Deccan Education Society's
Fergusson College (Autonomous), Pune.
Department of Computer Science

A

Project Report

on

Content Management Portal For Valuer's

Master of Science (Computer Science)-I

(Semester - II)

CSC4212 Computer Science Project-II

Submitted By -

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2. Shivam Laxmikant Dandavate Roll No. 226254

3. Saurabh Santosh Deo Roll No. 226264

[2022-2023]

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in partial fulfilment of the requirement of the completion of

F.Y.M.SC (C.S.)

[Semester-II]

Master of Science (Computer Science)

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3. Saurabh Santosh Deo Roll No. 226264

Under the Guidance of -
Prof.Mr.Irfan Khatik

CERTIFICATE

This is to certify that the project entitled **Content Management Portal For Valuer's**
Completed by

1. Abhishek Sachin Dhondalkar 226235
2. Shivam Laxmikant Dandavate 226254
3. Saurabh Santosh Deo 226264

in partial fulfilment of the requirement of the completion of M.Sc. (Computer Science) [Semester-II], has been carried out by team under my guidance satisfactorily during the academic year 2022-2023.

Place: Pune

Date: / /2022

Mr.Irfan Khatik
Project Guide

Dr. Kavita A. Khobragade
Head, Computer Science Department

Internal Examiner

External Examiner

ACKNOWLEDGEMENT

It gives us pleasure in presenting the project report on

'Content Portal For
Valuer's Association'

The satisfaction that accompanies that the successful completion of any task would be incomplete without the mention of people whose cooperation made it possible, whose constant guidance and encouragement all efforts with success.

We are grateful to our project Mentor ***Mrs. Swati Satpute and Mr.Irfan Khatik*** for the guidance,inspiration and constructive suggestions that helpful us in the preparation of this project.

A Special Thanks To Our **HOD Dr.KAVITA KHOBRAGADE** Ma'am and We also thank our ***Friends and Teachers*** who have helped in successful completion of this project.

With deep sense of gratitude we are thankful to ***Department Of Computer Science*** for providing us all necessary facilities and their constant encouragement and support.

Thank You…!!

Abhishek Sachin Dhondalkar.

Shivam Laxmikant Dandavate.

Saurabh Santish Deo.

INDEX

Sr. No	Table of Content	Page No
1	**Introduction**	
	1.1 Existing System	1
	1.2 Need of the System	1
	1.3 Overview of the Project	2
2	**Analysis**	
	2.1 Feasibility Study	
	2.1.1 Technical feasibility	3
	2.1.2 Economical Feasibility	3
	2.1.3 Operational feasibility	3
	2.2 Hardware and Software requirements	4
3	**Design**	
	3.1 Database Table design.	5
	3.2 Diagrams	7
	3.3 Alogorithm	9
	3.3 Input / Output Screens	10
4	**Testing**	
	4.1 Importance of testing	15
	4.2 Types of testing (testing which are performed for this project)	15
	4.3 Test cases	16
5	**Reports**	18
6	**Drawbacks and limitations**	19
7	**Future enhancement and conclusion**	19
8	**Bibliography**	19

1. Introduction

1.1 Existing System

- Valuers are the people who can help clients determine the value of a property they are looking to buy and what areas of their property need insurance.
- Valuer's need to manage each client's data and documents reg it is tedious job to manage all client's data also there is a possibility of loss of data.
- Existing system does not have a functionality where valuers can manage data efficiently and securely existing system does not have a portal or website where all user's data from different states comes together

Managing client data and data accessibility is the most important issue in this existing system.

1.2 Need of the System

- The portal which we have developed makes it easy for a valuer's to maintain, add, delete important users data and to it is also helpful to manage the IndexedII documents and storing data locally by using SQLite as it provides. Also there is a superuser named as admin which manages the whole system
- So, this system is very convenient for valuers. It saves the time of the valuer's and makes their work easy and comfortable.

1.3 Project Overview

Valuer's Association web portal is a website where anyone can search for property valuation documents. The documents are categorized under India, different states, cities under states followed by area. Also the user can view the documents and download this documents also valuer's can manage this users can keep the information and document downloaded count of user.

a) **VA members**

These are the users, who are actually members of Valuers association. They are the one who does valuation of a property, generate relevant documentation and upload in the system

- Can add 'n' no of index2 documents.
- Can download another 'n' no of documents.

b) **Random users /Guest Users**

Random users are end users who are looking for information on the portal. Does have account in the system. Can browse through area wise document list and download it. This users are managed by valuers.valuers kept the count of this us

c) **Administrators**

These users are part of administrative group having higher access right to manage software configuration. and they also manage all the valuer's and keeps the information of valuer's and all the random users.

Project Overview:

- **Login and registration:** This is for valuer's management. user first register by giving his name, email, username and password after successful registration user can login and identified as a valuer by using username and password and can use this portal.

- **Document upload & download:** valuer's can download and upload any no of IndexedII documents after successful login they can manage the count of documents uploaded by guest. user's document should be in PDF or image format.by using OCR (Optical Character Recognition) we are extracting required data from document.

- **Document Search:** we are providing a home page where guest user can search the document uploaded by valuers user can search document according to state, district, sub-district and if the document is present then it will be shown to user.

- **Admin Panel:** Admin is a superuser of this portal we are using default admin panel provided by Django for managing all the valuers and random user's data admin has the authority to add, update, delete the valuer's and user's information. we are using customized admin panel provided by Django

2. Analysis

2.1 Feasibility Study

2.1.1 Technical Feasibility

- The developed Portal is cost effective as technologies used are open source and freely available.
- The necessary hardware and software tools are available in the computer system and the software recommended supports application objectives. The technology we are using i.e. Django is free and open source.
- This web portal is responsive and user friendly.
- Languages Used are: Python (Django framework), Html, CSS, Bootstrap

2.1.2 Economical Feasibility

- To use this portal users are required to just search the document and download it. it's a simple task not much complexity involved in this process.
- The proposed portal minimizes the time and effort right from managing activities.
- We are providing simple GUI (Graphical user interface) in this application so even novice can easily use this portal. This portal does not involve much complexity it is simple and efficient.

2.1.3 Operational Feasibility

- As the proposed application is a user-friendly package with all the visual aids, the effort that goes into the educating and training the user is negligible. Therefore, resistance to the proposed application is NIL**.**

2.2 Hardware and Software Requirements

1. Hardware Requirements (for development)

- **Processor** **:**Dual core i3 or more
- **Memory** **:**4 GB RAM or more
- **Hard Disk** **:** 512GB

2. Software Requirements and technologies used

- **Operating System** **:** Windows 8/8.1/10/11 (64-bit)
- **IDE** **:** PyCharm Community Edition (2022.2.1)
- **Database** **:** SQLite (for local storage)
- **Python** **:** Version 3.10.7
- **Django** : Version 4.1.1
- **Html, CSS, Bootstrap** : For GUI

3. Design

3.1 Database Table Designing

Database used: SQLite

Table: Customuser

Table Fields

id	integer	"id" integer NOT NULL
password	varchar(128)	"password" varchar(128) NOT NULL
last_login	datetime	"last_login" datetime
is_superuser	bool	"is_superuser" bool NOT NULL
username	varchar(150)	"username" varchar(150) NOT NULL UNIQUE
first_name	varchar(150)	"first_name" varchar(150) NOT NULL
last_name	varchar(150)	"last_name" varchar(150) NOT NULL
is_staff	bool	"is_staff" bool NOT NULL
is_active	bool	"is_active" bool NOT NULL
date_joined	datetime	"date_joined" datetime NOT NULL
email	varchar(254)	"email" varchar(254) NOT NULL UNIQUE
status	varchar(100)	"status" varchar(100) NOT NULL
number_of_docs_...	integer	"number_of_docs_uploaded" integer NOT NULL
number_of_docs_...	integer	"number_of_docs_downloded" integer NOT NULL

Table Data

Table: users_customuser

Filter in any column

	id	password	last_login	is_superuser	username	first_name	last_name	is_staff	is_active	date_joined	email
	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter
1	1	pbkdf2_sha256$390000$8k1u...	2022-11-22 10:35:10.430999	0	test2	test2fname	test2lname	0	1	2022-11-22 04:42:37	atharvaadsul11@gmail.com
2	2	pbkdf2_sha256$390000$yZTsn...	2022-11-22 07:34:35.645556	1	OCR@111			1	1	2022-11-22 04:46:18.938547	athusiddeveloper@gmail.com
3	3	pbkdf2_sha256$390000$teHky...	2022-11-22 10:59:05.715437	0	test3	test2fname	test2lname	0	1	2022-11-22 10:36:16.764163	athuadsul7@gmail.com
4	4	pbkdf2_sha256$390000$pCwE...	NULL	0	siddharthlele	Siddharth	Lele	0	0	2022-11-23 05:42:26.715441	lele.siddha@gmail.com

Table: users_customuser

Filter in any column

	username	first_name	last_name	is_staff	is_active	date_joined	email	status	number_of_docs_uploaded	number_of_docs_downloded
	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter
1	test2	test2fname	test2lname	0	1	2022-11-22 04:42:37	atharvaadsul11@gmail.com	valuer	2	0
2	OCR@111			1	1	2022-11-22 04:46:18.938547	athusiddeveloper@gmail.com	valuer	0	0
3	test3	test2fname	test2lname	0	1	2022-11-22 10:36:16.764163	athuadsul7@gmail.com	valuer	4	0
4	siddharthlele	Siddharth	Lele	0	0	2022-11-23 05:42:26.715441	lele.siddha@gmail.com	valuer	0	0

Table: indexedIIdocument

Table Fields

Doc_ID	char(32)	"Doc_ID" char(32) NOT NULL
fileIn	varchar(200)	"fileIn" varchar(200) NOT NULL
serialNo	varchar(50)	"serialNo" varchar(50) NOT NULL
description	varchar(500)	"description" varchar(500) NOT NULL
vilagename	varchar(200)	"vilagename" varchar(200) NOT NULL
subdistrict	varchar(200)	"subdistrict" varchar(200) NOT NULL
district	varchar(200)	"district" varchar(200) NOT NULL
state	varchar(200)	"state" varchar(200) NOT NULL
language	varchar(100)	"language" varchar(100) NOT NULL
added_by_id	bigint	"added_by_id" bigint NOT NULL

Table Data

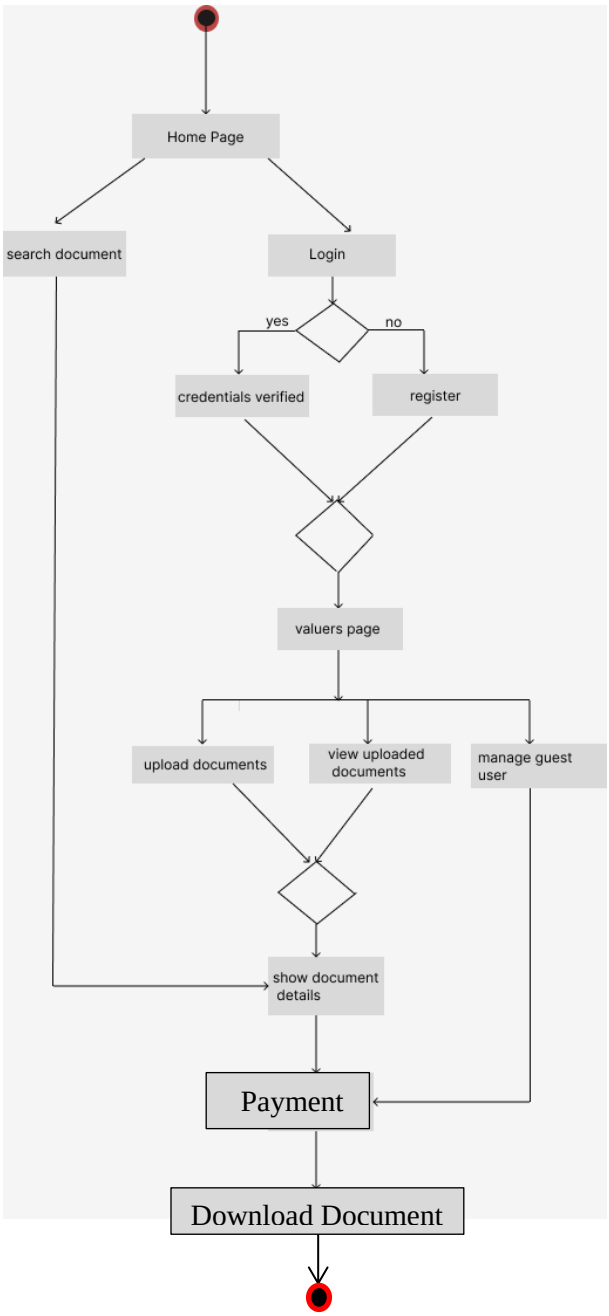
Table: indexIIdocument_indexiidoc

Filter in any column

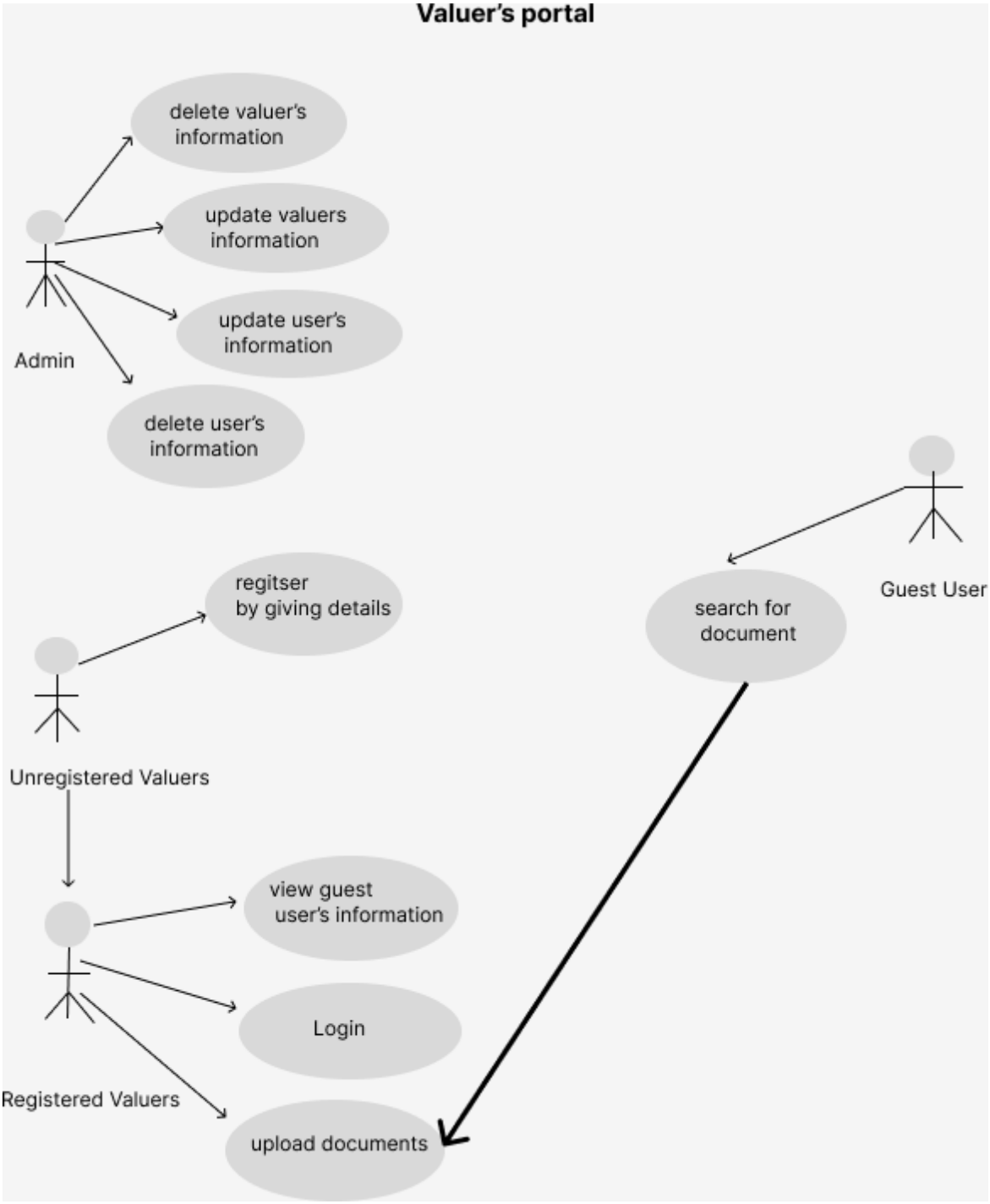
	Doc_ID	fileIn	serialNo	description	vilagename	subdistrict	district	state	language	added_by_id
	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter	Filter
1	36c69901f17745d8bfd1d090d9...	/media/...	5879/2022	1) name of municipality:pune ...	bopodi	haveli	pune	maharashtra	('English', 'eng')	1
2	b8e37cbe7e554c7c932ec9dc4e...	/media/document2.pdf	14695/2022	1) name of municipality: pune ...	bopodi	haveli	pune	maharashtra	('English', 'eng')	3
3	fdff1f197c324f6186feeead2fb9...	/media/document5.pdf	105/2022	1) name of municipality: nashi...	anjaneri	trambakeshwar	nashik	maharashtra	('English', 'eng')	3
4	ea9122dfcc8a458f9af9edd5af1...	/media/document7.pdf	1507/2022	1) name of municipality: nagp...	akola	umred	nagpur	maharashtra	('English', 'eng')	3

3.2 Diagrams

1. Flowchart



2. Use case Diagram



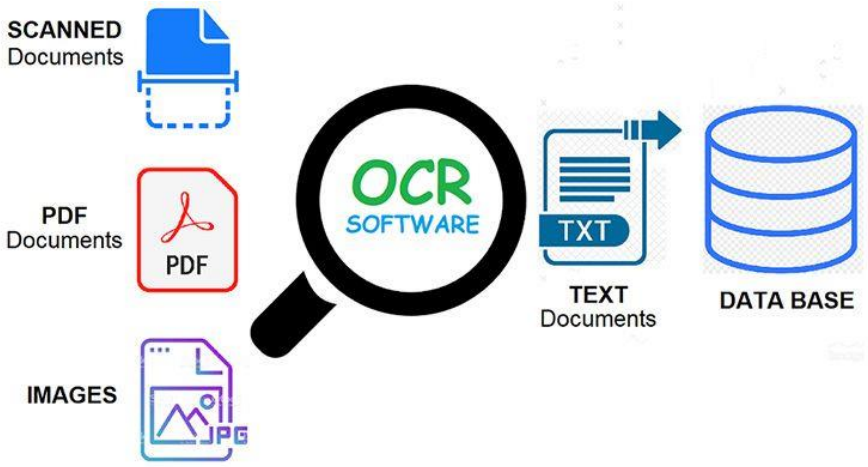
3.3 Alogorithm

Optical Character Recognition (OCR)

OCR systems transform a two-dimensional image of text, that could contain machine printed or handwritten text from its image representation into machine-readable text. OCR as a process generally consists of several sub-processes to perform as accurately as possible.

The subprocesses are:

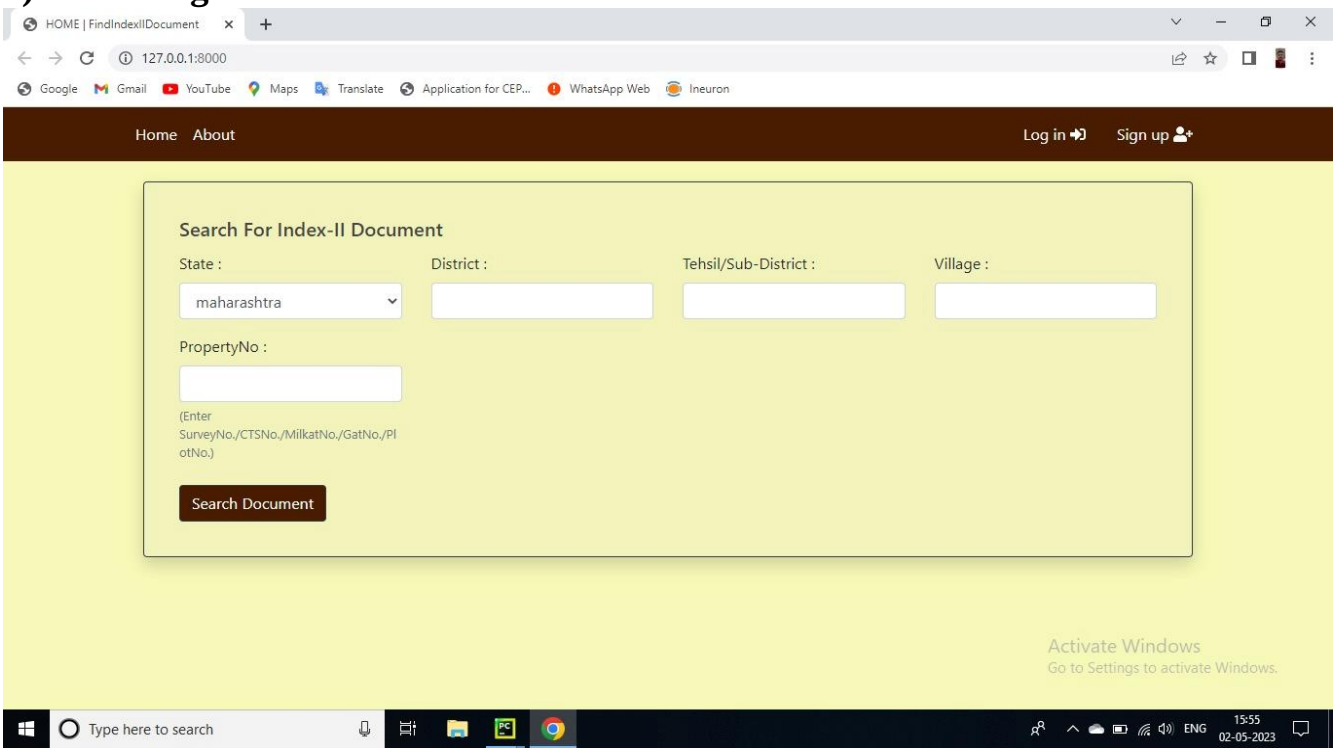
1. Preprocessing of the Image
2. Text Localization
3. Character Segmentation
4. Character Recognition



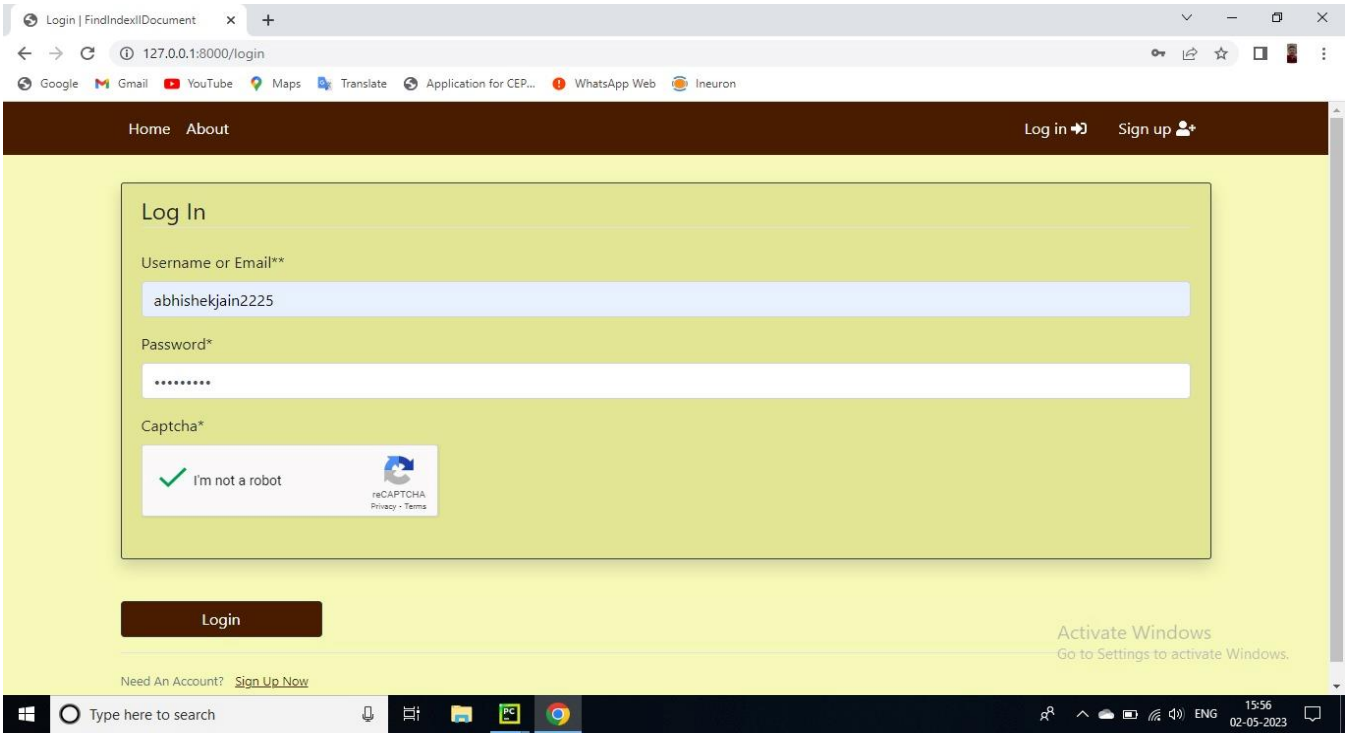
- We are using OCR in this portal to extracting a data from a uploading document and for getting the required fields from that document.
- For this we are using pytessarct which is optical character recognition tool for python. It can read and recognize text in images and is commonly used in python OCR image to text use cases.
- We are using Table OCR which is used to extract data which contains in a table format first valuers upload the IndexedII document then the OCR algorithms gets applied on this document by using table OCR. we can get data in the table manner by using table OCR.

3.1 Input Output Screens

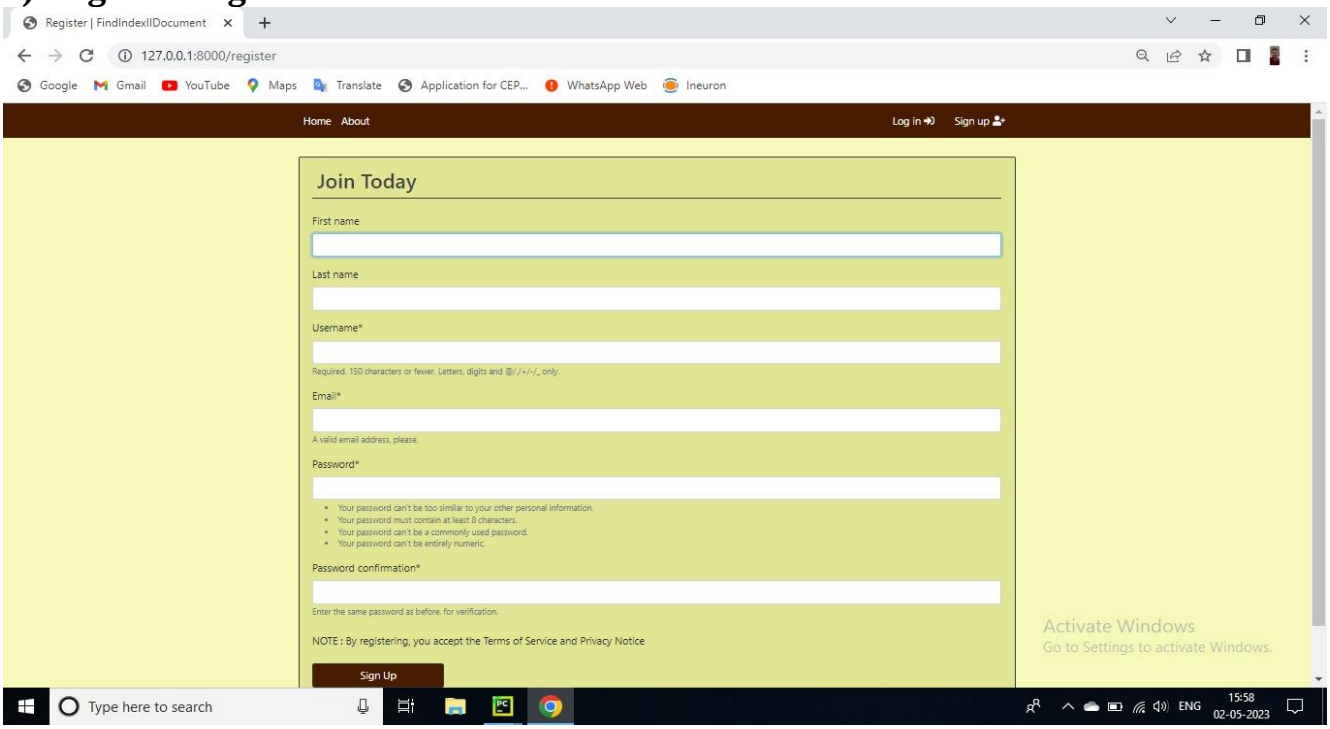
1) Home Page



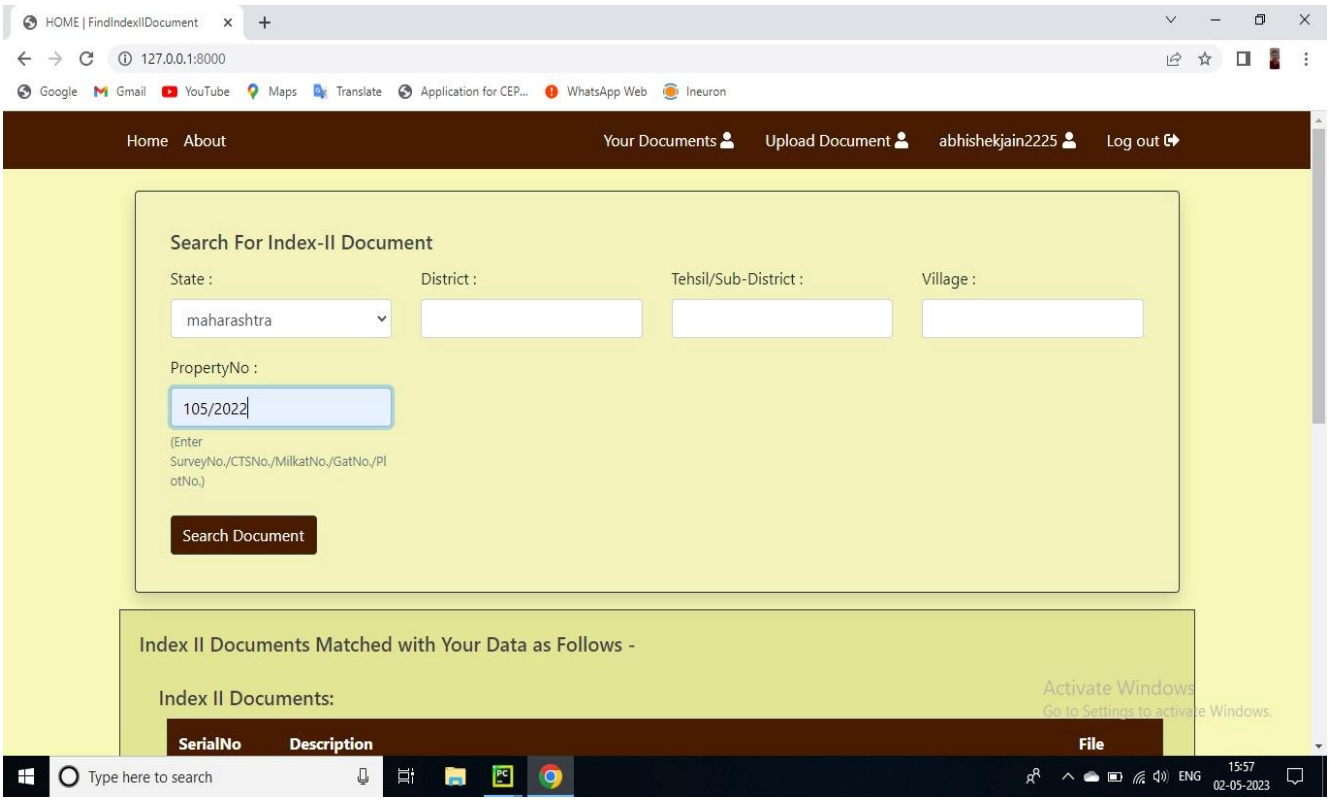
2) Login Page

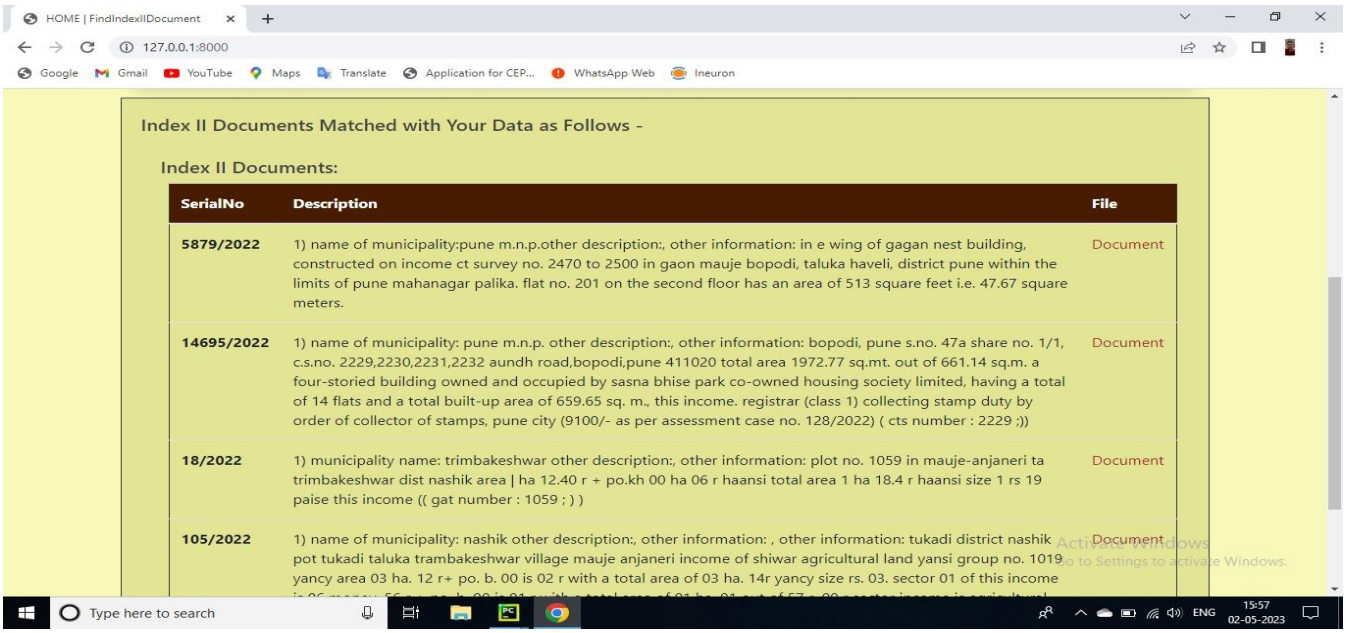


3) Register Page

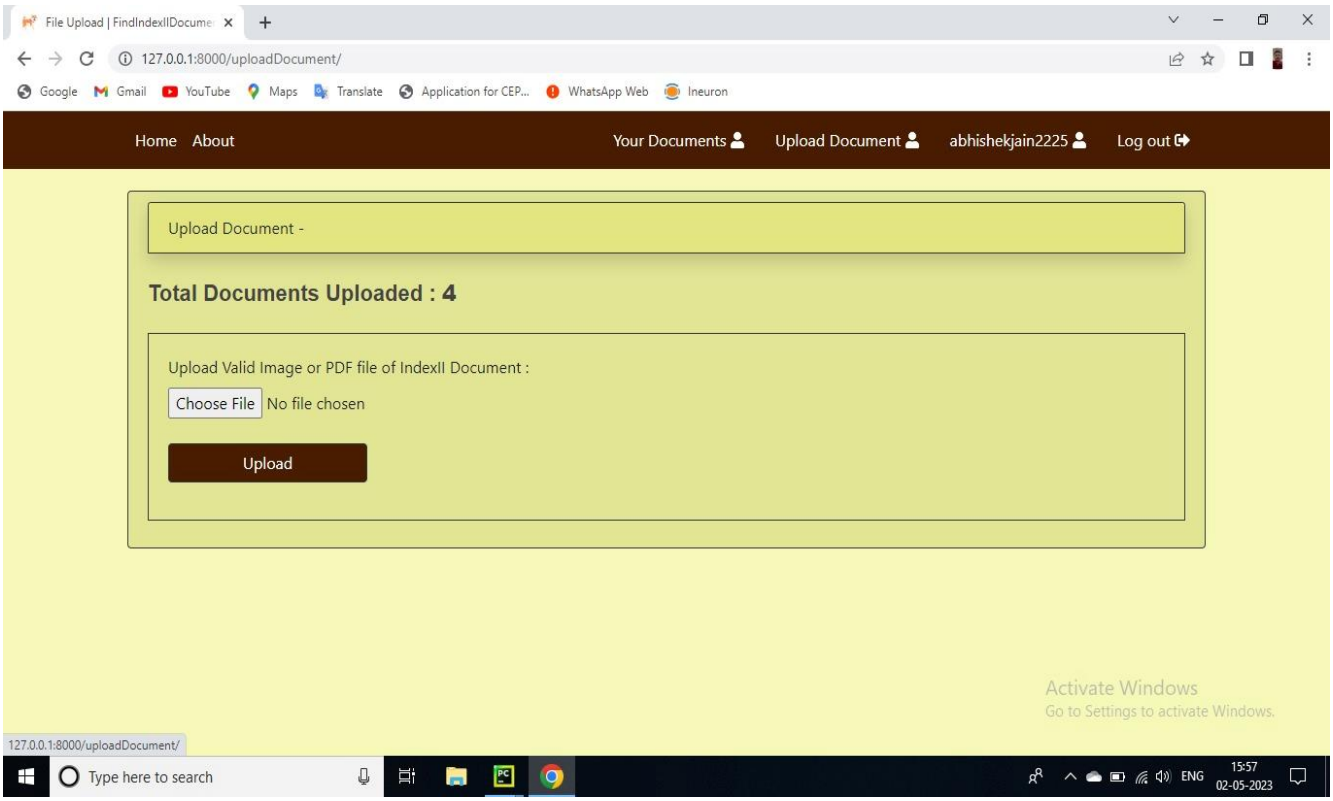


4) Search Document

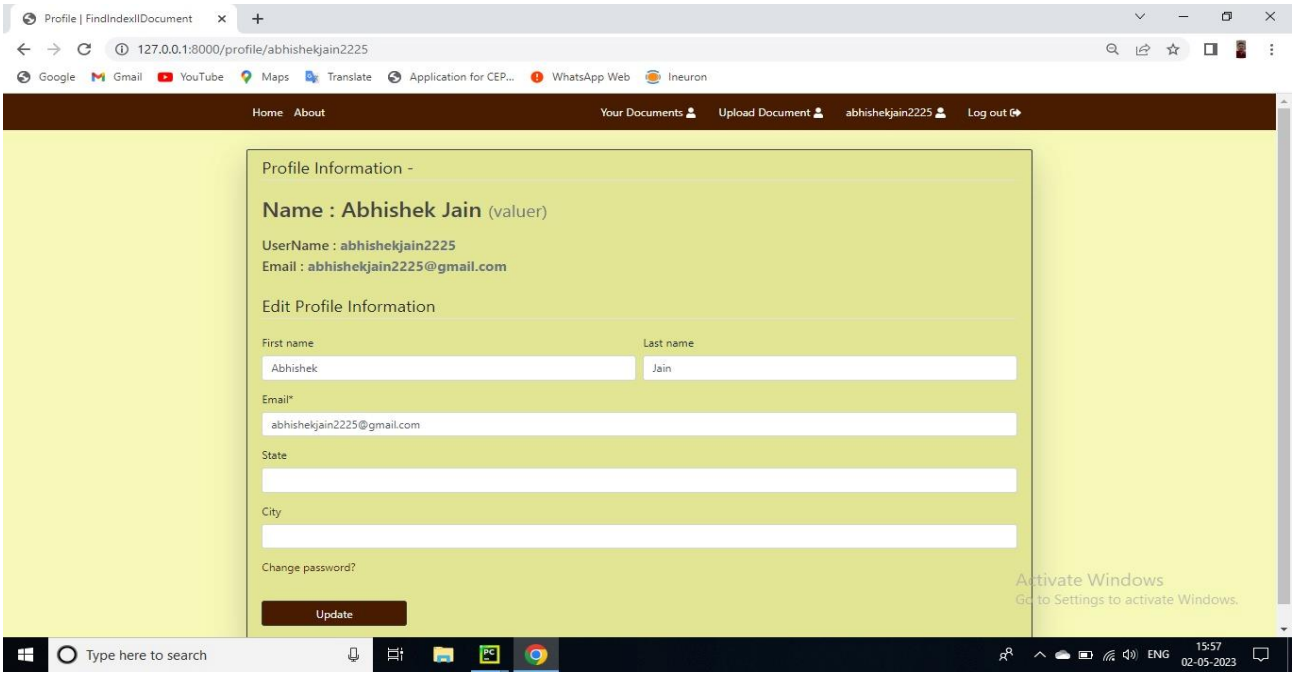




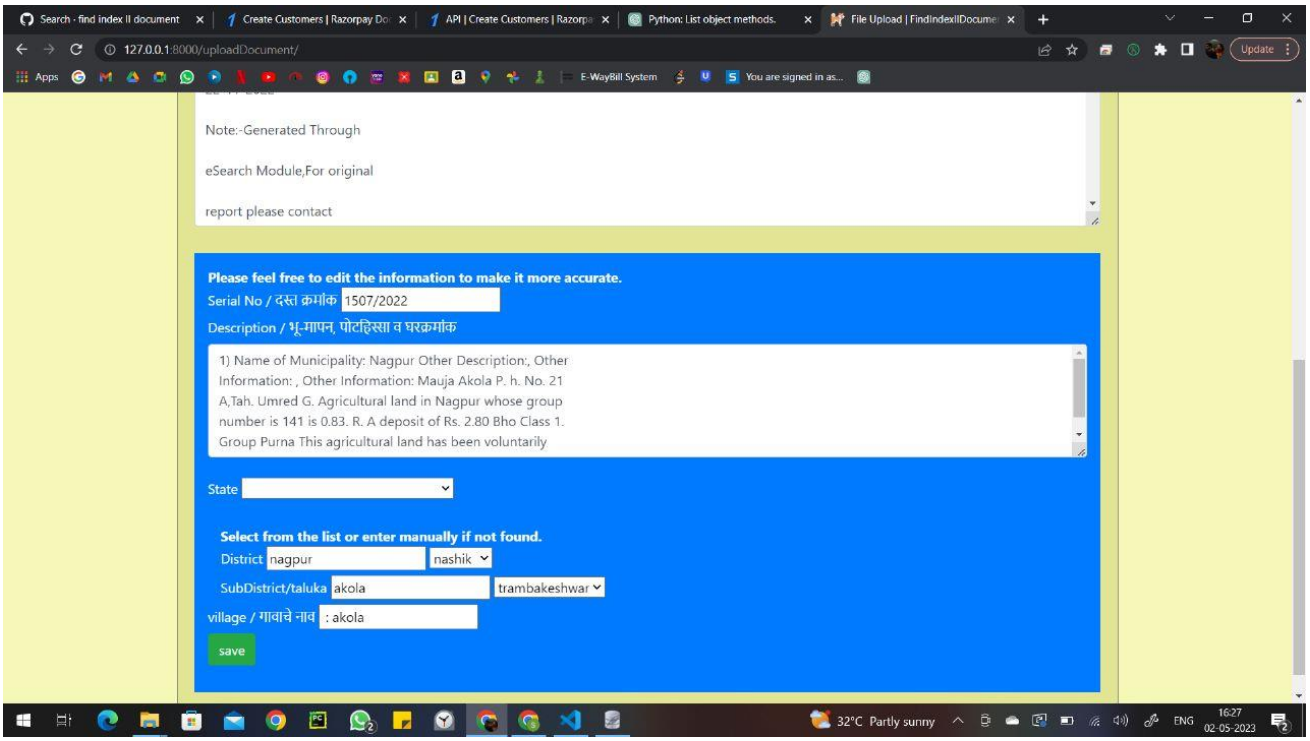
5) Document Upload Page



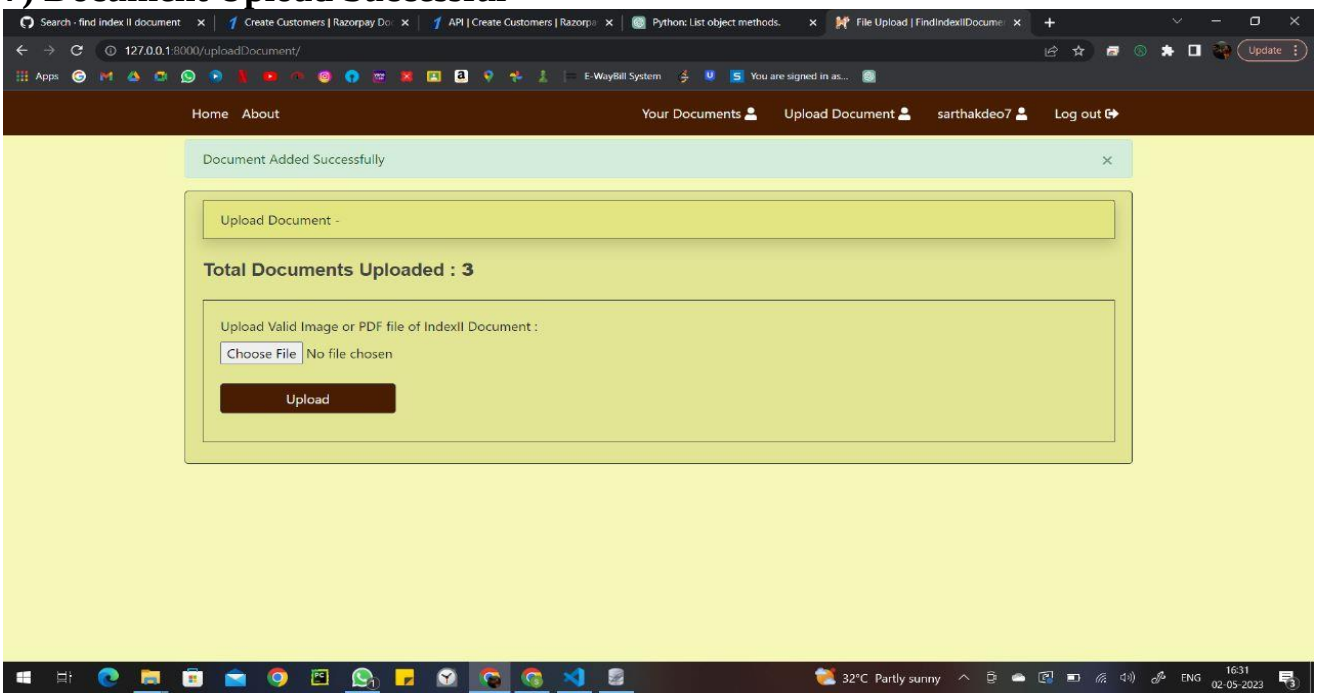
6) Profile Display –



6) Document Display



7) Document Upload Successful



4.1 Importance of testing

In projects, testing is a way to make sure that the requirements under a project are fulfilled accurately and it is risk free from manual errors, system environment issues, coding issues, crashes, performance, security etc. Testing also helps to make our product better by knowing and understanding the risks associated with it. Risks can be related to User experience, Usability, Functionality etc. Some of the factors that state the importance of testing:

- It produces a defect-free product/software.
- It ensures that the end-user is satisfied. It ensures all the requirements are met.
- It ensures the proper working of all the functionalities of an application.
- It makes sure that the system is reliable.
- It ensures that the software/product works as expected.
- It ensures security and safety. It ensures a good performance of the system.
- It improves the quality of the product. The risks associated with the product/software are reduced and in turn the loss is also reduced.

4.2 Types of testing

Unit Testing

Unit testing operates on individual modules in which the smallest testable parts are run independently and perform the required test of the project. It was carried to validate that each unit of the software code performs as expected. Unit tests isolate a section of code and verify its corrections.

Validation Testing

It gives the confirmation that the product meets its intended use and the needs of its users. It was carried outto confirm that all functional and performance specifications were satisfied or not by presenting the result after the test is carried out

.

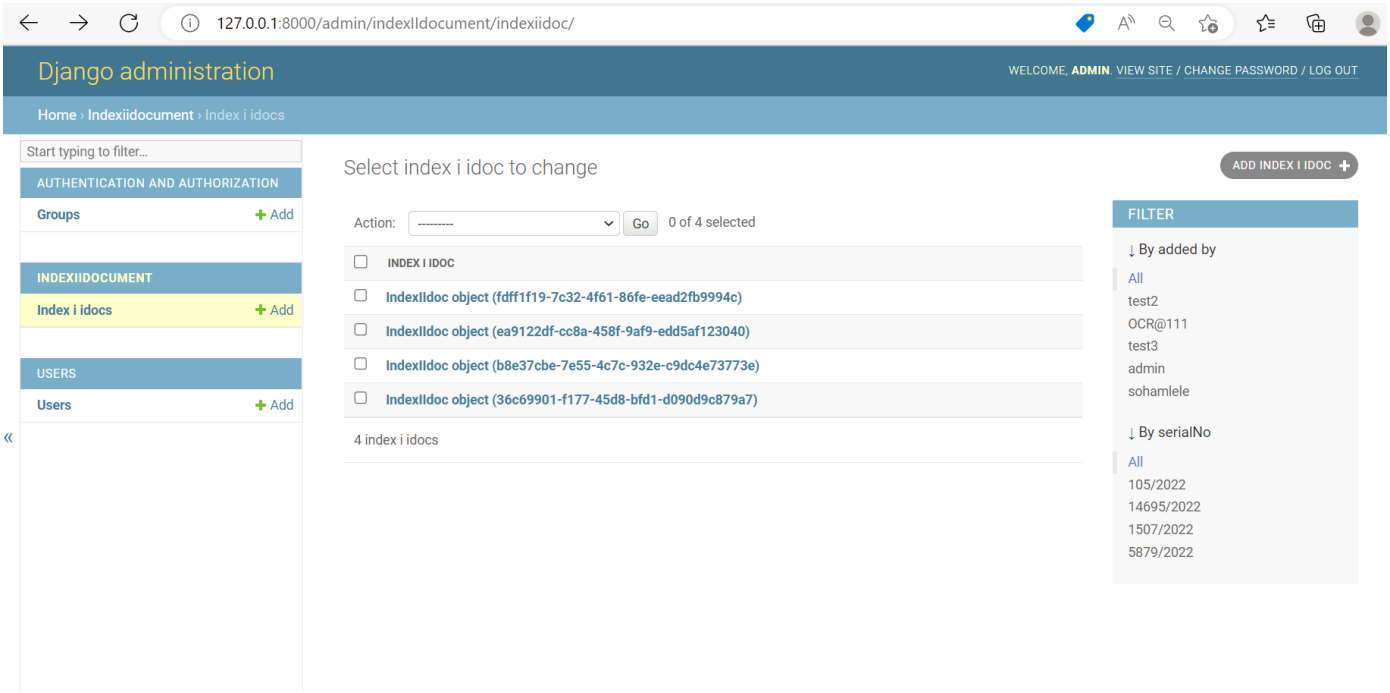
4.3 Test Cases

Test Case No	Test Case Suite	Test Case	Test Case Input	Expected Result	Actual Results	Pass/Fail
TC1	Register	Authenticate user	Name, Email, Password, Username	After successful registration and login user should use	As expected	Pass
TC2	Login	Login With valid data	Username-siddharthlele password-siddharth@123	User should login and directed to Document search page	As expected	Pass
		Login With invalid data	Username-siddharthlele password-sid@123	User should not login	As expected	Pass
TC3	Logout	Click on Logout button	User clicked log out button	User successfully logged out & redirected to login page successfully	As expected	Pass
TC4	Search document	Searched document is already there in database	User clicked “search document” button.	User successfully view the searched document	As expected	Pass
	Search document	Searched document is not there in database	User clicked “search document” button	User cannot view the searched document	As expected	Pass

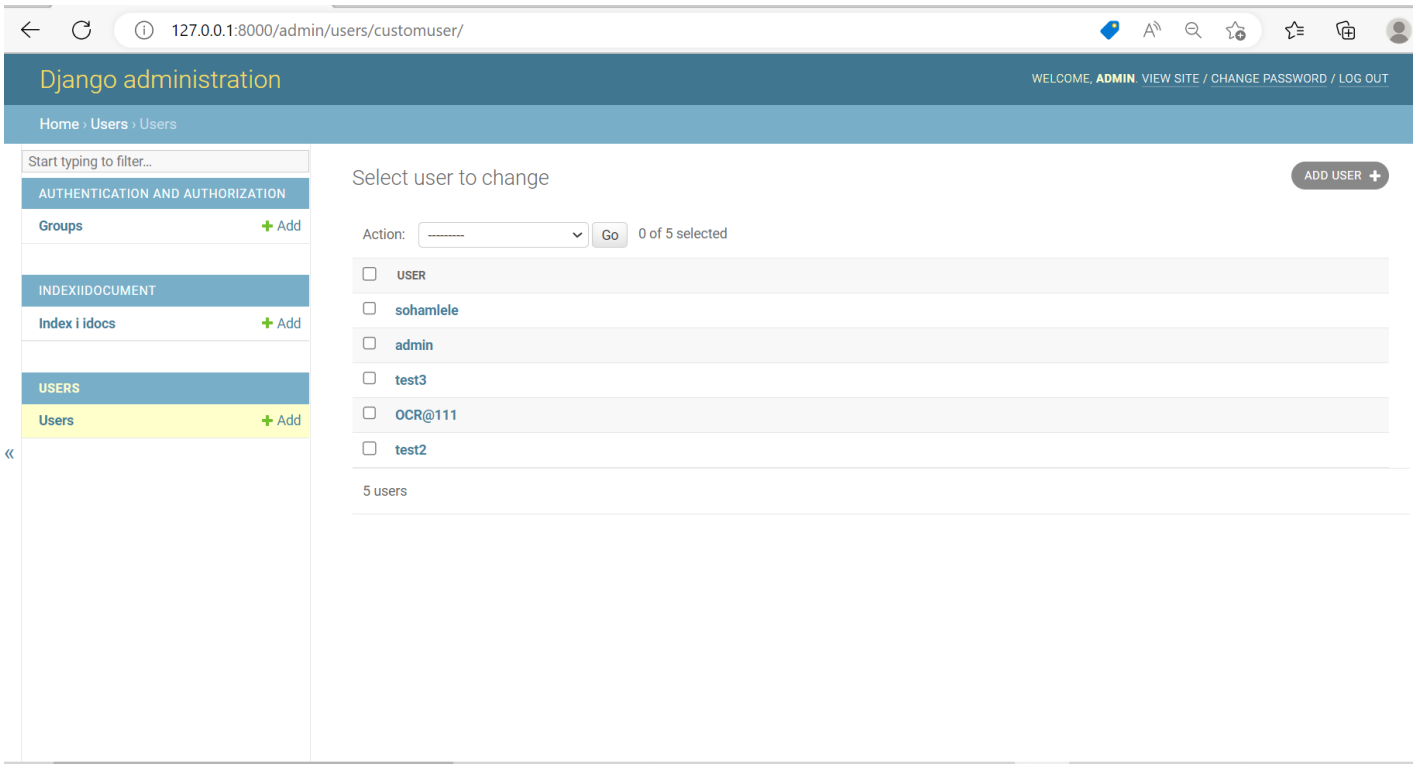
TC5	Document view	Click On “view document option”	Valuer clicked on “view Document” button.	Valuer successfully viewed the document	As expected	Pass
TC6	Document Upload	Click On “upload document button”	Valuer clicked on “Upload Document” button	Valuer’s successfully upload the document	As expected	Pass
	Document Upload	Click On “upload document button”	Valuer clicked on “Upload Document” button and document is already exist in database	Valuer’s cannot upload the document that is already exist	As expected	Pass
TC7	Valuer and user management by admin	Admin clicked on user/valuer’s option in admin panel	Admin clicked on Valuer’s option	Valuer’s gets added/deleted successfully	As expected	Pass
	Valuer and user management by admin	Admin clicked on user/valuer’s option in admin panel	Admin clicked on User’s option	User’s get added/deleted successfully	As expected	Pass

5. Reports

Document details in admin panel



User's entries in admin panel



6. Drawbacks and limitations

- Currently this portal is not fully compatible more functionalities are yet to be implement this portal
- Also this portal is not in customized form it has simple UI
- The document OCR is only applicable for English language documents we cannot extract data from regional language IndexedII documents. so it not useful for regional documents.

7. Future enhancement and conclusion

7.1 Future Enhancement

- Integration of payment gateway which is required when guest user download the document.
- Increase accuracy and optimize OCR(Optical Character Recognition) using some algorithms.

7.2 Conclusion

- Our portal can is a best for valuer's association. valuer's can manage different user's amongst different states. with the help of this portal user's can get the required document easily without doing much efforts. Also Data is kept secured and cannot share without permission.

8. Bibliography

- **For Django -**
  https://pylessons.com/django-website
  https://www.youtube.com/watch?v=JxzZxdht-XY

- **For OCR-**
  https://pypi.org/project/table-ocr/
  https://pypi.org/project/pytesseract/
  https://github.com/tesseract-ocr/tesseract

For GUI(Bootstrap) -
https://getbootstrap.com
https://www.w3schools.com/bootstrap/

Thank You...!!