

MIT ADTU Research Portal

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Place of Research Work

DEPARTMENT OF INFORMATION TECHNOLOGY

MITSOE

MITADT

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Safir Motiwala
Vinayak Sutar
Ram Suthar
TY IT

Contents

Abstract	i
1 INTRODUCTION	1
1.0.1 Problem Statement	1
1.0.2 Objectives	2
1.0.3 Features	2
1.0.4 Organization of Report	2
2 SYSTEM DESIGN	3
2.0.1 Architecture or Block Diagram	4
2.0.2 Data Flow Diagram	5
2.0.3 Class Diagram	6
2.0.4 Use Case Diagram	7
3 SYSTEM IMPLEMENTATION	8
3.0.1 Technology	9
3.0.2 Results and Analysis	10
4 APPLICATIONS	27
4.0.1 Applications	28
5 CONCLUSION AND FUTURE SCOPE	29
5.0.1 Conclusion	30
5.0.2 Future Scope	30
5.0.3 References	31

ABSTRACT

This project consists of a Web Application intended to make a Portal for PhD of MIT ADT University comprising of PhD programs, curriculum and administrative features. This System will be designed to provide an interactive platform for the Research Scholars, research Supervisors, Research Co- Supervisors and reduce a lot of time, efforts and paperwork. This will also provide a forum for doubt solving. More specifically, this system is designed to allow a user to manage and communicate with other users and publish/assess articles. This Software will facilitate submissions by making them online and avoiding the manual paperwork submission. The system also contains a relational database containing a list of Research Scholars, Research Supervisors and Research Co-Supervisors, and Articles/Publishingss.

Chapter 1

INTRODUCTION

MIT Art Design and Technology University (MIT ADT University) is a place where creativity and innovation coexist. The PhD course in MIT ADT University is one amongst the enhanced courses in MIT. The Work Flow in this course is totally based on paper work and is time consuming. The Aim of this project is to bring Digital Transformation in this PhD Course and seize redundant free management, digital process control and optimization, collecting and distributing knowledge and information, and optimal coordination with existing systems for efficient process management. This project will provide all the users a broad array of information on a specific domain, arranged in a way that is most convenient to access. It will increase communication and knowledge sharing. It will create a generalized portal for all domains. The project aims to provide a rich space to share and search information.

1.0.1 Problem Statement

To develop a System that will provide an interactive platform for the Research Scholars, research Supervisors, Research Co-Supervisors and reduce a lot of time, efforts and paperwork, and also provide a forum for doubt solving. More specifically, to allow a user to manage and communicate with other users and publish/assess articles. To facilitate submissions by making them online and avoiding the manual paperwork submission. The system also contains a relational database containing a list of Research Scholars, Research Supervisors and Research Co-Supervisors, and Articles/Publishing's.

1.0.2 Objectives

The main objectives behind this project are listed below:

- i. To create a user-friendly platform for Research Scholars, Research Supervisors, research Co-Supervisors
- ii. To increase the speed and efficiency.
- iii. To reduce paperwork and store/manage data/records efficiently.
- iv. To make communication and progress tracking easier.

1.0.3 Features

The main features of this project are listed below:

- i. Registration and Login with live validation and security
- ii. An interactive forum for the researchers to communicate
- iii. Submissions and Approvals of any resource.
- iv. E-Library to access books, papers, videos, audios, links
- v. PhD Progress Status to keep a record of milestones completed
- vi. User profile to display personal and professional details
- vii. Admin Panel to approve, block, unblock, view users

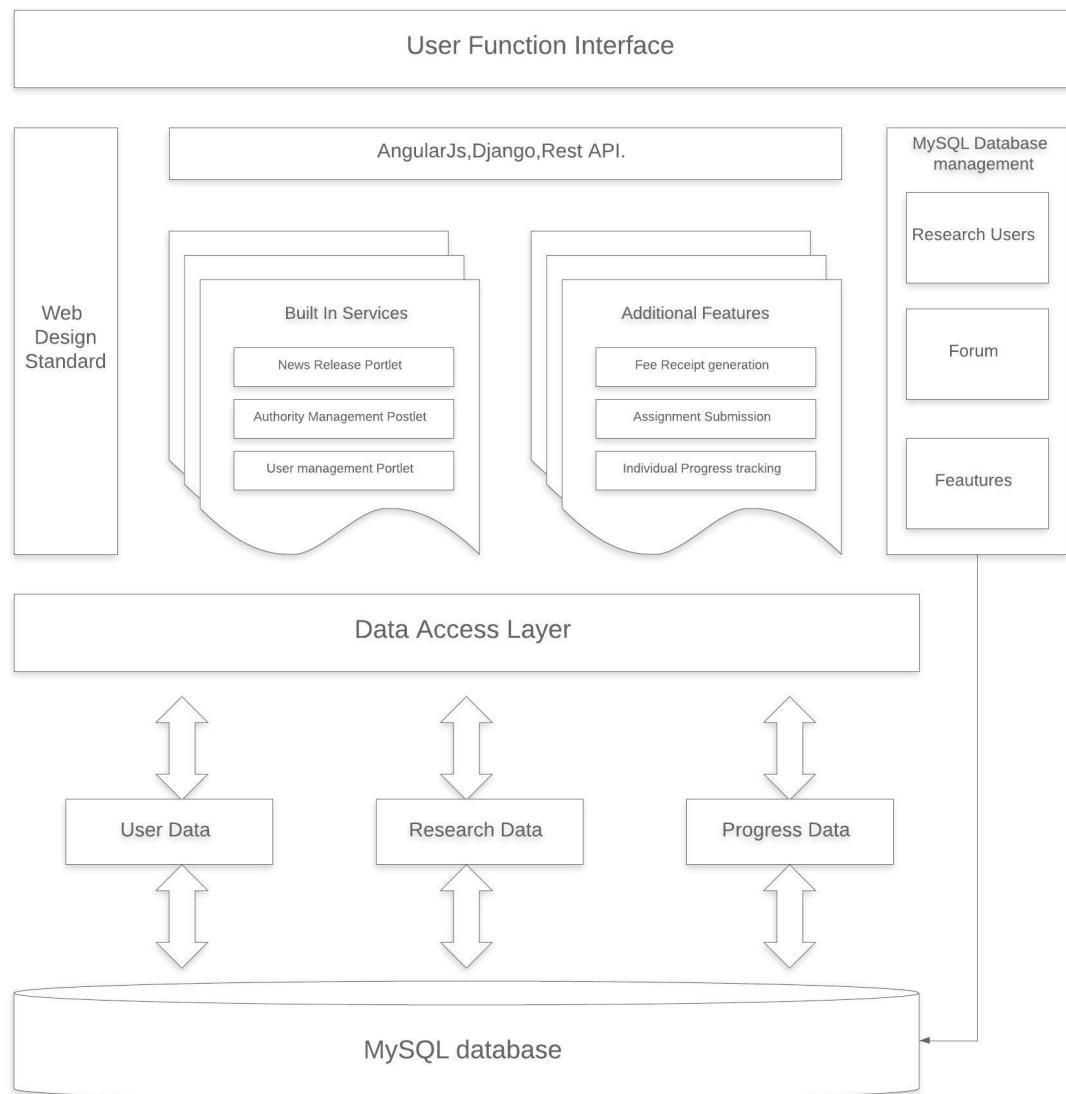
1.0.4 Organization of Report

In the chapter 1, we introduced the problem the system is expected to solve and explained the proposed system along with problem statement, objectives and features. Chapter 2 provides project system design. Chapter 3 consists of the technology and system implementation results and analysis. Chapter 4 comprises of system application. In the chapter 5, conclusion and future scope is provided.

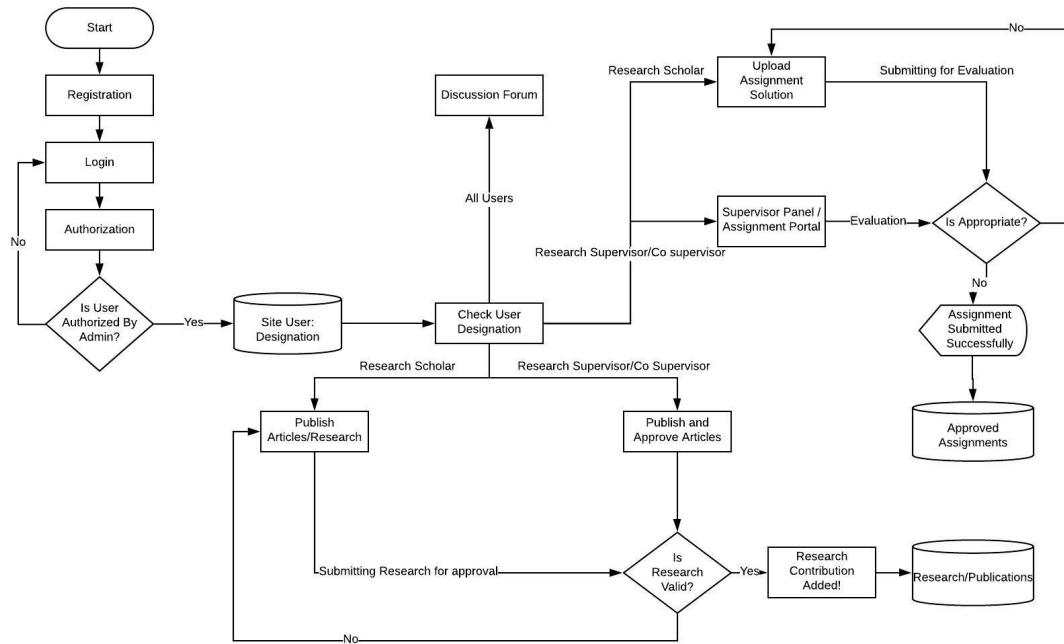
Chapter 2

SYSTEM DESIGN

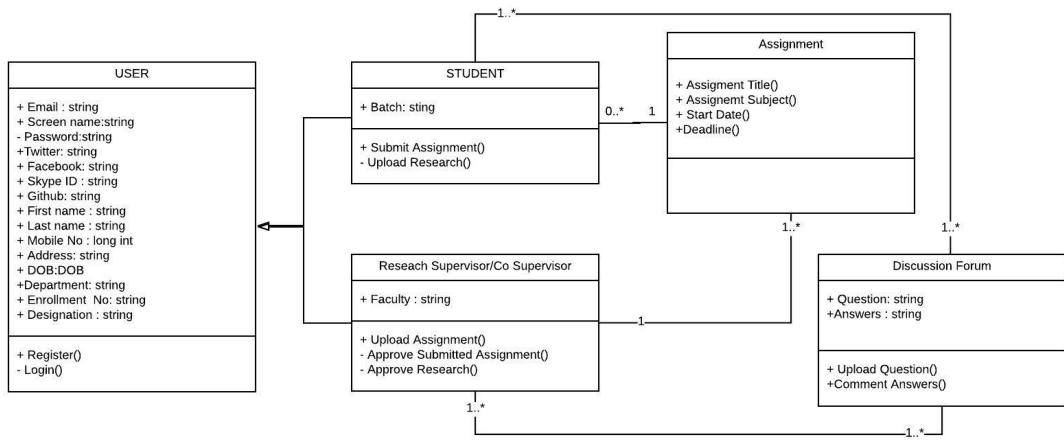
2.0.1 Architecture or Block Diagram



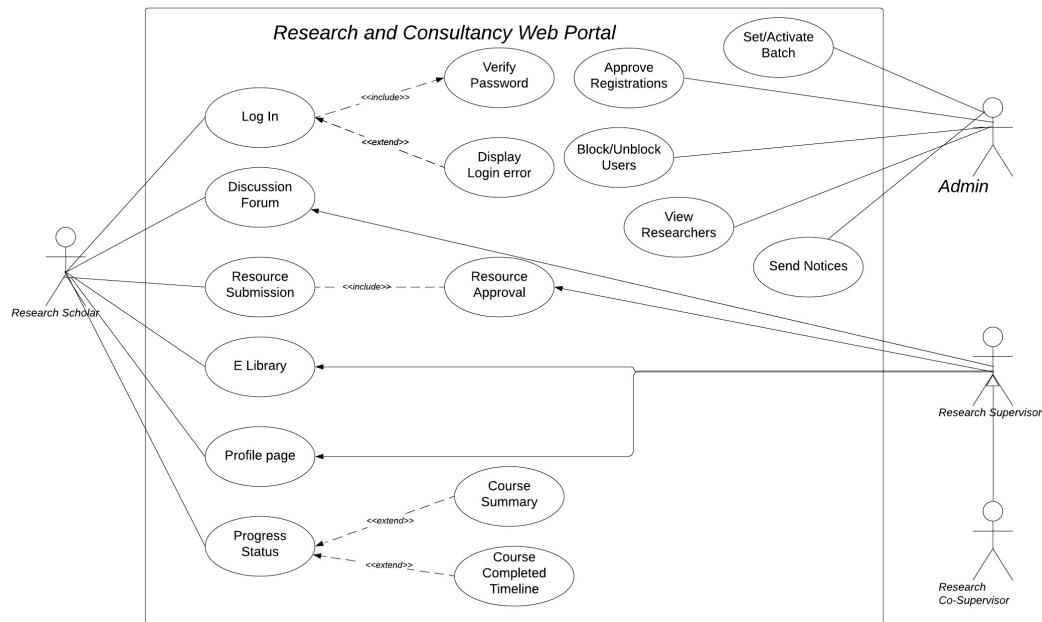
2.0.2 Data Flow Diagram



2.0.3 Class Diagram



2.0.4 Use Case Diagram



Chapter 3

SYSTEM IMPLEMENTATION

3.0.1 Technology

The Technology Stack used in this project is listed below :

- i. **Platform** : Windows, Ubuntu, Mobile
- ii. **Front End** : HTML5, CSS3, Bootstrap4, JavaScript, JQuery, Ajax, AngularJs
- iii. **Back End** : Flask, REST API
- iv. **Database** : MongoDB

3.0.2 Results and Analysis

Register Page :

This page is used to register Research Scholars, Research Supervisors and Research Co-Supervisors. The form has a live field validation and is completely secured towards any vulnerability attacks like Cross Site Scripting.

The screenshot shows a web browser window titled "MIT R&C" with the URL "127.0.0.1:5000/signup". The page is titled "Register" and includes a note "Batch : July 2020". It features a grid of input fields:

- Row 1: First Name (with icon), Twitter Profile Link (with icon)
- Row 2: Last Name (with icon), Facebook Profile Link (with icon)
- Row 3: Mobile No (with icon), Skype Profile Link (with icon)
- Row 4: Address (with icon), Repository Profile Link (with icon)
- Row 5: Email Id (with icon), Selected Department (with icon)
- Row 6: dd-mm-yyyy (with icon), Select Supervisor (with icon)
- Row 7: Gender (with icon), Select Co-Supervisor (with icon)
- Row 8: Nationality (with icon), Upload Profile Pic (with icon) and Choose File button

Below the fields are two buttons: "SIGN UP" and "SIGN IN". A message "Account already exists?" is displayed above the "SIGN IN" button. The browser taskbar at the bottom shows various pinned icons and the system status bar indicates the time as 21:14 and date as 11-07-2020.

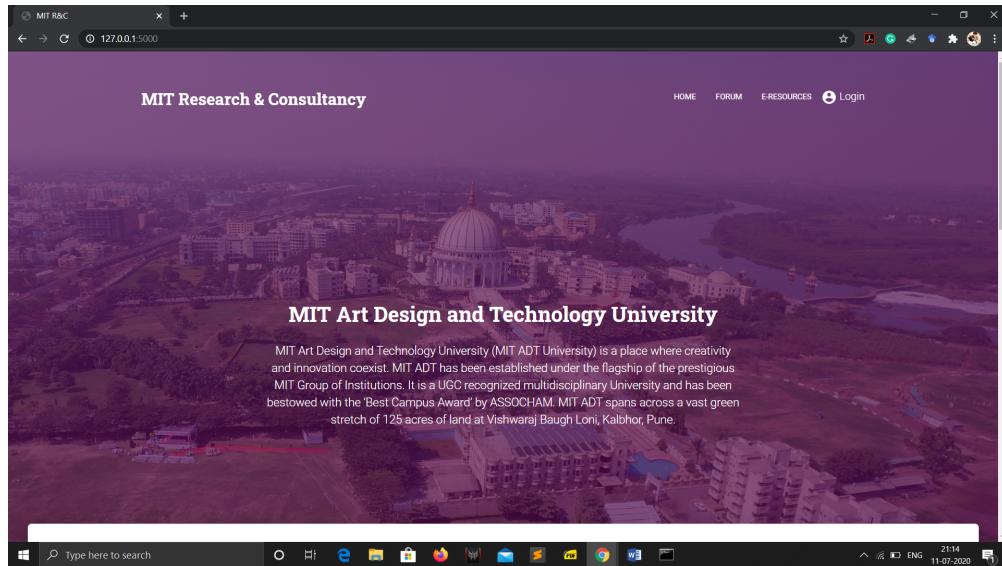
Login Page :

Once the admin approves the registration, and the user receives the email for password reset, He/She can then login from here.

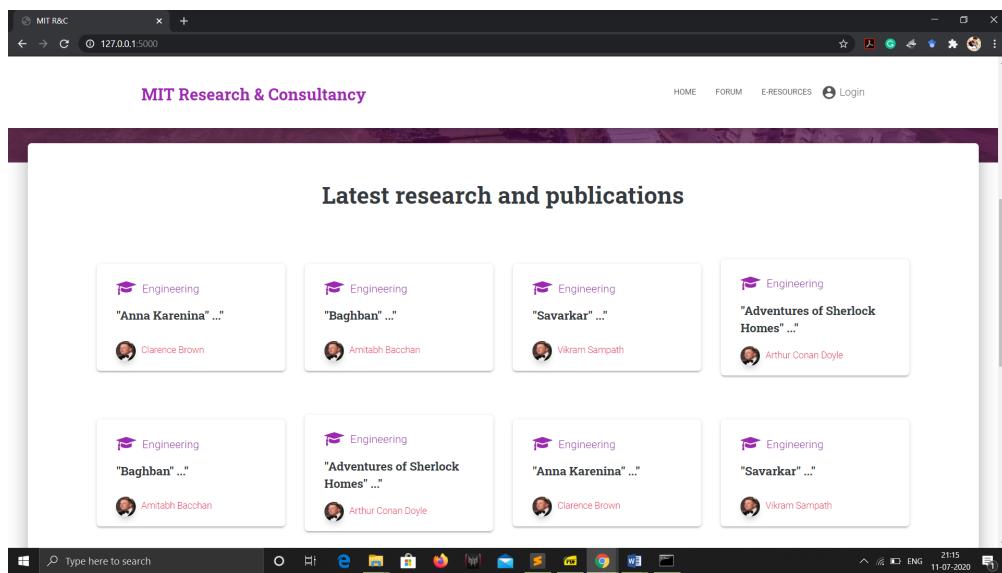
The screenshot shows a web browser window titled "MIT R&C" with the URL "127.0.0.1:5000". The main page header includes "MIT Research & Consultancy", "HOME", "FORUM", "E-RESOURCES", and a "Login" button. A purple modal window titled "Log in" is centered over the page. The modal contains fields for "Email..." and "Password...", a "LOGIN" button, and a "CREATE NEW USER" link. The background of the main page features a photograph of a university campus with text overlays: "MIT Art D", "MIT Art Design and Technology", "and innovation coexist", "MIT Group of Institutions", "bestowed with the 'Best...', "stretch of...". The bottom of the page displays a section titled "Latest research and publications". The browser taskbar at the bottom shows various pinned icons and the system status bar indicates the time as 21:14 and date as 11-07-2020.

Home Page head :

The homepage of a Research Scholar with tabs for forum, Progress page, e-resources, and view members. The Supervisors have an additional tab called as Supervisor Panel.

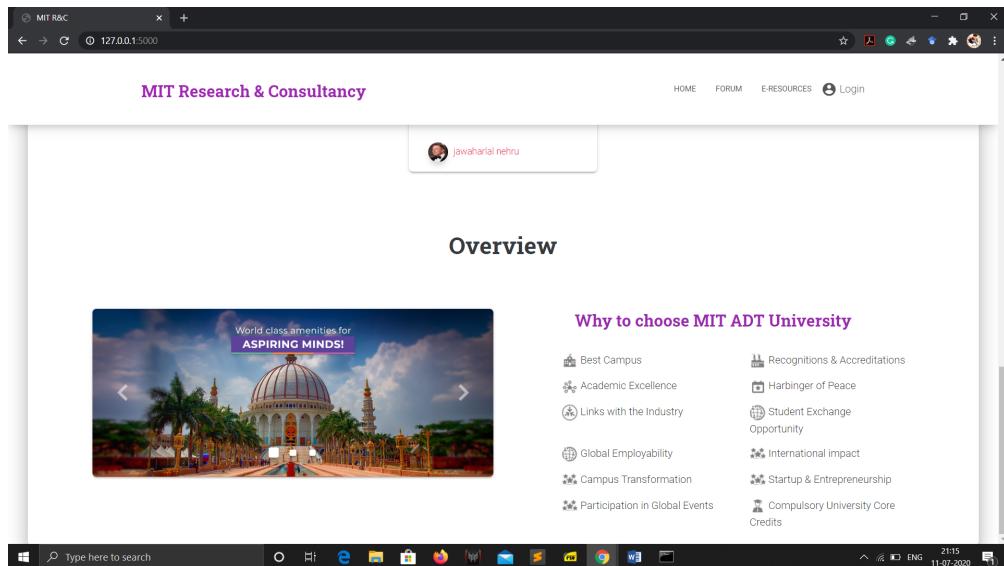
**Home Page center :**

In this section of the homepage, the recent publications will be displayed.



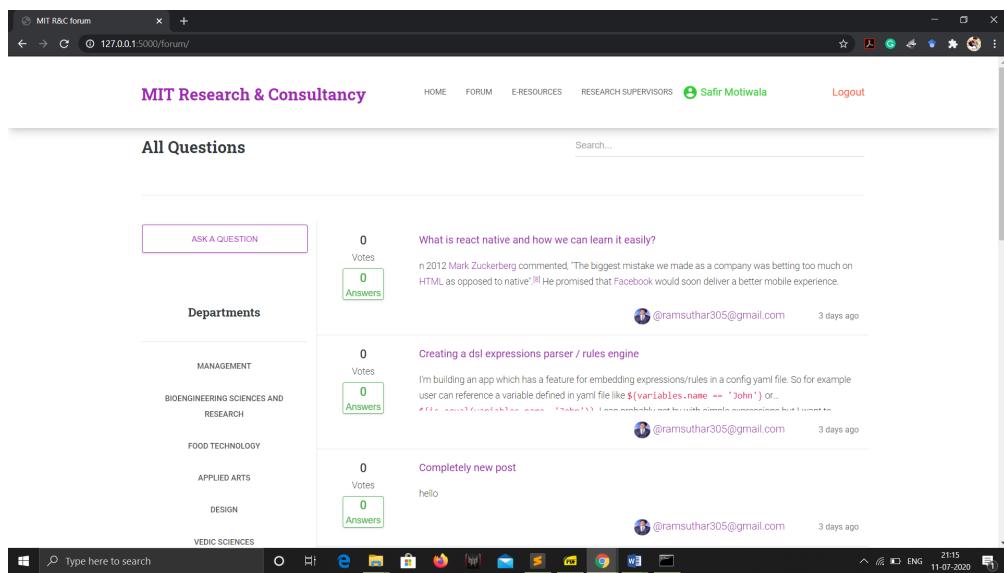
Home Page bottom :

This sections will have a carousal that will slideshow the pictures from the gallery, and will also consists of links to the forum and e-library.



Forum :

This interactive forum will help the Researchers communicate with each other, announce as well as solve doubts.



All Batch Members :

This page displays all the members of that batch and provides various options to communicate with that individual.

The screenshot shows a web application interface titled "MIT Research & Consultancy". The top navigation bar includes links for HOME, FORUM, E-RESOURCES, RESEARCH SUPERVISORS, a user profile for "Safir Motiwala", and LOGOUT. On the left, there's a sidebar titled "Categories" with a list of fields: ENGINEERING (selected), BIO-ENGINEERING, DESIGN, FOOD TECHNOLOGY, APPLIED ARTS, MANAGEMENT, and VEDIC. The main content area displays a grid of three profiles, each featuring a photo of a man in a red plaid shirt, the title "CEO / CO-FOUNDER", and icons for Twitter, Facebook, and Google+. At the bottom of the screen, the Windows taskbar is visible with various pinned icons and the system tray showing the date and time.

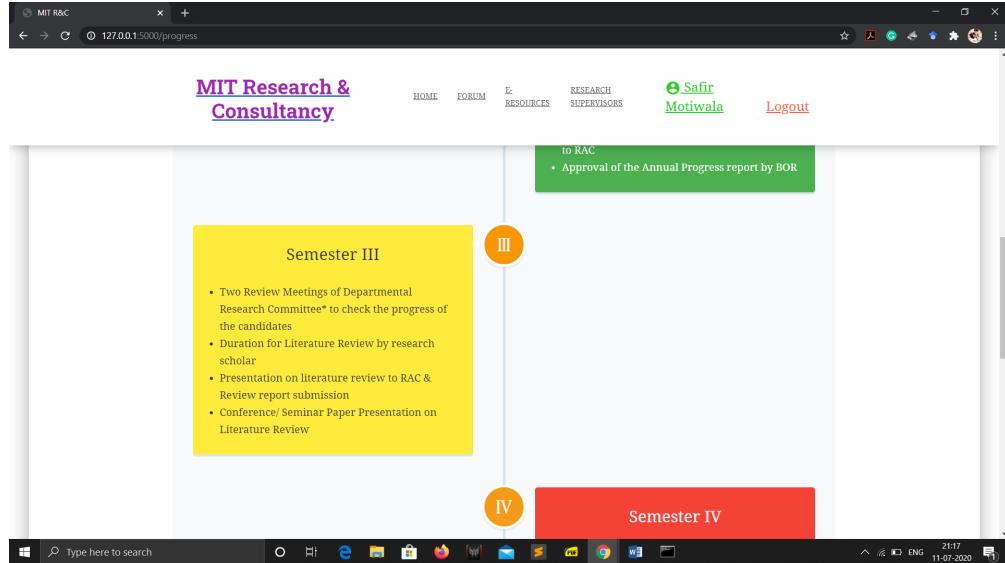
E-Resources :

This page consists of books, audios, videos, links and other resources.

The screenshot shows a web application interface titled "MIT Research & Consultancy". The top navigation bar includes links for HOME, FORUM, E-RESOURCES, RESEARCH SUPERVISORS, a user profile for "Safir Motiwala", and LOGOUT. The main content area has a search bar labeled "Search...". On the left, there's a sidebar titled "Resource Type" with categories: BOOK, PAPER (selected), JOURNAL, VIDEO, and LINK. The main content area lists publications under the "PRODUCT" category, each with a thumbnail, title, author, and download links. The publications listed are "Anna Karenina" by Clarence Brown, "Baghban" by Amitabh Bachchan, "Savarkar" by Vikram Sampath, and "Adventures of Sherlock Homes". The bottom of the screen shows the Windows taskbar and system tray.

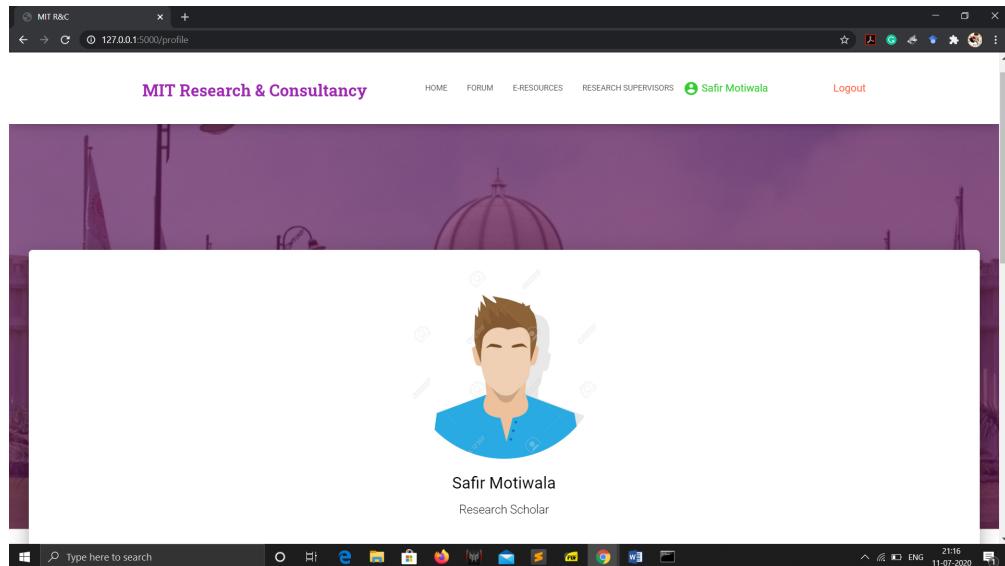
Progress :

This page gives the course summary and keeps a track of the progress of the Research Scholars. The progress is updated, when the admin promotes the Research Scholar.



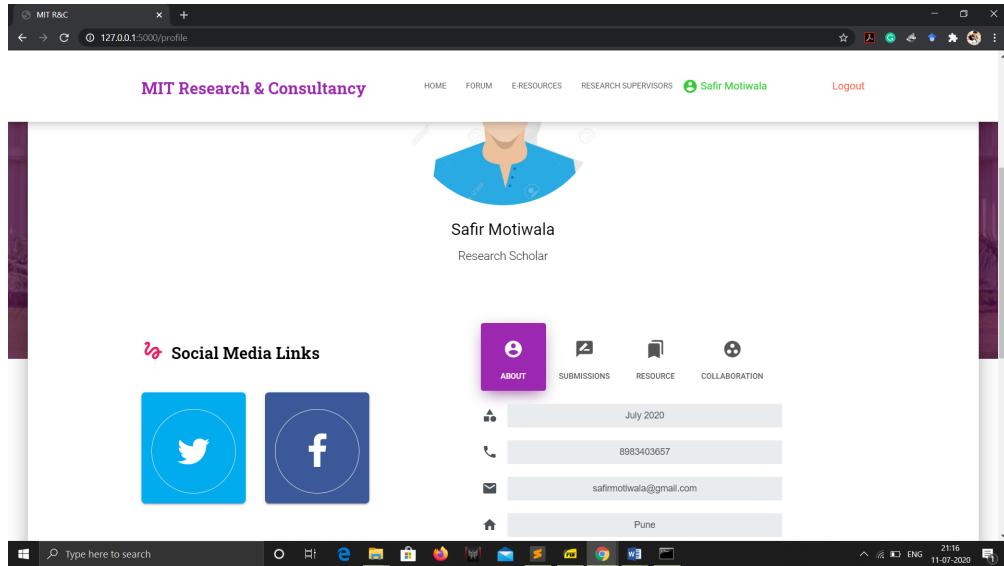
Profile Page

This profile page gives information about the current user that is logged in.



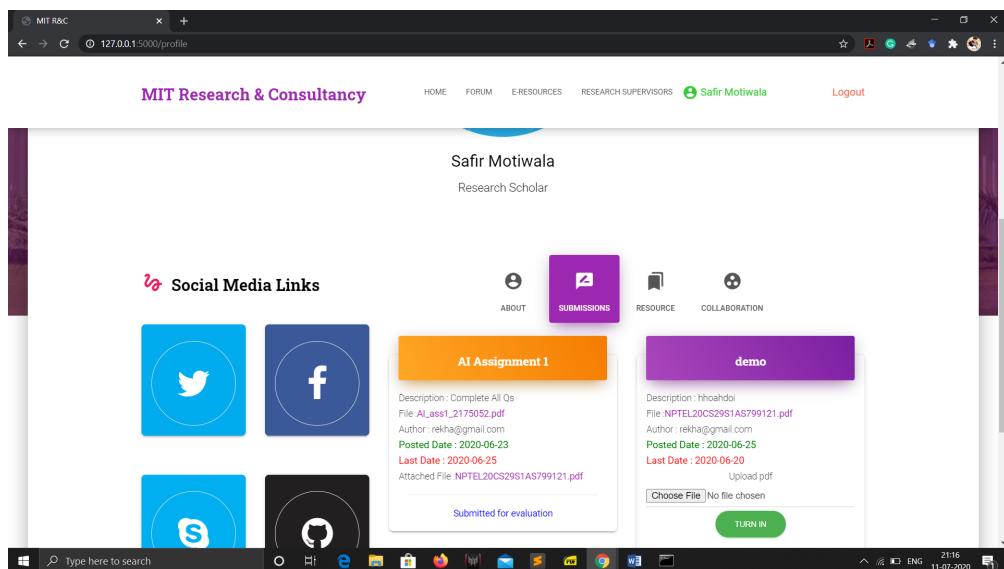
Profile Page : User info

This profile page gives information about the current user that is logged in, and also allows the user to edit information.



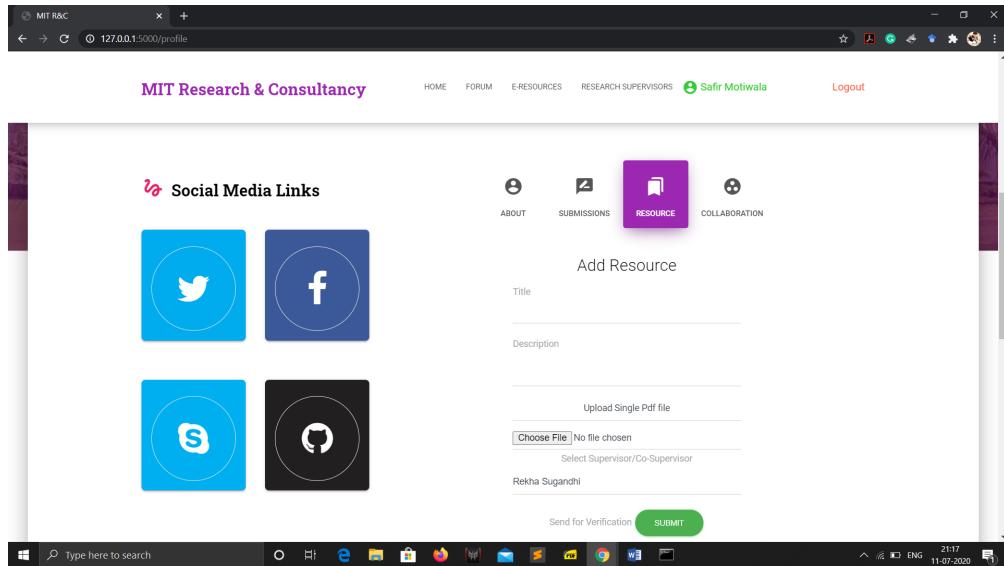
Profile Page : Submission

This page shows the submission; complete as well as pending!



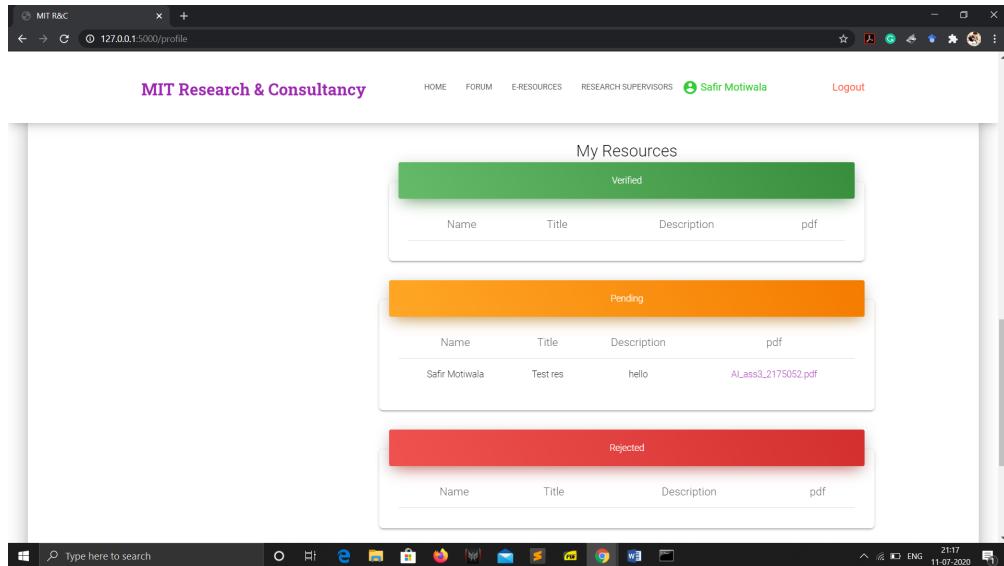
Profile Page : Resources upload

This page allows the user to upload the resource which is then verified by the Supervisor. AI algorithm can be added to this page in the future, so as to, if a user uploads any resource, He will earn points based on his resource.



Profile Page : Resources upload

This page allows the user to upload the resource which is then verified by the Supervisor. AI algorithm can be added to this page in the future, so as to, if a user uploads any resource, He will earn points based on his resource.



Profile Page : Collaboration

The Supervisor and Scholar can collaborate.

Social Media Links

- Twitter
- Facebook
- LinkedIn
- Github

Add Researcher for Collaboration

Email: _____

Get User FETCH

My Collaborations

Collaborator 1	Collaborator 2	Title	File	Action
Collaborator 1	Collaborator 2	Project A	ProjectA.pdf	

Supervisors Panel : Request for Submission

This panel allows the supervisors to request for submissions, view as well as evaluate submissions.

Supervisors Panel

SUBMISSIONS **RESOURCES**

Request for Submission

Assignment Title

Select Department

Select Batch

DeadLine
dd-mm-yyyy

Description

Pdf Upload

Supervisors Panel : View Submission

This panel allows the supervisors to request for submissions, view as well as evaluate submissions.

DEMO	Name	Title	Description	pdf	Accept	Reject
	Ram Suthar	Introduction to Machine Learning	.jpg			
	Rajendra Kelwa	IMG20200620112436	.jpg			
	Safir Motiwala	NPTEL20CS29S1AS799121	.pdf			

Supervisors Panel : Verify Resources

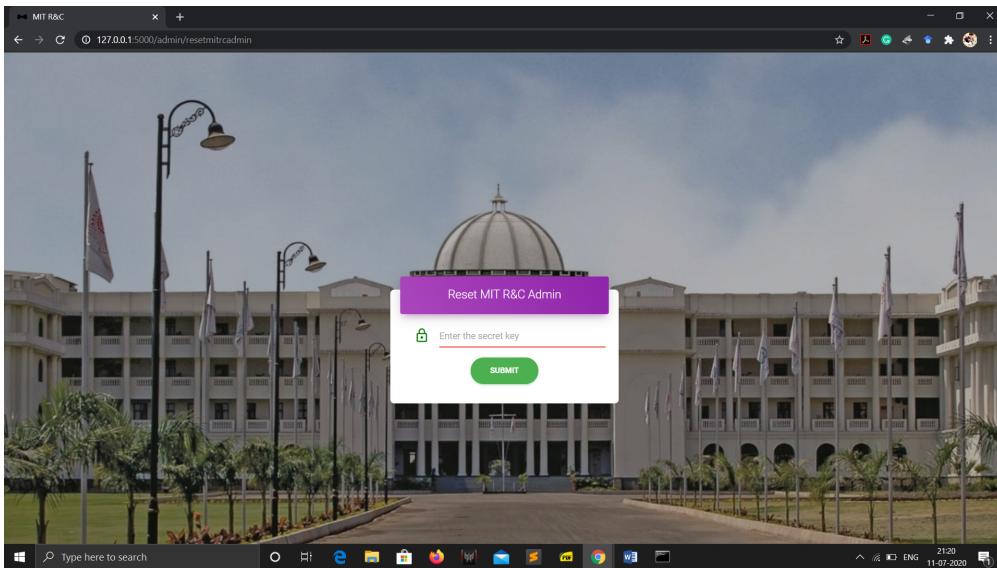
The Supervisor can verify the resources uploaded by the Scholar.

Name	Title	Description	pdf	Verify	Reject
Safir Motiwala	Test res	hello	AI_lass3_2175052.pdf		
Ram Suthar	yo	ndjolol	IMG20200620112436.jpg		

Name	Title	Description	pdf
Safir Motiwala	Seminar Report	Check this out	NPTEL20CS29S1AS799121.pdf
Ram Suthar	New	dwhdwhdoh	AI_lass1_2175052.pdf

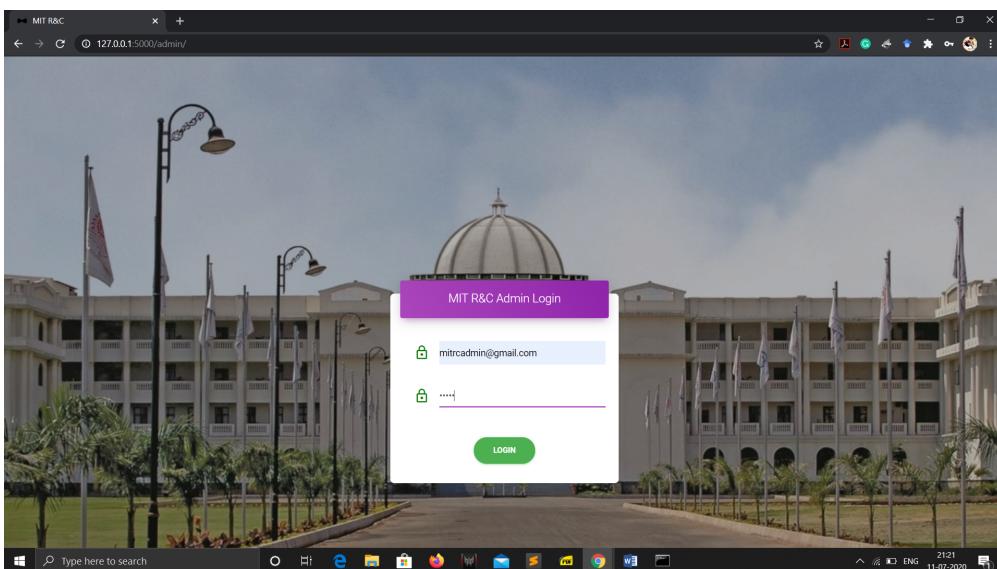
Admin Page : Reset Admin

The Admin can be reseted using a secret key which will only be with MIT ADT University.



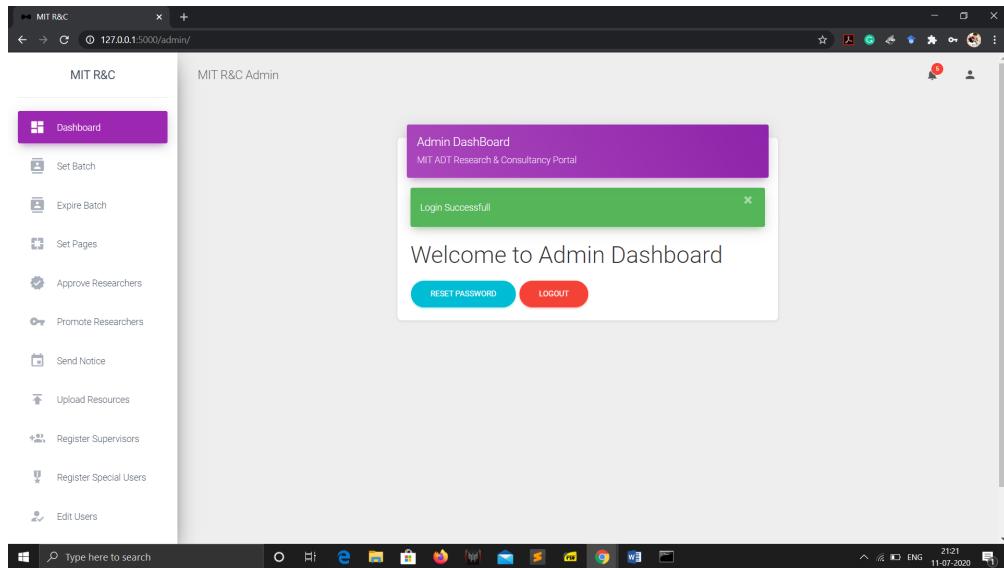
Admin Page : Login

This page is used to login into Admin Dashboard.



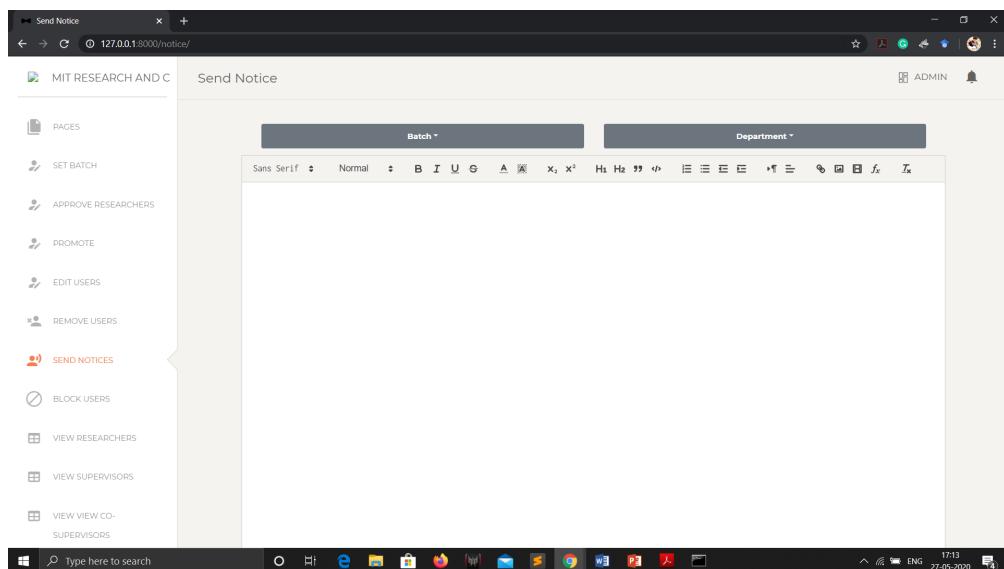
Admin Page : Dashboard

The Admin can change password and do other functionalities.



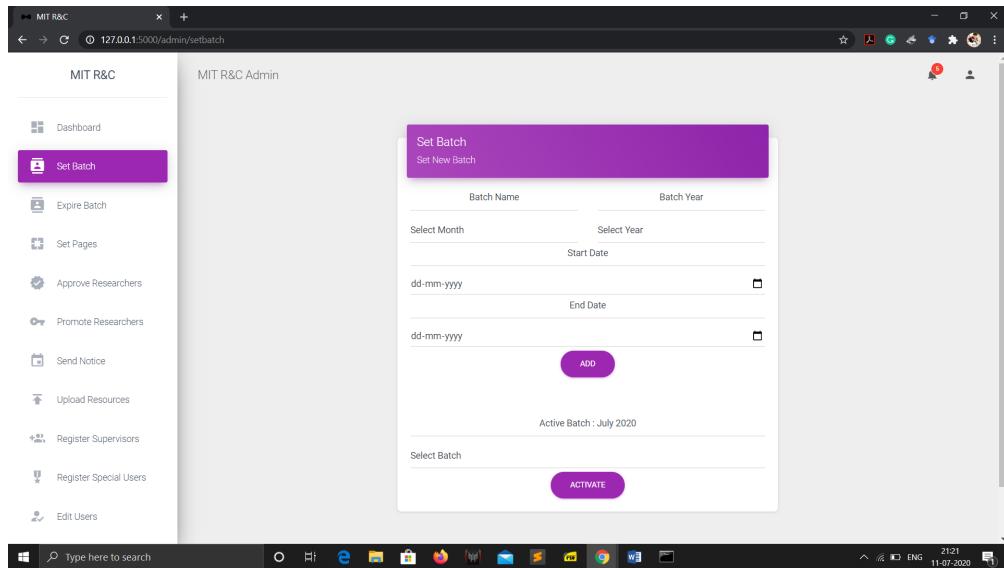
Admin Page : Send Notices

The Admin can send notices to specific departments and branches.



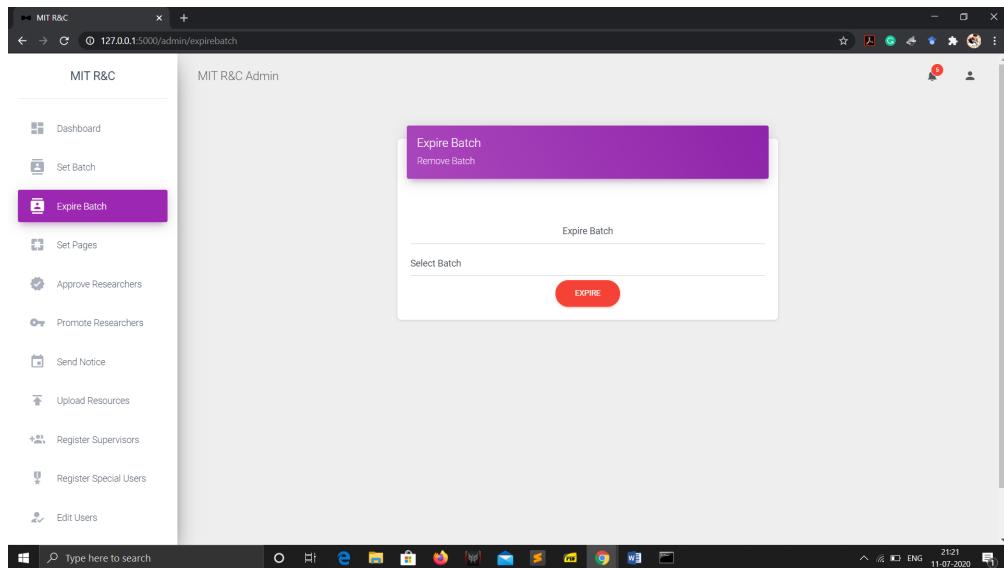
Admin Page : Set Batch

This page is used to create a new batch and activate it.



Admin Page : Expire Batch

This page is used to expire a batch.



Admin Page : Approve Registrations

This page allows the Admin to approve the registrations of the Researchers. A mail will be sent to the Researcher once the Admin approves.

Profile Pic	Name	Mobile No	Email	Address	DoB	Gender	Nationality	Department	Supervisor	Co-Supervisor	Approve	Delete
	Ram Suthar	7056664653	ramsvtar305@gmail.com	wadgaon sheri pune	1999-07-26	Male	Indian	Engineering	Rekha Sugandhi	Yogesh Cajmal		

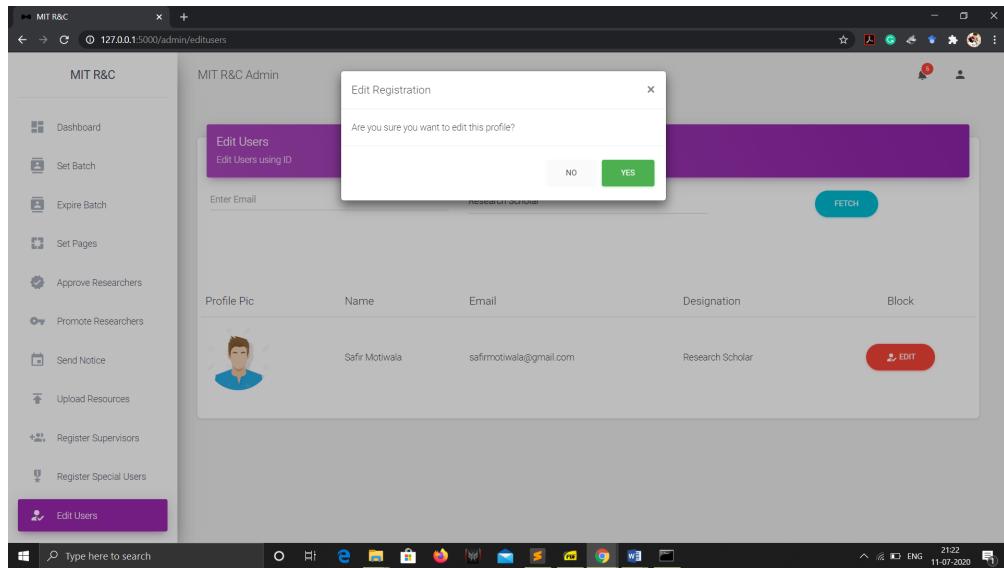
Admin Page : Promote Research Scholars

From this page, the Admin promotes the Research Scholar and the changes are reflected on the Progress page.

Profile Pic	Name	Mobile No	Email	Promote	Demote
	Vinayak Sutar	68686869	vinayak@gmail.com		
	Ram Suthar	392797	ramsvtar305@gmail.com		
	Saif Motiwala	8983403657	saifmotiwala@gmail.com		

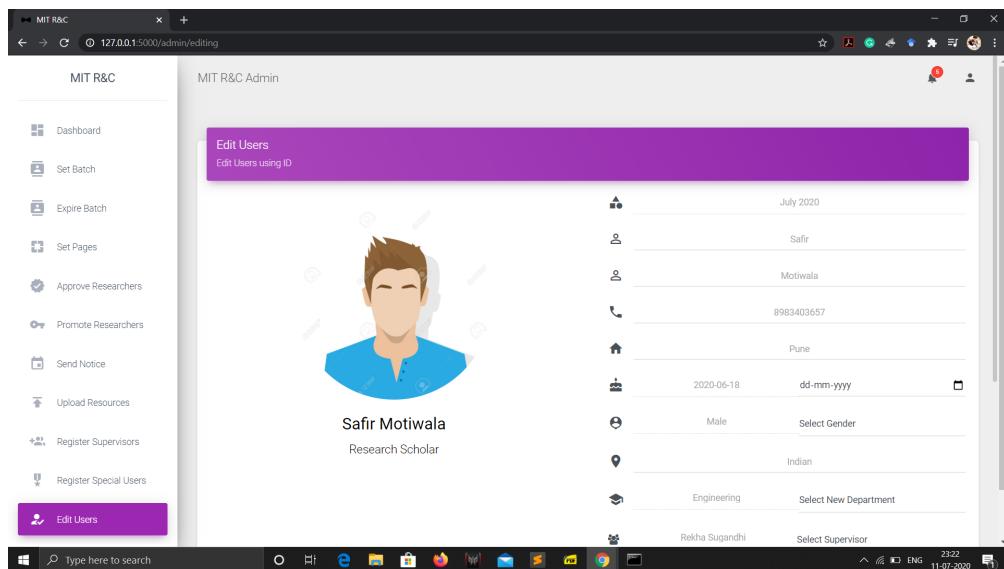
Admin Page : Edit User

The admin can edit all the information of the user.



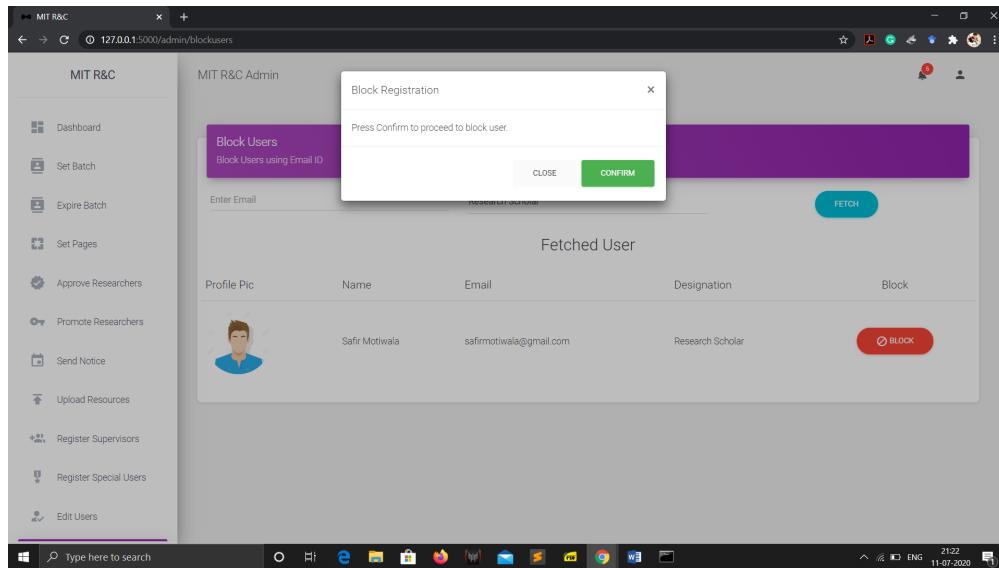
Admin Page : Edit User

The admin can edit all the information of the user.

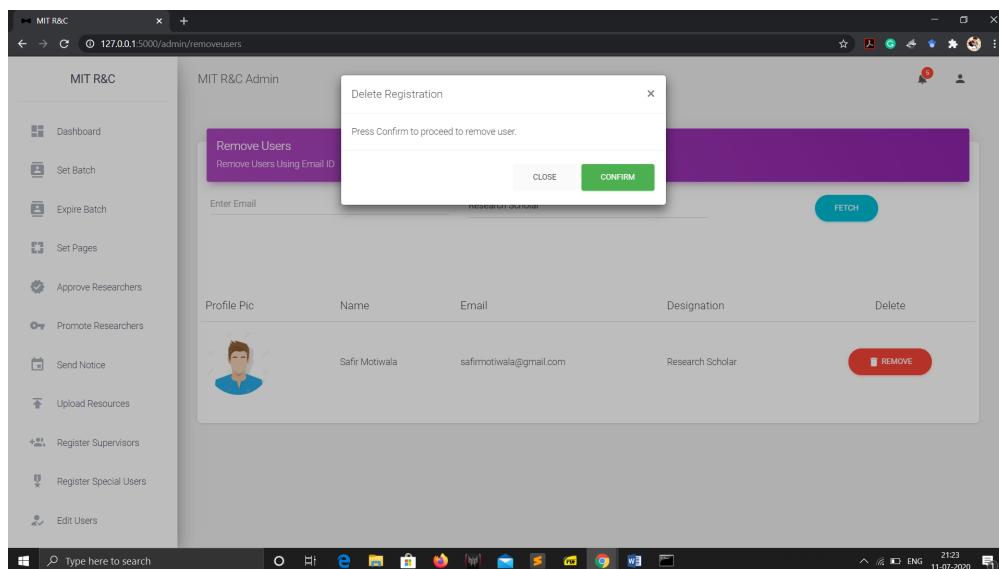


Admin Page : Block User

The Admin can block any user from this page.

**Admin Page : Remove User**

The Admin can remove a user from this page.



Admin Page : View Research Scholars

The Admin can view all the Research Scholars here and can filter them by batch, department, etc.

Profile Pic	Name	Mobile No	Email	Address	DoB	Gender	Nationality	Department	Supervisor	Co-Supervisor	Twitter	Facebook
	Vinayak Sutar	68686869	vinayak@gmail.com	Pune	2020-06-11	Male	Indian	Engineering	Rekha Sugandhi	Yogesh Gajmal	twitter link	fb link
	Ram Suthar	392797	ramsuthar305@gmail.com	Pune	2020-06-18	Male	Indian	Engineering	Rekha Sugandhi	Yogesh Gajmal	twitter link	fb link
	Saif Motiwala	8983403657	saifmotiwala@gmail.com	Pune	2020-06-18	Male	Indian	Engineering	Rekha Sugandhi	Yogesh Gajmal	twitter link	fb link

Admin Page : View Research Supervisors

The Admin can view all the Research Supervisors here.

Profile Pic	Name	Mobile No	Email	Address	DoB	Gender	Nationality	Department	Sub-Department	Twitter	Facebook	Skype	Github
	Rekha Sugandhi	86686868	rekha@gmail.com	Pune	2020-06-11	Female	Indian	Engineering	Information Technology	twitter link	fb link	skype link	repo link

Admin Page : View Research Special Users

The Admin can view all the Research Supervisors here.

The screenshot shows a web-based administrative interface titled "MIT R&C Admin". On the left, there is a sidebar with various menu items: Dashboard, Set Batch, Expire Batch, Set Pages, Approve Researchers, Promote Researchers, Send Notice, Upload Resources, Register Supervisors, Register Special Users, and Edit Users. The main content area is titled "View Authorities" and "View Special Access Holders". It displays a table with columns: Profile Pic, Title, Name, Description, Mobile No, Email, Address, DoB, Gender, Nationality, Twitter, Facebook, Skype, and Github. One row is visible, showing a profile picture of a man in a suit, title "Dr", name "Mangesh Karad", description "President of MIT ADT University", mobile number "6927969", email "mangesh@gmail.com", address "Pune", date of birth "2020-06-13", gender "Male", nationality "Indian", and links for Twitter, Facebook, Skype, and GitHub.

Research Portal : Developers

The Developers of MIT ADT Research Portal.

The screenshot shows a web-based research portal titled "MIT Research & Consultancy". At the top, there are navigation links for HOME, FORUM, and ERESOURCES. The main content area features a purple banner with the text "Core Developers". Below the banner, it says "Meet our nerd rockstars behind the MIT Research and Consultancy Portal.". Three developer profiles are listed: Safir Motiwala (BTECH INFORMATION TECHNOLOGY, MIT SCHOOL OF ENGINEERING, MIT ADTU), Ram Suthar (BTECH INFORMATION TECHNOLOGY, MIT SCHOOL OF ENGINEERING, MIT ADTU), and Vinayak Sutar (BTECH INFORMATION TECHNOLOGY, MIT SCHOOL OF ENGINEERING, MIT ADTU). Each profile includes a circular profile picture and the developer's name and degree information.

Chapter 4

APPLICATIONS

4.0.1 Applications

The Applications are listed below :

- i. Redundant Free Management
- ii. Digital Process Control and Optimization
- iii. Collecting and Distributing Knowledge and Information
- iv. Optimal Coordination with existing systems for efficient process management

Chapter 5

CONCLUSION AND FUTURE SCOPE

5.0.1 Conclusion

We have successfully completed all the modules of the project. New features can be updated to the project anytime. All the major modules work well, and are ready to serve the researchers once the website is hosted. After successful hosting of this website, the Researchers will be able to easily communicate with other Researchers, access library, upload/approve resources and can keep a track of their course progress.

5.0.2 Future Scope

The Future scope is listed below :

- i. New innovative features can be easily integrated in the website.
- ii. Machine Learning can be used to build chat bot in the website that would be trained to answer questions based on answered questions from forums.
- iii. AI algorithm can be added to automatically calculate points based on Researchers Resources.
- iv. The Website can also be connected to MIT ADTU's administration database and can keep a record of fees and other information.

5.0.3 References

References are listed below :

- i. O'Donnell, Jim (10 March 2017). "IDC says get on board with the DX economy or be left behind". techtarget.com.
- ii. Matt, Christian; Hess, Thomas; Benlian, Alexander (2015-08-04). "Digital Transformation Strategies". *Business Information Systems Engineering*. 57 (5): 339–343. doi:10.1007/s12599-015-0401-5. ISSN 2363-7005.
- iii. Dignan, Larry. "Adobe's biggest Creative Cloud perk could be lower piracy". ZDNet. Retrieved 2020-01-23.
- iv. Knobel, Michele (2008). Digital literacies: concepts, policies and practices. p. 173. ISBN 978-1433101694 – via Google Books. The ultimate stage is that of digital transformation and is achieved when the digital usages which have been developed enable innovation and creativity and stimulate significant change within the professional or knowledge domain.
- v. Heinze, Aleksej; Griffiths, Marie; Fenton, Alex; Fletcher, Gordon (2018). "Knowledge exchange partnership leads to digital transformation at Hydro-X Water Treatment, Ltd". *Global Business and Organizational Excellence*. 37 (4): 6–13. doi:10.1002/joe.21859.
- vi. Patel, Keyur; McCarthy, Mary Pat (2000). Digital transformation: the essentials of e-Business leadership. New York: McGraw-Hill. ISBN 0-07-136408-0.