



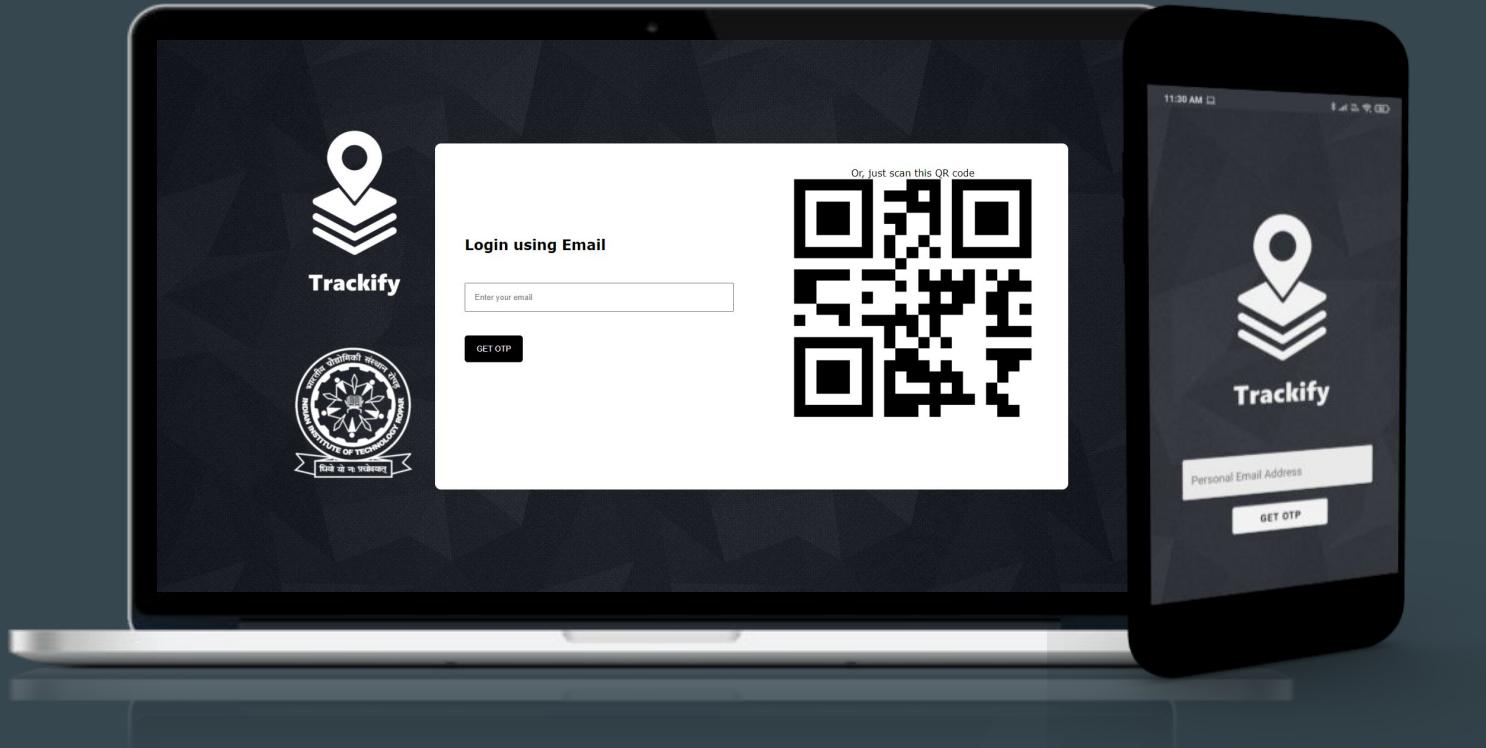
# Trackify

CP301 - Development Engineering Project  
Collaborators/Beneficiaries: IIT Ropar

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Team B1  
Ekansh Mahendru  
Hansin Ahuja  
Sakshay Mahna  
Mentor: Dr. Puneet Goyal

# Introducing Trackify



# Understanding the problem

- Current administrative work leaves a lot of paper trail - we aim to eliminate a lot of that!
- Currently, whenever a file is generated and passed around, a manual log of the file's history has to be maintained:
  - Who generated the file?
  - Where is the file right now?
  - Who handled the file?
  - What kind of a file is it?
- Trackify seeks to cut the clutter.

# Motivation and Expectations

- There exists a lot of administrative overhead when it comes to keeping track of files, i.e. how they travel from office to office, who handles them, date of events, file details, etc.
- Our app aims to ease some of this bureaucratic burden by allowing users to track the current status of the files that they've sent, handled, received, etc.
- For office workers, they could simply scan a written tag on the file instead of maintaining manual logs at their end, not only speeding up the process by which they handle files, but also maintain a more organized account of files handled that is distributed to the stakeholders as and when needed.

# Motivation and Expectations

- There also exists an added convenience factor wherein the user can search for files based on personalized tags, dates handled, handling personnel, etc. instead of manually having to track or remember or constructing custom search queries, hence affording them a lot of swiftness when it comes to tracking their files.
- Our app aims to automate a lot of the manual logging process that occurs in an administrative environment, which is often seen as cumbersome and might drive down productivity by burdening the workers by occupying them with something that is monotonous, instead of them engaging in other work that might be more productive.

# Primary features

## ID based File Tracking

- 6 digit ID identification for File
- Supports scanning of handwritten IDs from phone camera for easier updation

## File Analytics

- Clear timeline for each file along with remarks and timestamp
- Easier delegation to some other person for transferring ownership while creating the file.

## User Experience

- Management of personal or processed files by custom tags
- Separate queues for created, received and incoming files for office holders

# Primary features

## User Experience

- Files displayed in tabular format with informative fields
- Filtering and Sorting on all fields in the files table

## Office Features

- Supports switching between multiple offices
- Easy request for clarifications or any other inputs from the creator and notification via an email

## Security Features

- Secure OTP based login
- Easy login using QR code if the app is already installed.  
(Trackify Web)

# Technology Stack

## Backend

- Flask Framework
  - Azure Computer Vision Services
  - Azure App Services
-

# Technology Stack

## Frontend (Android / iOS)

- Expo
- React Native
- React Native Paper

## Frontend (Web)

- Vanilla JS
-

# Deployment

**Mobile App:** APK available [here](#).

**Web App:** Hosted [here](#).

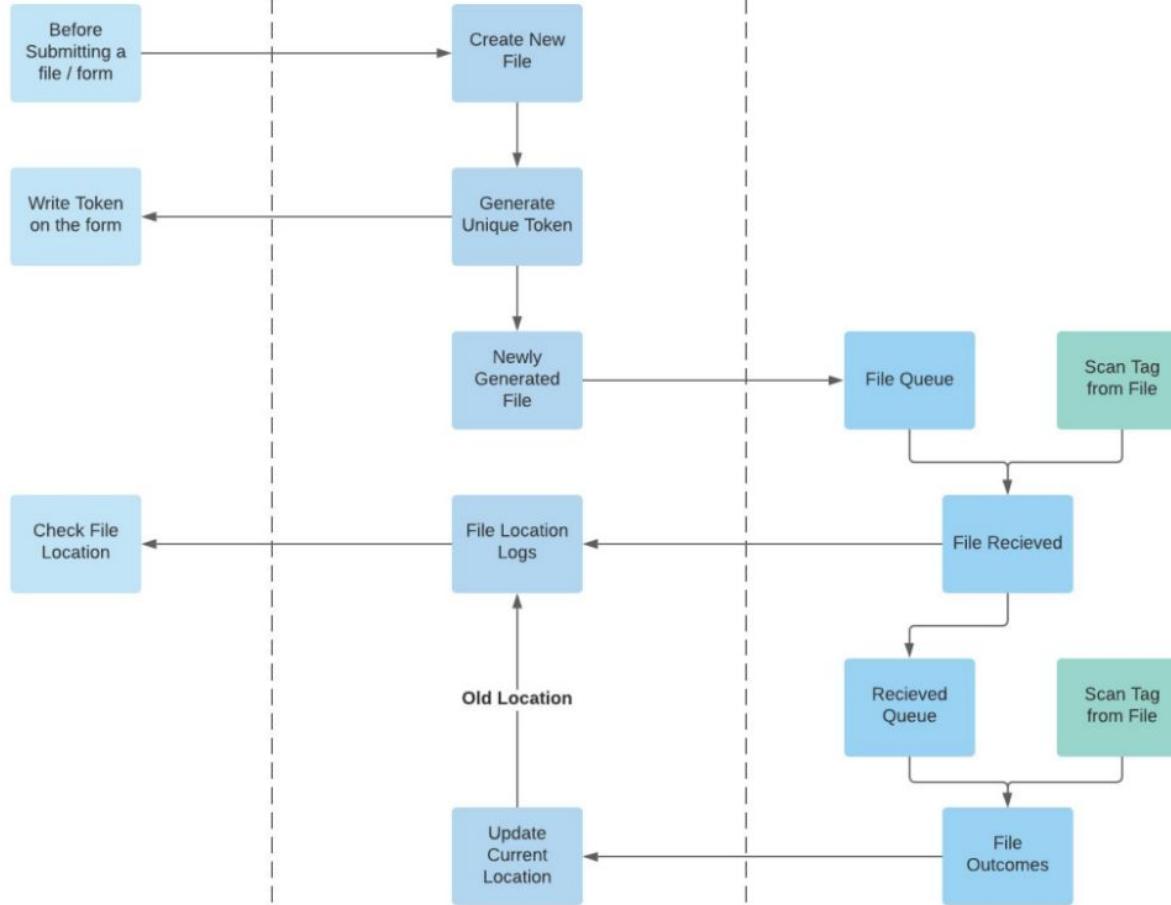
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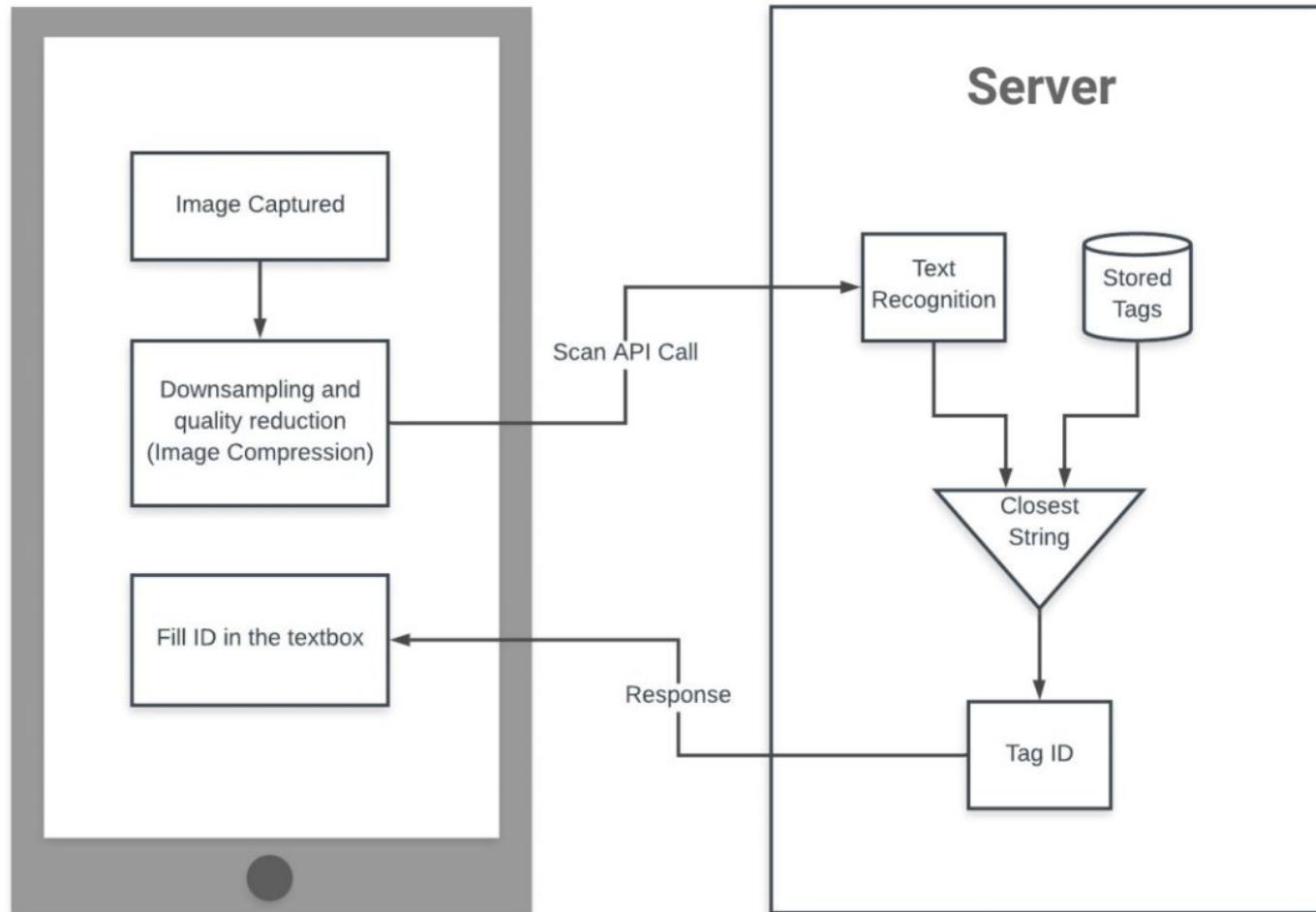
# **Workflow**

# Workflow

1. A user creates a new file which is associated with an alphabetic unique token ID generated by the system. This token ID is to be written on the form / file.
2. This file is then shown in the file queue of the office account which it is sent to. Here, the account holder can accept the file using the tickmark button or by scanning. This file is then moved to the received queue.
3. After the file is done processing in this office, the account holder scans it or selects it from the received queue and chooses the corresponding outcome of the file.
4. The location of the file is updated and other users can view its history using the unique token ID.

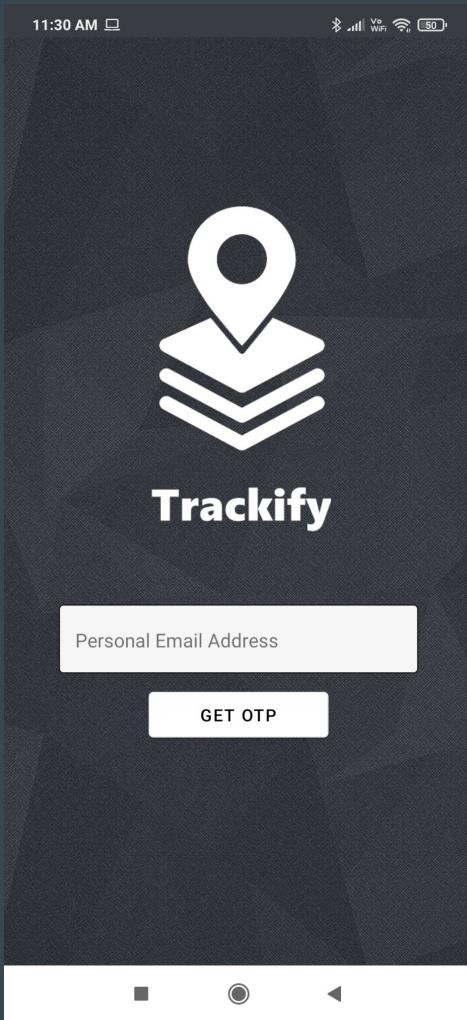
### Any User                      Server                      Office Account





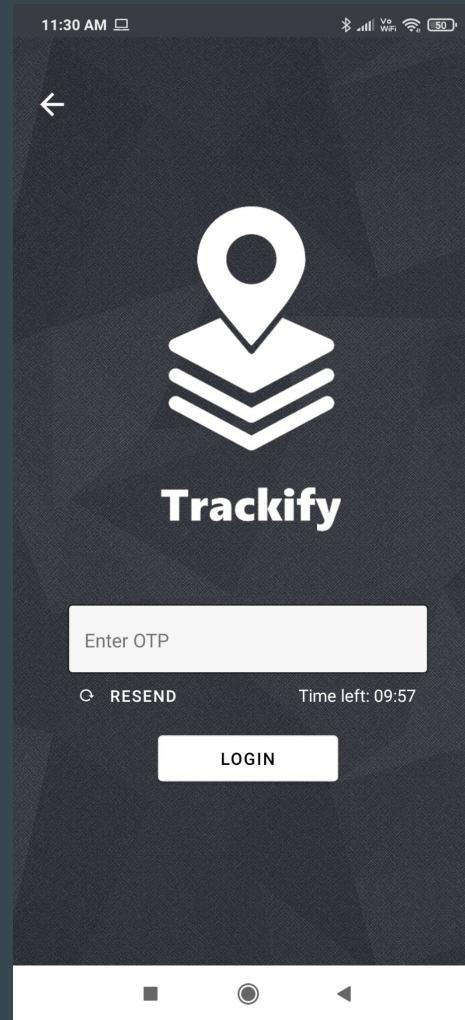
# Screenshots

## Android / iOS App



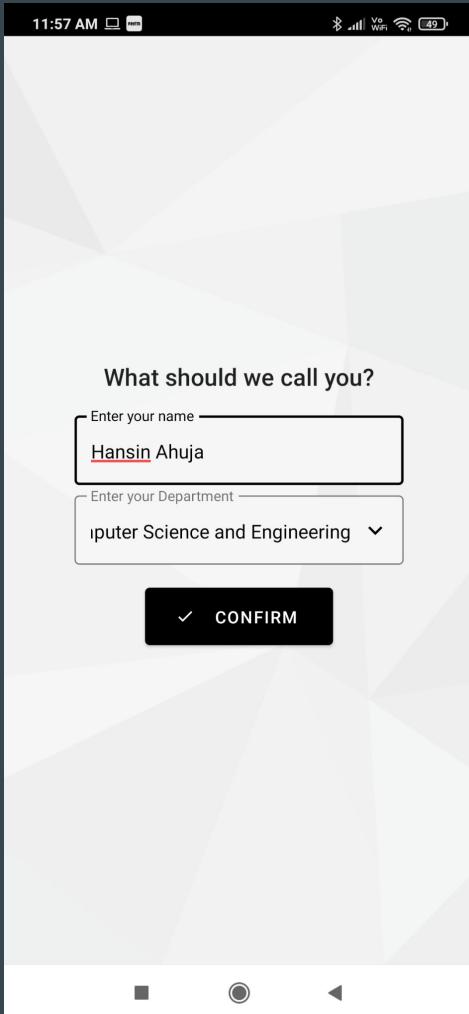
## Login Page

Login is done using secure OTP which is emailed to the email address.



## OTP Login

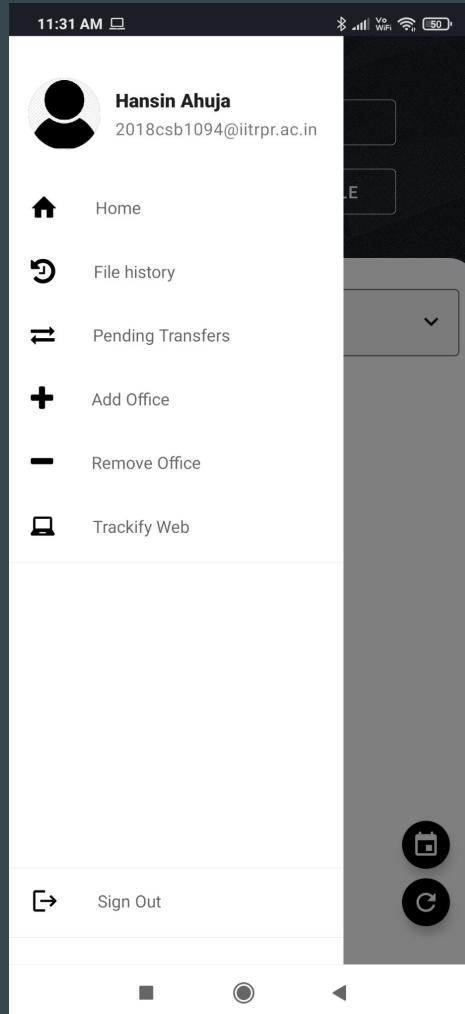
Login using the OTP emailed to the email address.

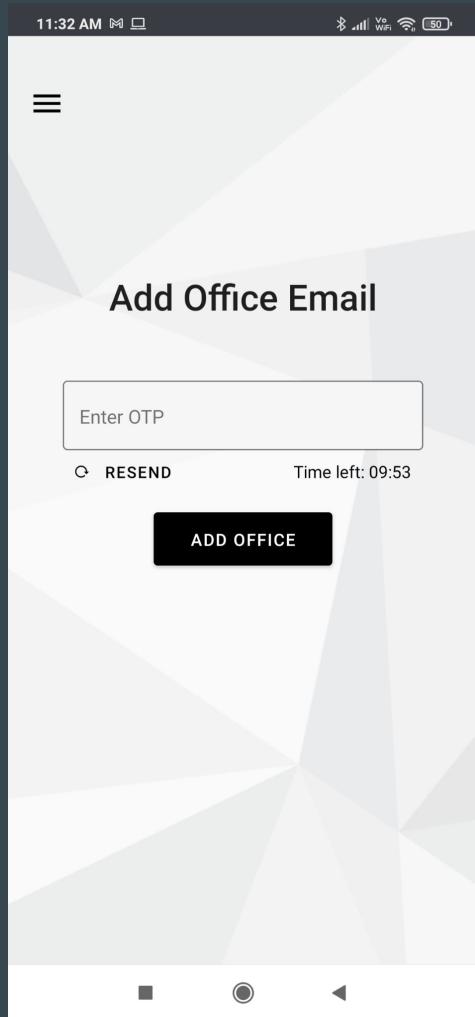


## First Time Login

First Time Login requires the name of the user and their department

**Dashboard**  
The dashboard contains all links for quick access.





## Adding Offices

New offices are added using secure OTP, emailed to the respective office email.

This mobile application screen shows a dashboard for 'TestFaculty'. At the top, there's a header bar with the title 'TestFaculty'. Below the header are three buttons: 'SCAN A FILE' (with a camera icon), 'CREATE NEW FILE' (with a plus icon), and 'TRACK EXISTING FILE' (with a magnifying glass icon). The main area has tabs for 'CREATED', 'RECEIVED', and 'QUEUE'. The 'QUEUE' tab is selected, showing a search bar with 'Search by Name' and a dropdown arrow. Below the search bar is a table with two columns: 'Name' and 'Tracking ID'. The table contains three items:

Name	Tracking ID
Assignment survey	21TPVLW
Leave request	21DRDVC
Budget Statement	21AAAAB

At the bottom right are two circular icons: one with a square and one with a circle.

## Created Queue

Created Queue to view all the created files.

12:00 PM

Bluetooth WiFi 4G 49%

←

## Create new file

Name (Required) —  
Budget Statement

File type (Required) —  
Bill >

Submitted to (Required) —  
TestOffice2 >

Transfer ownership >

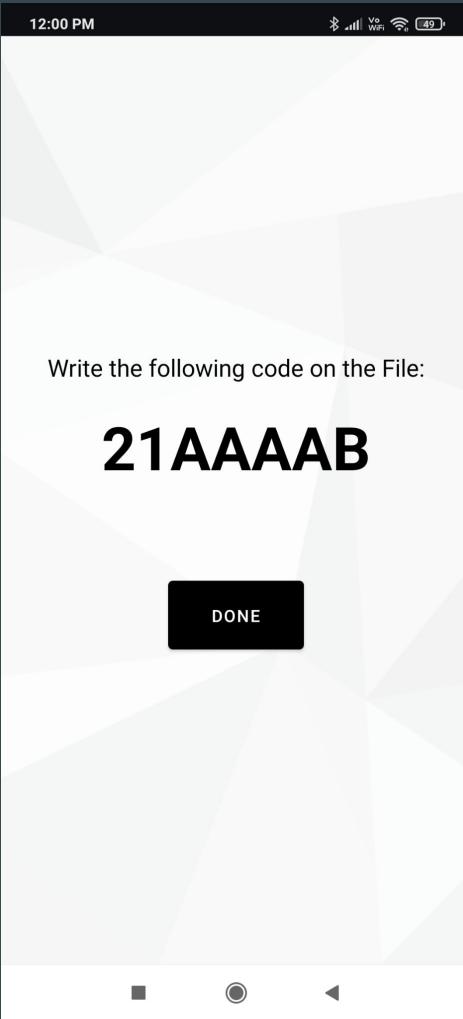
✓ CONFIRM

■ ○ ◀

This screenshot shows a mobile application interface for creating a new file. At the top, there's a header with the time '12:00 PM' and connectivity status. Below it is a back arrow. The main title 'Create new file' is displayed in bold. The form consists of four input fields: 'Name (Required)' containing 'Budget Statement', 'File type (Required)' containing 'Bill' with a dropdown arrow, 'Submitted to (Required)' containing 'TestOffice2' with a dropdown arrow, and 'Transfer ownership' with a dropdown arrow. At the bottom is a black 'CONFIRM' button with a white checkmark icon.

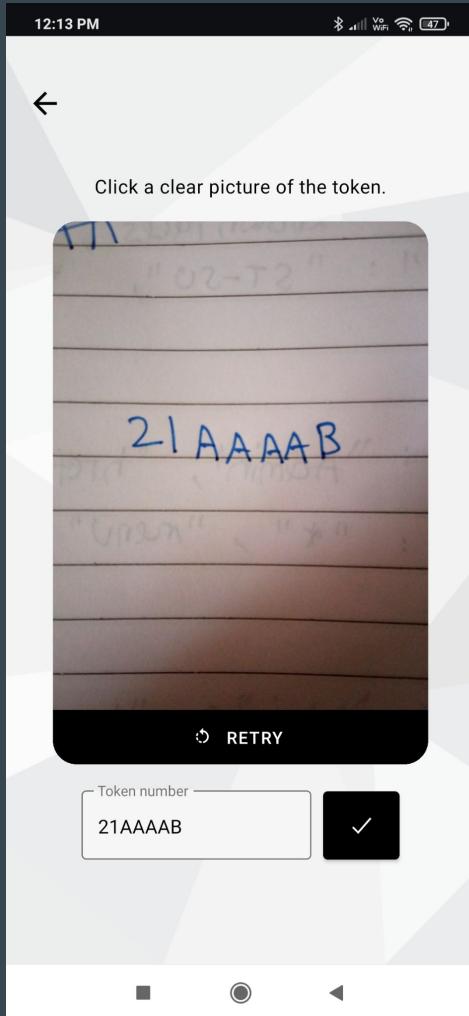
## Create New File

Create new file identified by their name, file type and submit to an office.



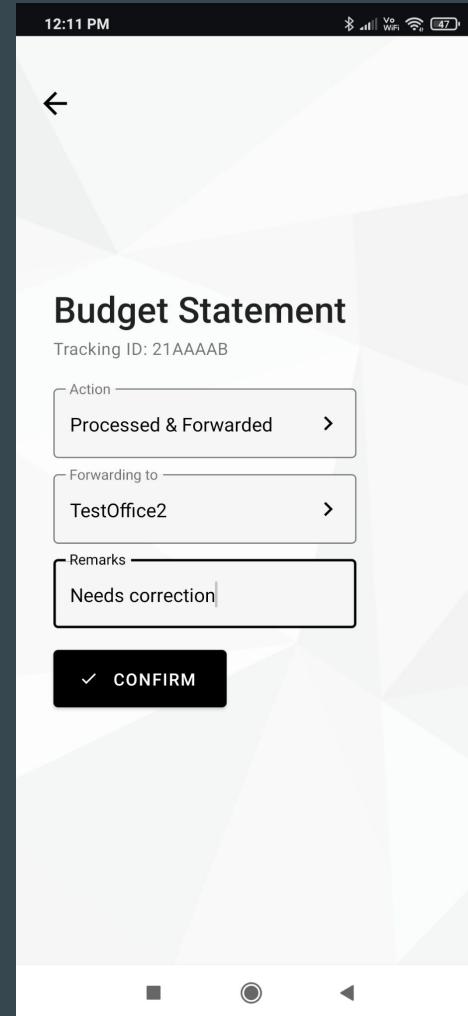
## File ID

File ID for a newly created file, to be written on the physical file



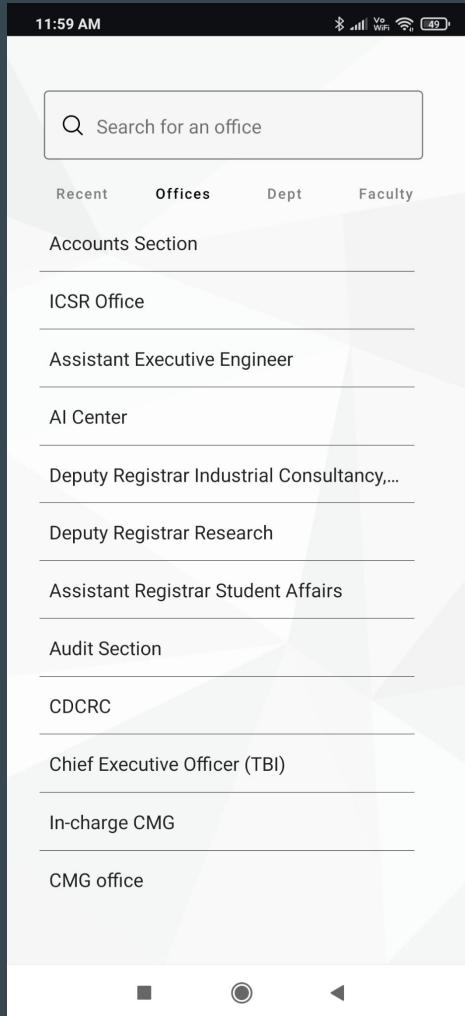
## Token Scanning

User can manually enter a token or scan it on the file to perform an action on it.



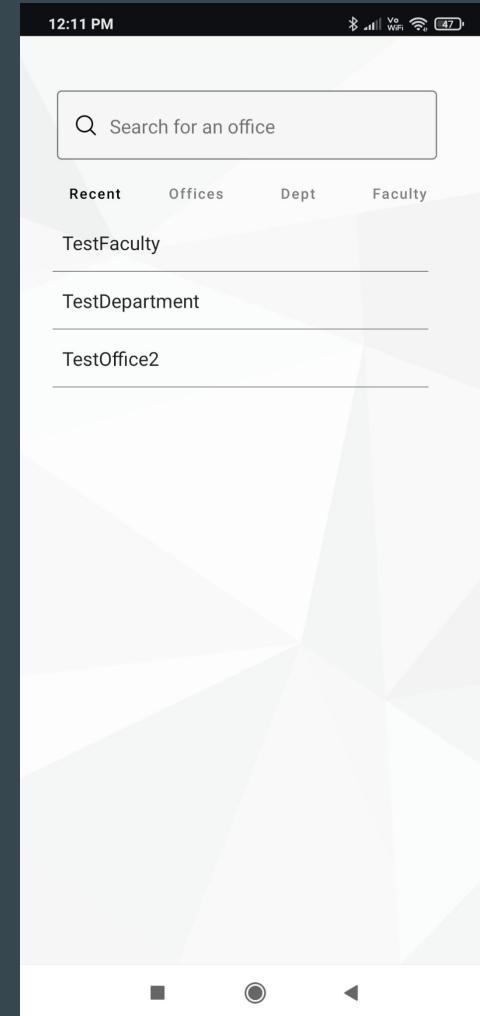
## Action Screen

User can perform actions such as forwarded, input needed, etc.



## Forwarding

Easy access to all offices  
using separate tabs and the  
search feature



## Recent forwards

Offices recently interacted  
with available to the user

12:17 PM

Bluetooth Vo WiFi 47%

### TestOffice2

SCAN A FILE

CREATE NEW FILE

TRACK EXISTING FILE

	CREATED	RECEIVED	QUEUE
Search by Name			
	Name	From	
✓	Intern request	Hansin Ahuja	
✓	Budget Statement	Hansin Ahuja	

Scan

Cancel

## Queue Files

Once forwarded, the receiving user must confirm the file in their queue

12:10 PM

Bluetooth Vo WiFi 47%

### TestOffice2

SCAN A FILE

CREATE NEW FILE

TRACK EXISTING FILE

	CREATED	RECEIVED	QUEUE
Search by Name			
	Name	From	
	Budget Statement	Hansin Ahuja	

Scan

Cancel

## Received Files

Once confirmed in the queue, the file moves to the received tab

12:04 PM

Bluetooth Vo WiFi 48%

←

### Create new file

Name (Required) —  
Assignment survey

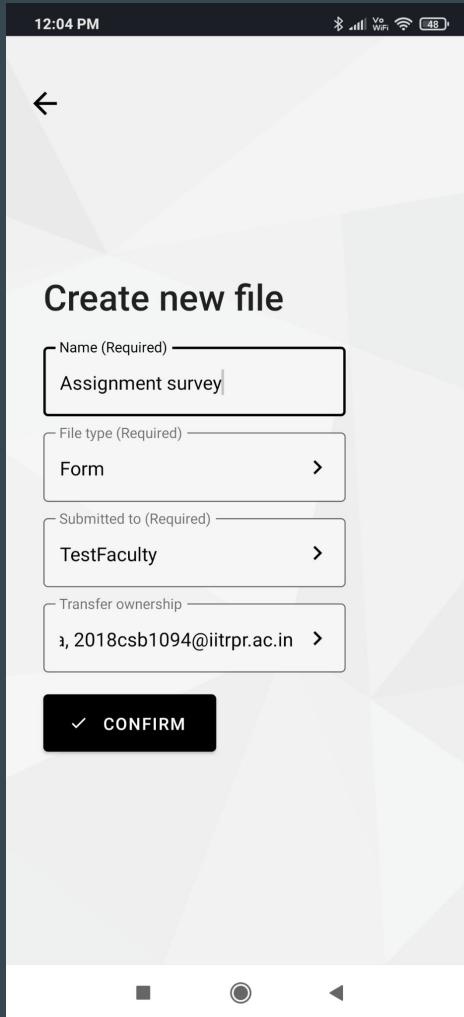
File type (Required) —  
Form >

Submitted to (Required) —  
TestFaculty >

Transfer ownership —  
, 2018csb1094@iitrpr.ac.in >

✓ CONFIRM

■ ○ ◀

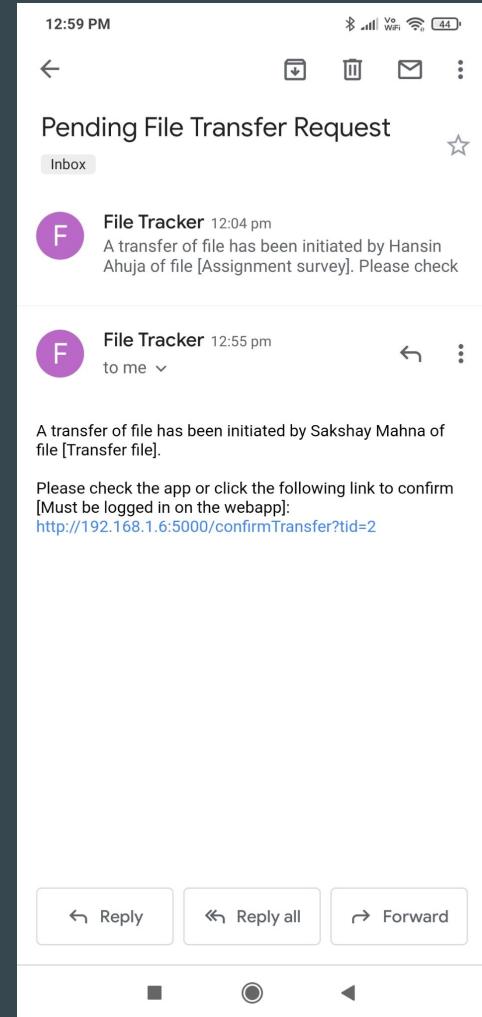


## Transfer ownership

Ownership can be transferred if the user is creating the file on someone's behalf

## Confirm transfer

Confirmation can be done through the app or website, and an email is sent for the same



12:16 PM

Bluetooth WiFi 4G 47%

←

## Budget Statement

Tracking ID: 21AAAAB

Edit tags   Budgets   Approvals

Wed, 19 May 2021 12:16:14 GMT  
**Sent to TestOffice2**  
No remark added

Wed, 19 May 2021 12:15:55 GMT  
**Sent for clarification by TestOffice2**  
Remarks: Check for total

Wed, 19 May 2021 12:11:58 GMT  
**Passed on by TestOffice2**  
Remarks: Needs correction

■ ◯ ◀

## File Timeline

View the timeline and remarks of a particular file

1:07 PM

Bluetooth WiFi 4G 43%

Search for a tag

+ Add new tag

---

Budgets

Approvals

Personal

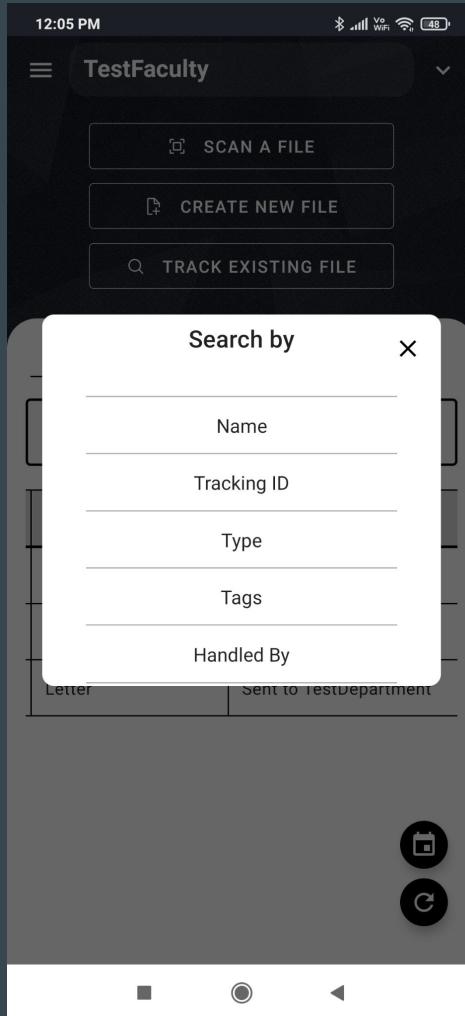
Misc

CLEAR ALL

■ ◯ ◀

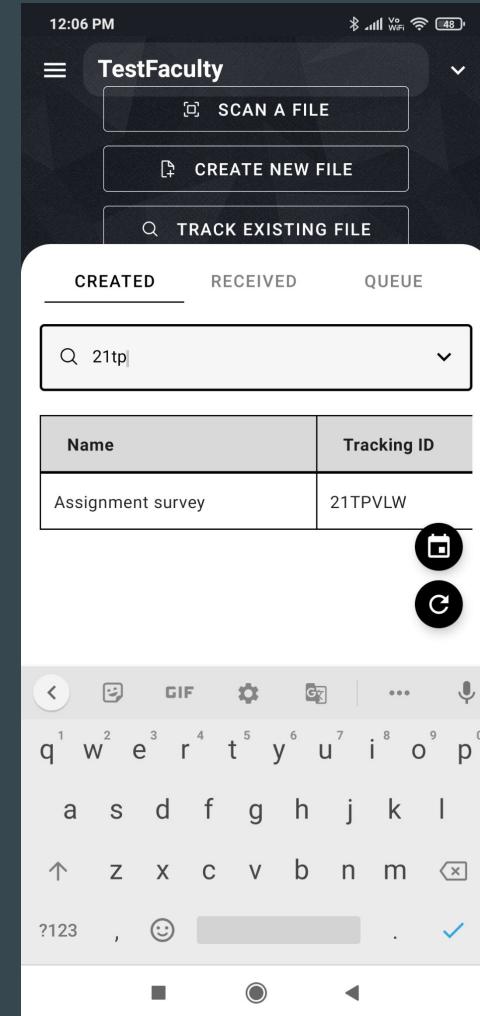
## Custom tags

Add custom tags to classify and filter files



## Search Options

Searching for files using different criteria like Name, Tracking ID, Tags and so on



**Quick Searching**  
Filters all the relevant files using regex

The mobile application interface for "TestFaculty" shows a sidebar with three main actions: "SCAN A FILE", "CREATE NEW FILE", and "TRACK EXISTING FILE". Below this is a search bar labeled "Search by Name". The main content area displays a table with three columns: "CREATED", "RECEIVED", and "QUEUE". The "CREATED" column is currently selected, indicated by an underline. The table contains the following data:

Tracking ID ↑	Type	Status
21TPVLW	Form	Sent to TestOffice1
21DRDVC	Letter	Sent to TestFaculty
21AAAAB	Bill	Sent to TestDepartment

At the bottom right of the screen are two circular icons: one with a camera and another with a circular arrow.

## Sorting Options

Sorting can be done through various criteria, currently showing ascending in TrackingID

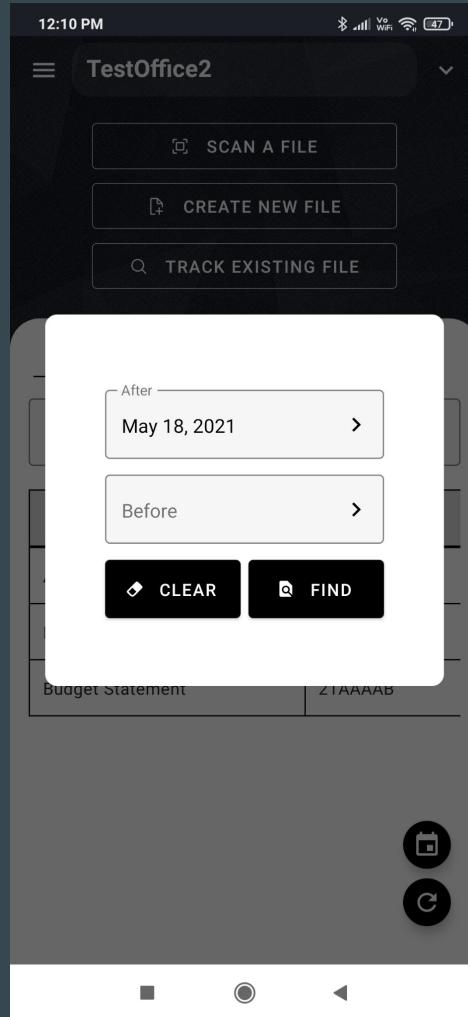
The mobile application interface for "TestFaculty" shows a sidebar with three main actions: "SCAN A FILE", "CREATE NEW FILE", and "TRACK EXISTING FILE". Below this is a search bar labeled "Search by Name". The main content area displays a table with three columns: "CREATED", "RECEIVED", and "QUEUE". The "RECEIVED" column is currently selected, indicated by an underline. The table contains the following data:

	Type ↓	Status
	Bill	Sent to TestOffice2
	Form	Sent to TestFaculty
	Letter	Sent to TestDepartment

At the bottom right of the screen are two circular icons: one with a camera and another with a circular arrow.

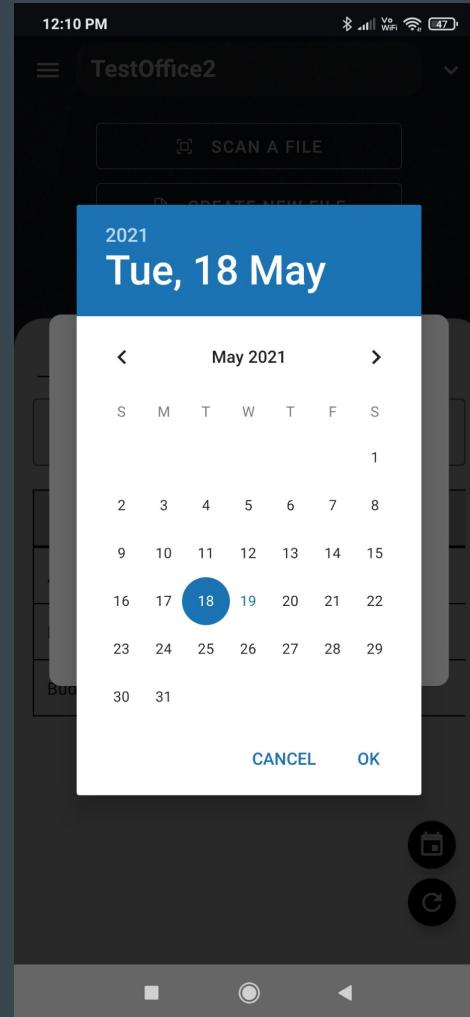
## Sorting Options

Sorting can be done through various criteria, currently showing descending in Type



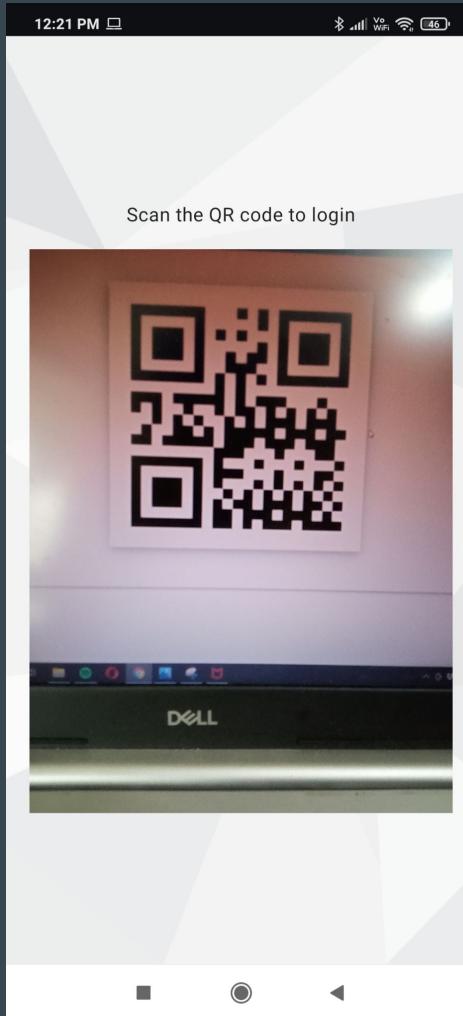
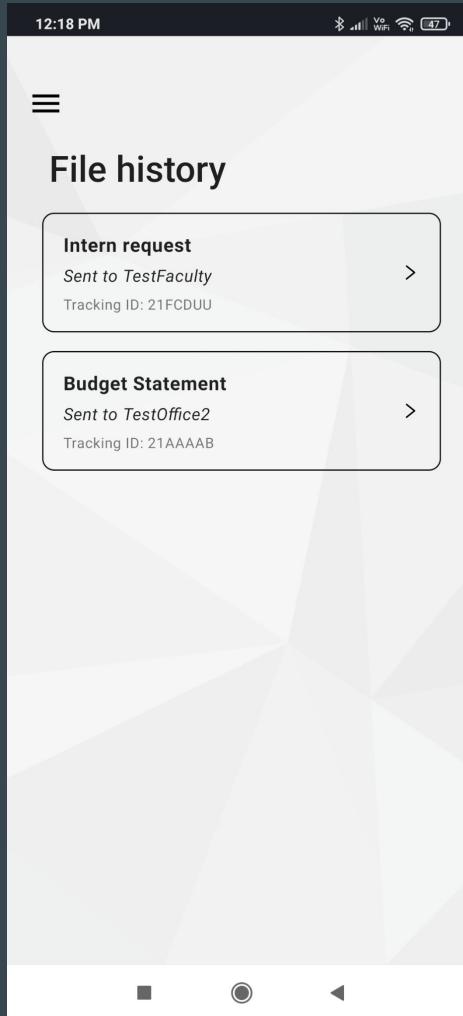
## Filter by date

Filter files using starting and ending date



## Date picker

Navigate using a user friendly date picker



# Screenshots

## Web App



**Trackify**

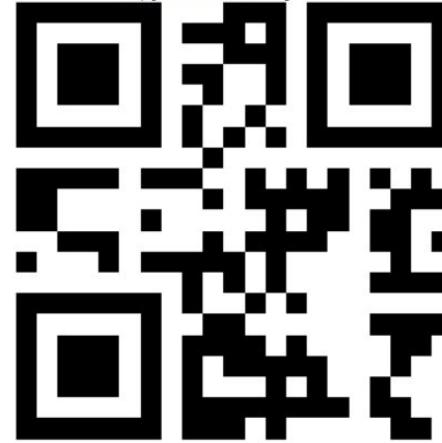


## Login using Email

Enter your email

GET OTP

Or, just scan this QR code



SearchName 

Accounts Section

 + Create New File \* Track File by ID

Created

Incoming Queue

Received

File History

 Manage Offices Logout

### Create a File

Name\*

Type\*

 Form

Submitting To\*

Transfer Ownership

 CREATE CANCEL

Name	Tracking ID	Type	Status	Date	Tags
Ekans			Student	19/04/2021	
Ekans			Student	19/04/2021	
Testlin			Student	19/04/2021	
Test F				18/04/2021	
Test F			Students Section	18/04/2021	
Test F			Students Section	18/04/2021	
Test F				18/04/2021	
Travel Reimb.			Students Section	18/04/2021	
File 2	21DRDVC	Bill	File Processed	17/04/2021	
File 1	21AAAAB	Form	Currently with Accounts Section	17/04/2021	

Create a file

▼

## Accounts Section ▾

[+ Create New File](#)[Track File by ID](#)

## Created

## Incoming Queue

## Received

## File History

[Manage Offices](#)[Logout](#)

Name	Tracking ID	Type	Status	Date ↑	Tags
Ekansh Mahendru	21TPNRR	Form	Sent to Dean Student Affairs	19/04/2021	
Ekansh Mahendru	21BJOOZ	Form	Sent to Dean Student Affairs	19/04/2021	
Testing File	21GCRPT	Form	Sent to Dean Student Affairs	19/04/2021	
Test File 4	21VIDJO	Form	File Processed	18/04/2021	
Test File 3	21GHURR	Form	Sent to Accounts Section	18/04/2021	
Test File 2	21EKSMQ	Form	Sent to Accounts Section	18/04/2021	
Test File	21FCDUU	Form	File Processed	18/04/2021	
Travel Reimbursement	21TPVWLW	Form	Sent to Accounts Section	18/04/2021	
File 2	21DRDVVC	Bill	File Processed	17/04/2021	
File 1	21AAAAB	Form	Currently with Accounts Section	17/04/2021	

Created files

Accounts Section

+ Create New File

\* Track File by ID

Created

Incoming Queue

Received

File History

Manage Offices    Logout

	Name	Created By	Department	Sent By	Tracking ID	Type	t
✓	adminfile	admin	Electrical Engineering	Self	21QATAJ	Form	19/C
✓	Test Mail	admin	Electrical Engineering	Self	21UYWHS	Form	19/C
✓	Test Mail	admin	Electrical Engineering	Self	21TXTBY	Form	19/C
✓	Test Mail	admin	Electrical Engineering	Self	21EDMNR	Form	19/C
✓	Test File 3	Ekansh Mahendru	Computer Science and Engineering	Self	21GHURR	Form	18/C
✓	Test File 2	Ekansh Mahendru	Computer Science and Engineering	Self	21EKSMQ	Form	18/C
✓	Travel Reimbursement	Ekansh Mahendru	Computer Science and Engineering	Self	21TPVLW	Form	18/C

## Incoming Queue

TestOffice2

+ Create New File

Track File by ID

Created

Incoming Queue

Received

File History

Manage Offices Logout

Search				Name	▼	
Name	Created By	Department	Tracking ID	Type	Date ↑	Tags
Intern request	Hansin Ahuja	Computer Science and Engineering	21FCDUU	Letter	19/05/2021	
Budget Statement	Hansin Ahuja	Computer Science and Engineering	21AAAAB	Bill	19/05/2021	

## File History

TestOffice2

+ Create New File

Track File by ID

Created

Incoming Queue

Received

File History

Manage Offices

Logout

Search

Name

Name	Created By	Department	Tracking ID	Type	Date ↑	Tags
Intern request	Hansin Ahuja	Computer Science and Engineering	21FCDUU	Letter	19/05/2021	
Budget Statement	Hansin Ahuja	Computer Science and Engineering	21AAAAB	Bill	19/05/2021	

### Intern request

**Sent to TestFaculty**  
Wed May 19 2021 17:53:26 GMT+0530 (India Standard Time)  
No Remarks

**Passed on by TestOffice2**  
Wed May 19 2021 17:48:05 GMT+0530 (India Standard Time)  
No Remarks

CLOSE

Search

Name

Accounts Section

[+ Create New File](#)[# Track File by ID](#)

Created

Incoming Queue

Received

File History

[Manage Offices](#)[Logout](#)

Name	Tracking ID	Type	Status	Date	Tags
------	-------------	------	--------	------	------

Ekansh Mahendru	21TPNRR	Form	Sent to Dean Student	19/04/2021	
-----------------	---------	------	----------------------	------------	--

Ekansh Mahendru			Student	19/04/2021	
-----------------	--	--	---------	------------	--

Testing			Student	19/04/2021	
---------	--	--	---------	------------	--

Test F				18/04/2021	
--------	--	--	--	------------	--

Test F			Accounts Section	18/04/2021	
--------	--	--	------------------	------------	--

Test F			Accounts Section	18/04/2021	
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Test F				18/04/2021	
--------	--	--	--	------------	--

Travel Reimbursment	21TPVLW	Form	Sent to Accounts Section	18/04/2021	
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File 2	21DRDVC	Bill	File Processed	17/04/2021	
--------	---------	------	----------------	------------	--

File 1	21AAAAB	Form	Currently with Accounts Section	17/04/2021	
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### Track a File

Tracking ID#:

 TRACK CLOSE

Track a file

# Brief Feedback / Testimonial

- The app has been distributed to a couple of offices and is in beta testing mode.
- The response has been extremely positive, and we've received some constructive feedback as well.
- The users are really enthusiastic about the possibility of reducing paperwork, and simply maintaining an audit trail by scanning files. They appreciate the interface of the app.
- The users have requested a few more features, and we'll be evaluating the possibilities of these in the future.

# Individual contributions

## Ekansh

- Worked primarily on the backend.
- Worked on backend-frontend integration.
- Worked on Web App design.

## Hansin

- Worked primarily on the frontend.
- Worked on backend-frontend integration.
- Worked on testing the final product.

## Sakshay

- Worked primarily on the backend.
- Worked on office integration.
- Worked on testing the final product.

Thank you!