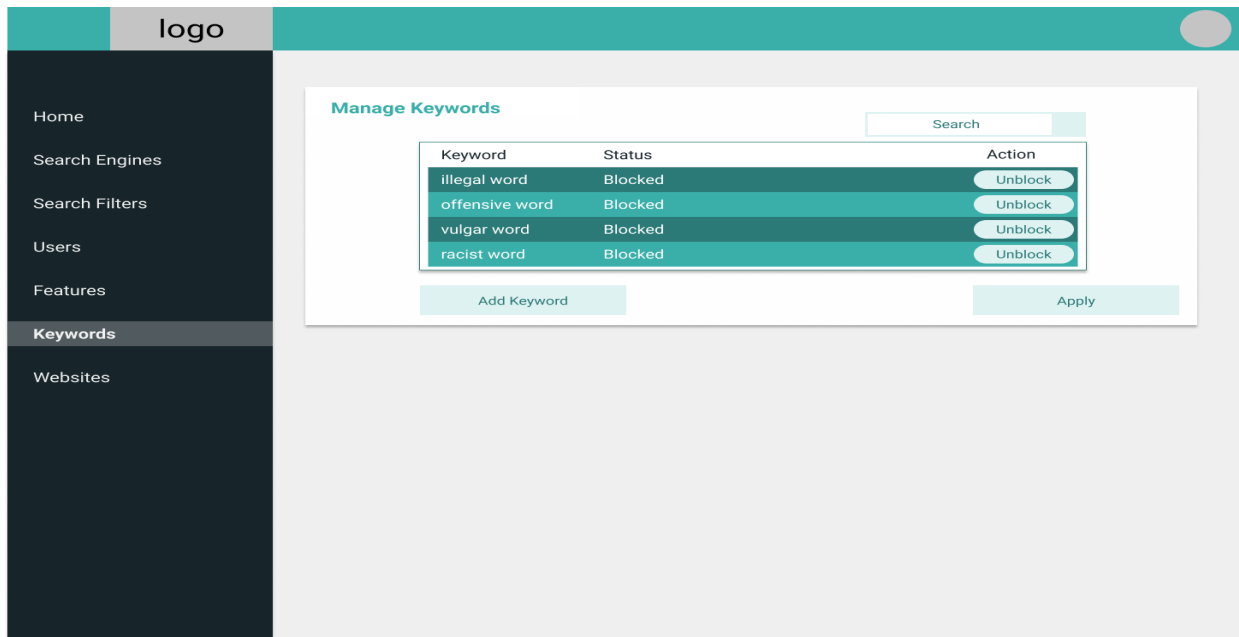
- **Manage Features**



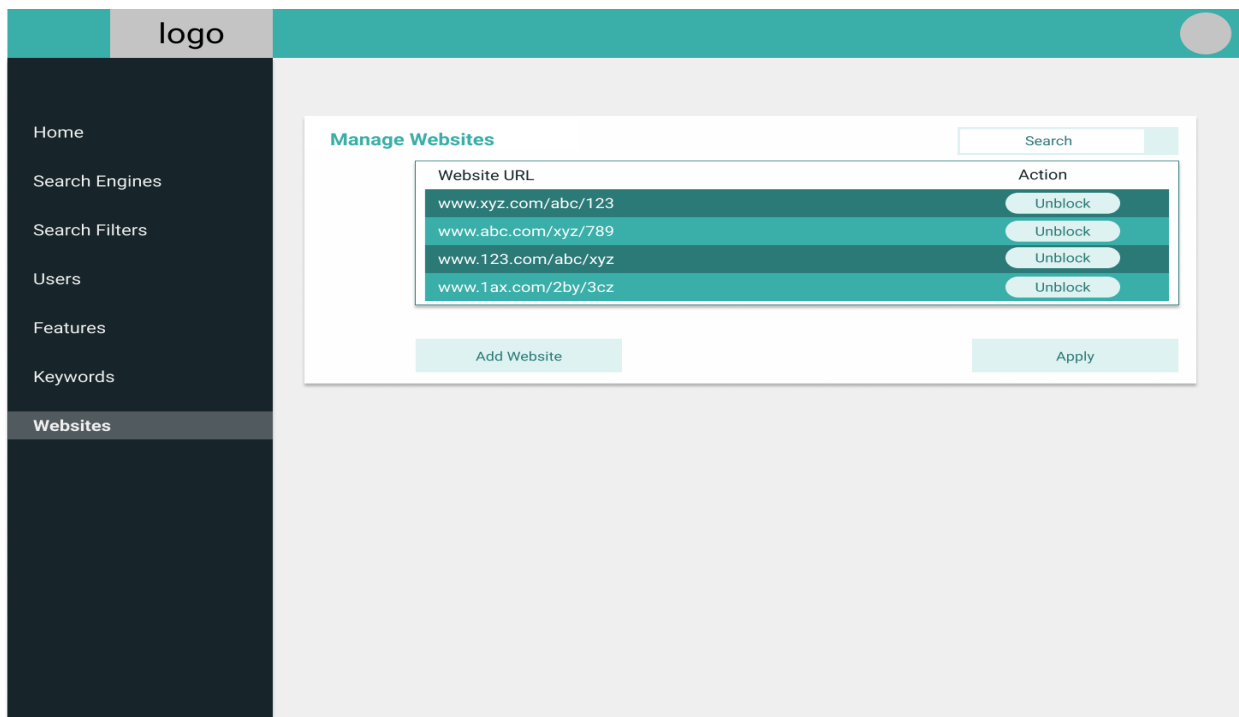
The screenshot shows a web application interface with a teal header bar containing a 'logo' and a user profile icon. A dark sidebar on the left lists navigation options: Home, Search Engines, Search Filters, Users, Features (highlighted), Keywords, and Websites. The main content area is titled 'Manage Features' and contains three toggle switches for different features: 'Enable User Login' (checked), 'Eable Report Generation' (unchecked), and 'Enable Report Sharing' (checked). An 'Apply' button is located at the bottom right of the feature list.

Feature	Status
Enable User Login	<input checked="" type="checkbox"/>
Eable Report Generation	<input type="checkbox"/>
Enable Report Sharing	<input checked="" type="checkbox"/>

- **Manage Keywords**



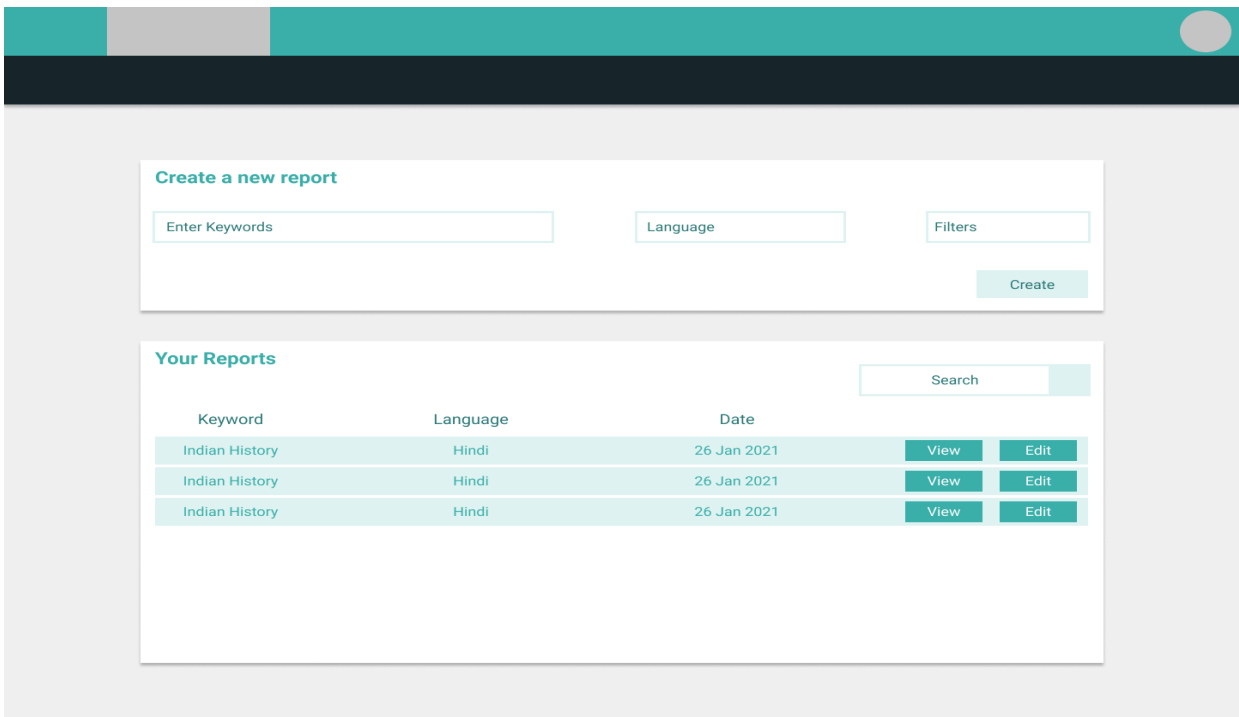
- **Manage Websites**



- **User Homepage**



- **User Dashboard**



The User Dashboard UI features a teal header bar with a grey profile icon on the right. Below the header is a dark teal navigation bar. The main content area is light grey and contains two white panels. The first panel, titled "Create a new report", has three input fields: "Enter Keywords", "Language", and "Filters", followed by a teal "Create" button. The second panel, titled "Your Reports", includes a search bar and a table with three columns: "Keyword", "Language", and "Date". The table lists three reports, each with "Indian History" as the keyword, "Hindi" as the language, and "26 Jan 2021" as the date. Each row has "View" and "Edit" buttons. The table is followed by a large empty space.

Create a new report

Enter Keywords Language Filters

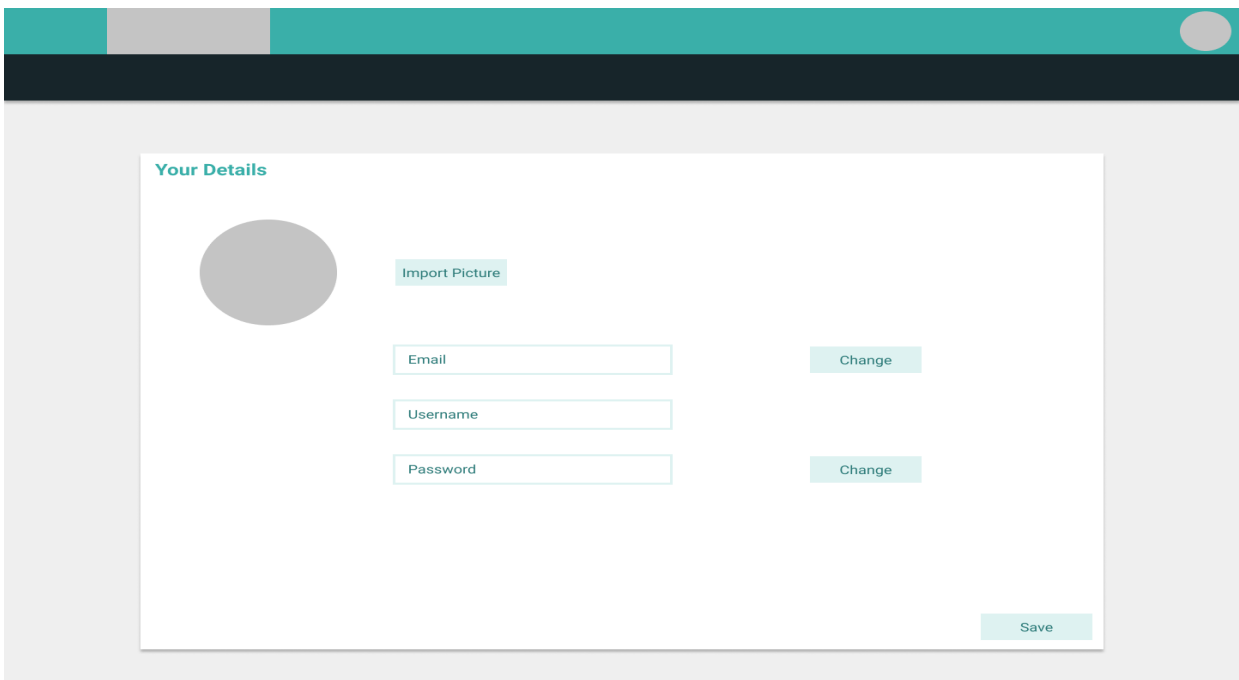
Create

Your Reports

Search

Keyword	Language	Date		
Indian History	Hindi	26 Jan 2021	View	Edit
Indian History	Hindi	26 Jan 2021	View	Edit
Indian History	Hindi	26 Jan 2021	View	Edit

- **User Profile**



The User Profile UI features a teal header bar with a grey profile icon on the right. Below the header is a dark teal navigation bar. The main content area is light grey and contains a white panel titled "Your Details". The panel has a large grey circle for a profile picture, followed by an "Import Picture" button. Below this are three input fields: "Email", "Username", and "Password", each with a corresponding "Change" button to its right. A teal "Save" button is located at the bottom right of the panel.

Your Details

Import Picture

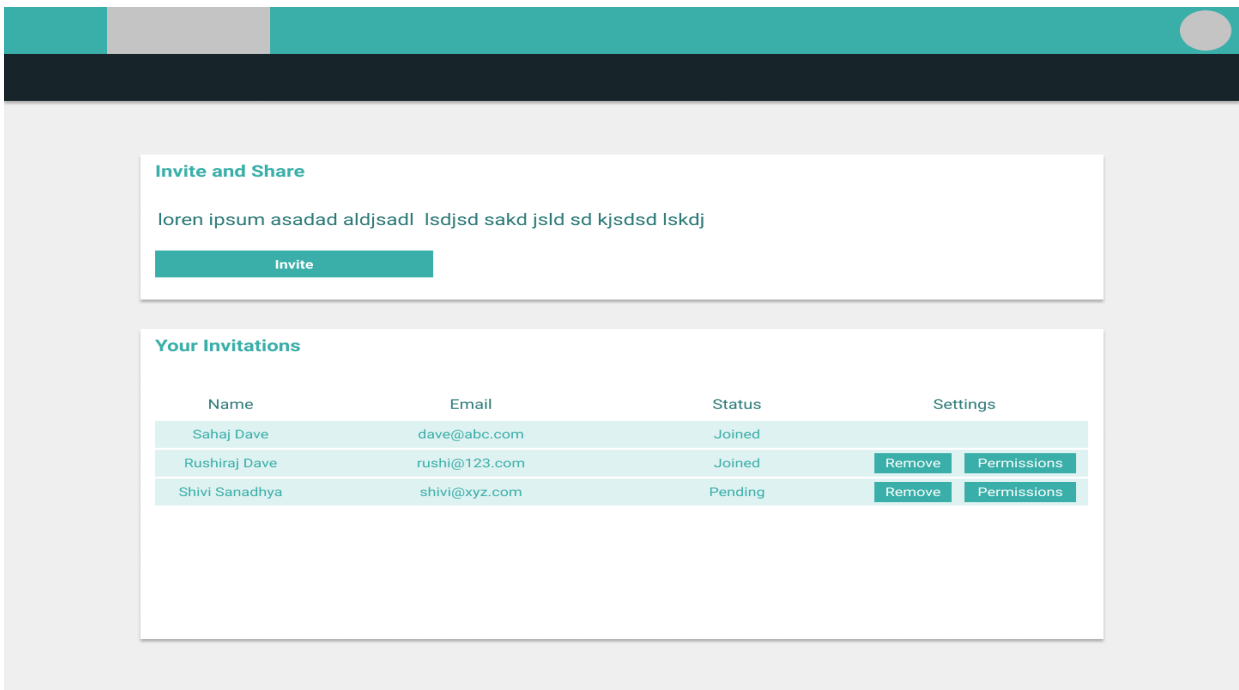
Email Change

Username

Password Change

Save

- **User Invitations**



7. Tools, Technologies, APIs and Libraries

1. Tools and technologies

- VS code
- Jira
- Github
- Postman
- React
- Python
- Django
- Bootstrap

2. APIs and Libraries

- Redux
- djoser

8. Testing Strategies

- *Unit Testing*- Testing each component or module of your software project is known as unit testing.
- *Integration Testing*- After integrating the modules, you need to see if the combined modules work together or not. This type of testing is known as

integration testing. You need to perform fewer integration tests than unit tests.

9. Programming/ Designing Contribution

- Frontend: Sahaj, Rushiraj, Shivi
- Backend: Sahaj
- Documentation: Shivi
- Designing: Sahaj, Rushiraj, Shivi

10. Lessons learnt

Lessons we have learnt during this period of time are as follows

- Importance of teamwork
- Data Scraping
- Learnt basics of Python
- React JS basics
- Working with Python libraries
- Work with Django framework
- While working with REST APIs we should use [Postman](#) to identify the errors
- Importance of writing dynamic code
- Importance of managing file versions

11. Bibliography

- [Draw.io](#)
- [Stackoverflow.com](#)
- [Github.com](#)
- [Figma.com](#)
- [atlassian.com](#)