



MICROSOFT DESIGN CHALLENGE - 2022

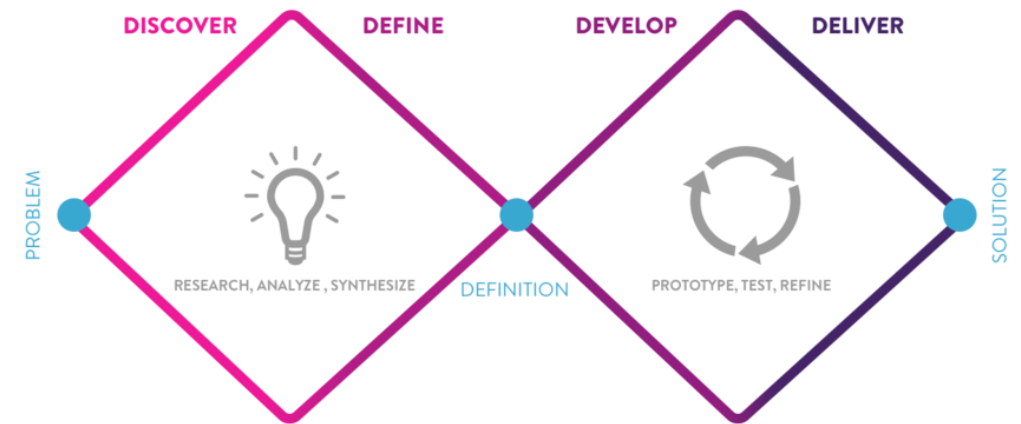
LEARNING AND COLLABORATION

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PROCESS PLANNING

- “Ideation begins only after analysis”.
- **Task 1** – I read the four themes assigned for this year’s competition and gave each one of them a thorough thought. The idea was to put me in various situations related to **Collaboration, Learning, Well Being and Security** and come up with a list of things missing in these fields.
- **Task 2** – I chose **Learning and Collaboration** as the fields to explore. I quickly realised, that, as we are moving into an online/ hybrid world where your presence in classes, meetings, gatherings is now moving online, there is an instant need for resource management systems. I will describe the same in the following slides.
- **Task 3** – Ideate, design and perfect a UX solution that can meet the need of the hour.



The Double Diamond Design Process

PREMISE

- **Collaboration** is one of the primary drivers of human development. Moreso, in the learning space.
- When the world was still an “offline” playground, all resources provided by the professors and lecturers were hard copies of
 - practice sheets
 - quizzes, assessment papers
 - grade cards, and so on.
- Students maintained files and folders to store these resources for future use.
- With an accelerated movement into the “hybrid” world, it is now necessary to look at online versions for resource management. The material we have to store now - **links**. These are links to
 - online drive files, folders
 - links to assessment portals
 - online question banks
 - grades portal for each course, and so on.



ROAD TO IMPLEMENTATION

STEPS I TOOK TO ARRIVE AT THE FUNCTIONALITY-LIST.



STUDY THE USER'S NEED

- The target audience for this solution is **college students**. Consider a generic college student.
- This student has N courses which have **one in-charge** each. Each **course is a bucket of resources** that help the student complete these courses, and manage his/her activity with respect to the course.
- The student needs a dashboard of course buckets that contain these 2 information bits.
- Apart from this, the resources can be linked to different entities like – **folders, files, online management portals**.
- Students need not manage only courses though. These buckets need to be generalised to all project/ daily resource management needs of the user.

Resource
Link 1

Resource
Link 2

Portal
Link 1

Similar
Info for
bucket 2

Bucket 1

Bucket
2

Student RMS

MY PROBLEM STATEMENT

- Every professor has his/her own teaching style and resources, their unique assessment patterns and platforms. Moreover, students need to track their online resources efficiently and sensibly.
- There needs to be a solution for a **student** to create **virtual buckets** of resources that he/ she encounters on a daily basis.
- These **buckets** can be created by the individual to document a collection of resources, that could be
 - Links to Online Files/ Folders shared by others, related to a particular bucket.
 - Links to Online Portals that help the individual track his/ her academic progress.
 - These resource buckets must be shareable and the solution must minimize the “clicks-to-action” ratio.

FUNCTIONALITIES OF THE SOLUTION

- The virtual buckets will contain information about
 - Person in charge of the bucket activities – course instructor, internship manager, etc.
 - The various resources that are associated with that bucket
 - Links to **online files and folders** shared by the in-charge.
 - Links to **online portals that manage the activity** represented by that bucket.
 - Link to the **user's personal notes and task submissions** on the topic.
- These buckets will be created, shared, edited by the users of the app, hence promoting and implementing **Collaboration between students in the Learning sphere, to get things done quickly with minimum clicks-to-action.**
- The users **can manage their profiles and data on an yearly basis**, for each academic year. Hence, going back to a past activity is very simple and lightweight on the app server, as well.

PLAN THE UX

- The app is structured into two layers.
 - A dashboard of buckets
 - A view for individual buckets, containing resources.
- Hence, if a user wanted to access a resource for a particular bucket, he would need 2 clicks only. One, to open the bucket he wants, and second to select the resource. Clicks-to-action of 2 is a very good number for this app.
- This hierarchical flow is well understandable and simple for any user, irrespective of background in technology and app usage.
- Other side-line features like User Profile, App Settings are added away from the user's gaze, on the Navigation tray.

PLAN THE UI

- The UI has to be **formal, yet comfortable, soothing on the eye**. This will bring the users back to the app, to add and access resources, making full use of the system.
- A **funky, modern UI is to be avoided**, simply because this app is targeted for the management of resources, related to courses, projects, work undertaken by the student in the Learning sphere.
- The **fonts and logos on the app have to be standard and intuitive**. Only then will the productivity of the users shoot up and they will be able to get work done faster, and in time. **Seeking the attention of the user is a very difficult task in modern-day app building**.
- The number of colours have to be **minimal** and such a design will go a long way in simplifying the tasks for the user.

MY CONSTRAINTS

- College Examinations and Time Planning
 - My semester examinations are exactly at the same time as the MS Design Challenge 😊 and academics is a higher priority.
 - However, my passion for UX will keep me driving towards this project. I needed to find the right balance.
- Feasibility of the Solution
 - The solution I propose must be relevant to the current scheme of things in the world, and also be implementable.
 - A solution that is awesome but can be implemented only 30 years into the future is of no use for this project.
- Relevance of the Problem
 - The problem I identify has to be the need of the hour.
 - It must affect some audience, be it small or big. The solution must be generalized enough for scalability in future.



MY SOLUTION

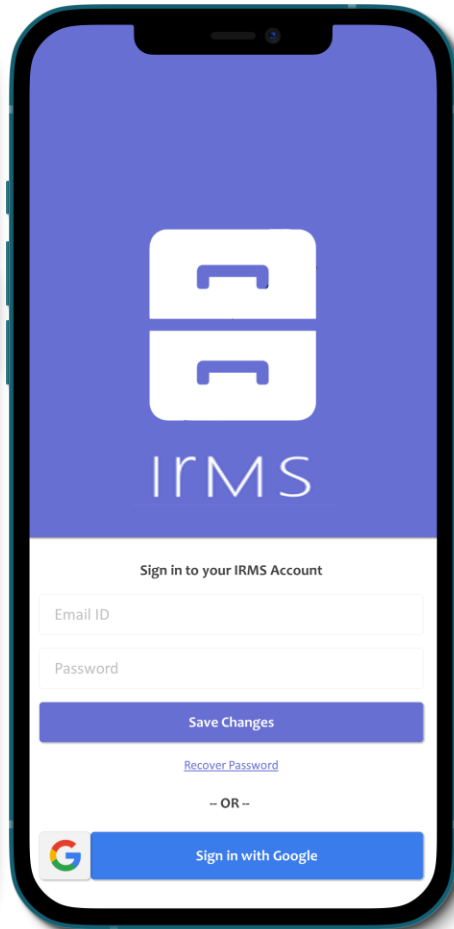
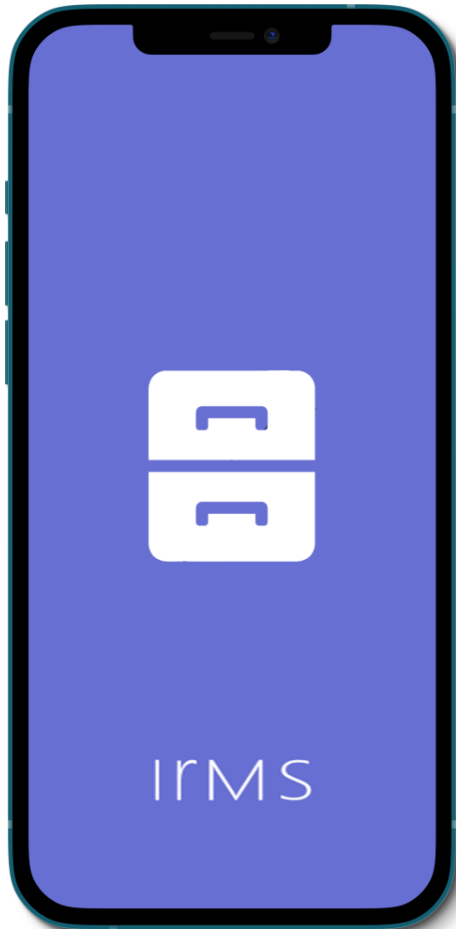
HERE IS THE BREAKDOWN OF THE SOLUTION



HIGH FIDELITY OVERVIEWS – LIGHT AND DARK MODE

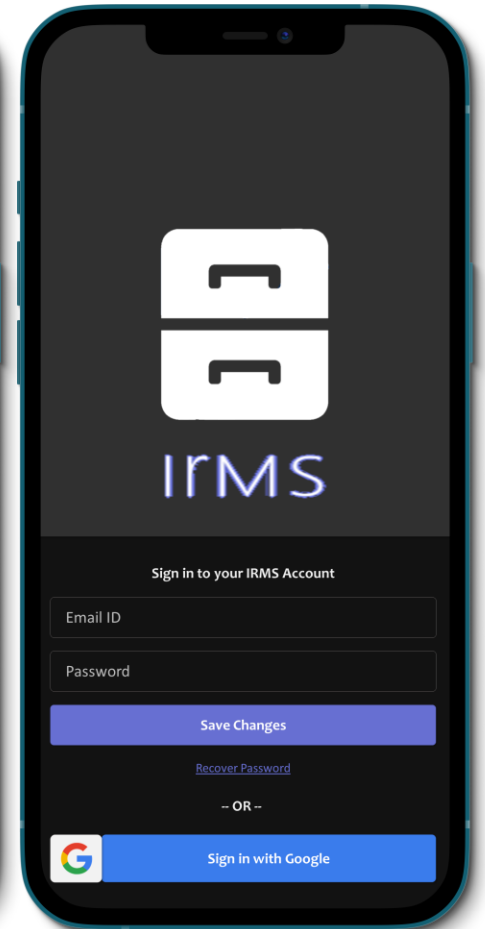


THE SPLASHSCREEN AND LOGIN PAGE

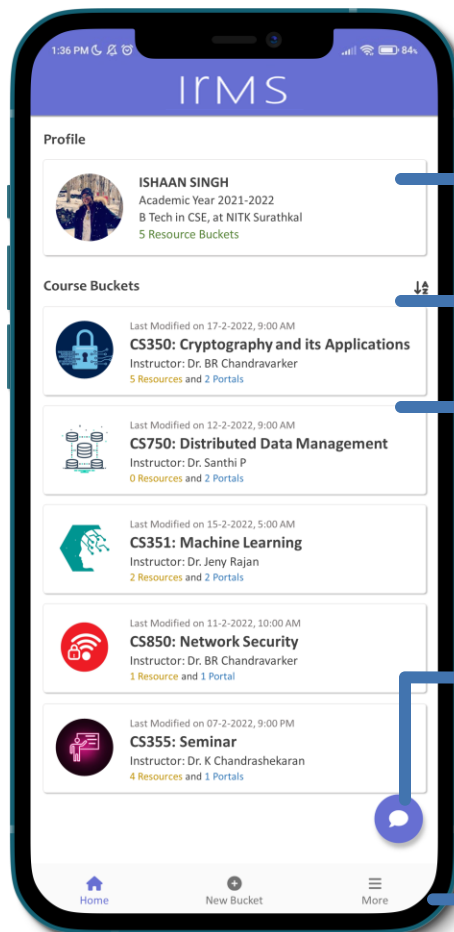


The splash screen has a simple “cabinet” logo that is the universal symbol for the management of files and folders in the offline world. So the user will instantly connect with the purpose of the app.

The app’s splash screen transitions in to the login with a simple slide-up transition, inviting the user to sign-in. The traditional email-id and password mechanism as well as Google sign-ins are possible.



DASHBOARD OF BUCKETS



User Profile Card is the user's way to connect to the setting of the app. The active academic year is mentioned. This can be changed in the settings of the app, to travel to a previous year and refer to the past buckets.

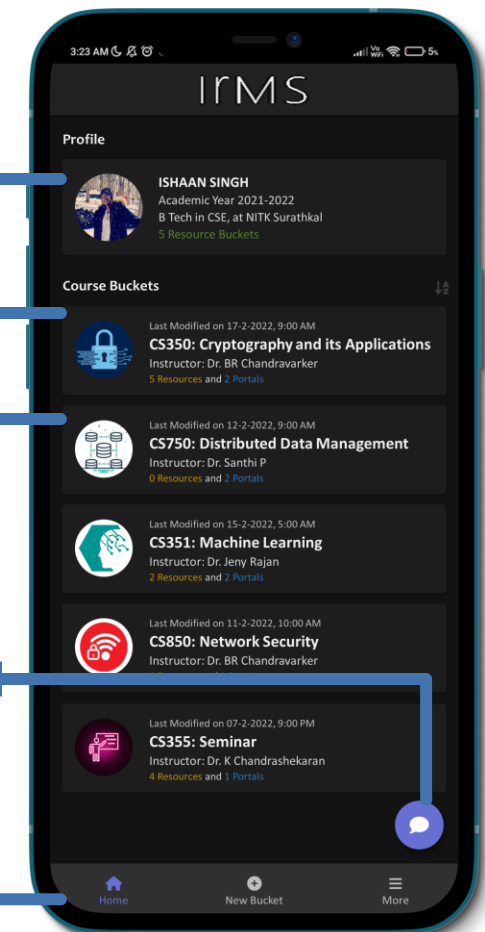
The buckets can be sorted alphabetically, just as one would expect intuitively from a list.

Care is taken to keep the bucket cards as simplistic as possible. Every bucket card has an image that helps the user connect to the activity. In addition, important information like the Name of the Bucket, In-charge, last modified datetime, and the number of resources inside the bucket are enlisted.

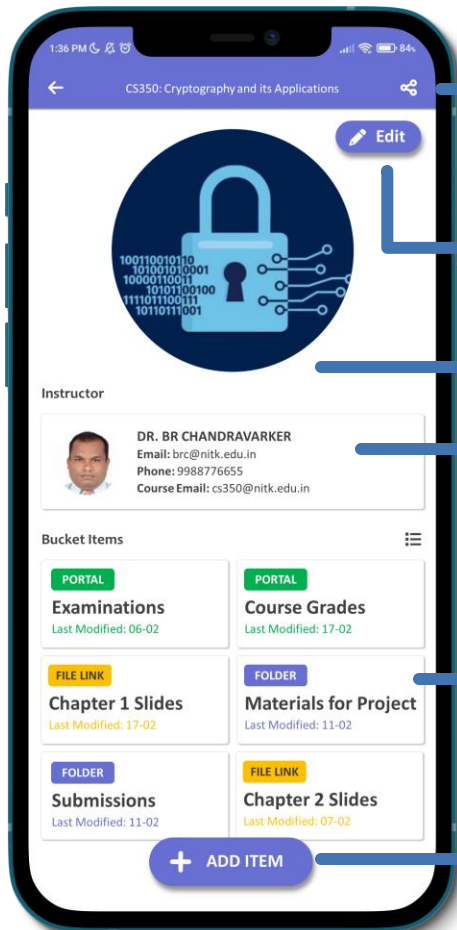
User feedback is ever-important, and quick pop-up feedback is provisioned.

The navigation tray encapsulates important but side-line features of the app like

- Creation of new buckets
- Settings for the app and user preference settings



SINGLE BUCKET VIEW



The **Share button** allows the student to share the bucket with other users as a JSON via a **QR code**, which will call an **in-app API** to create the same bucket on the target user's end, simplifying the **collaboration** process.

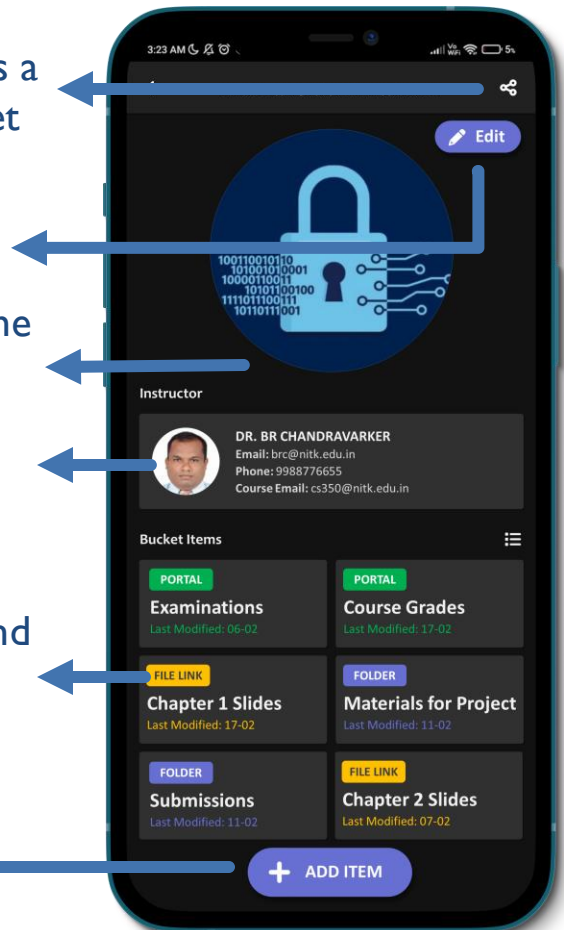
The **EDIT** button on the top **lets the user edit Bucket Info**, as expected.

The logo of the bucket is shown on this page to catch attention and focus the user on the screen. **It is the first thing the user sees on the page.**

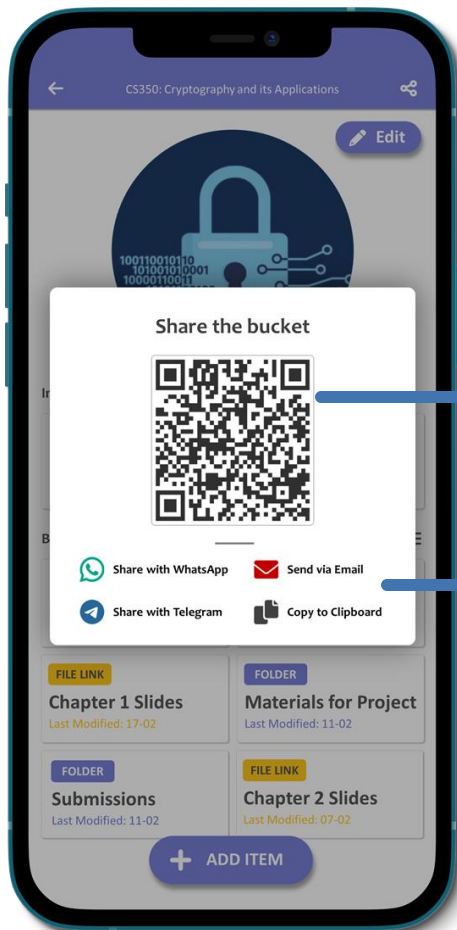
The instructor info can be copied to the clipboard with a single click. It shows all the relevant information about the in-charge of the bucket's activity.

The resources are labelled as – **Portal, File Link or Folder** – signifying the kind of link they represent. They can be seen in list or grid view, as needed, Clicking on these resource cards will open an “**Edit Resource Page**” from where the user can use a clickable link to go to that webpage.

The **ADD ITEM** opens a form to **add a new resource to the bucket.**



SHARE THE BUCKET WITH OTHERS



The **QR code** can be scanned, which will call a **Web-to-App API** to create the same bucket on the target user's end, simplifying the **collaboration** process.

The progress of the users will be shared with the target users and they can manage and track the progress with the activity together.

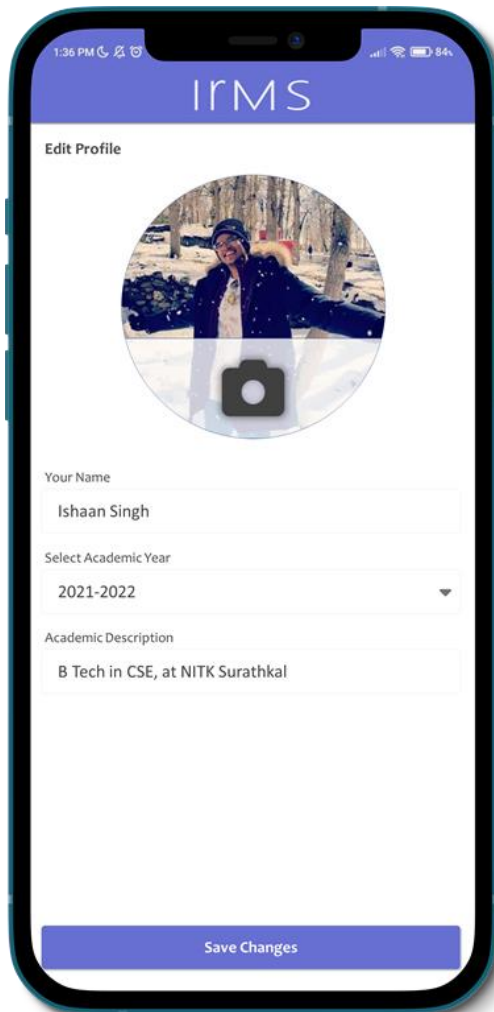
True learning is a consequence of effective collaboration.

The same **web-to-app link** can be sent via WhatsApp, Telegram, Email or through some other app by copying the same to the clipboard.

Collaboration in 2 clicks-to-action!




FORMS ON THE APP



1:36 PM 84%

IRMS

Edit Profile



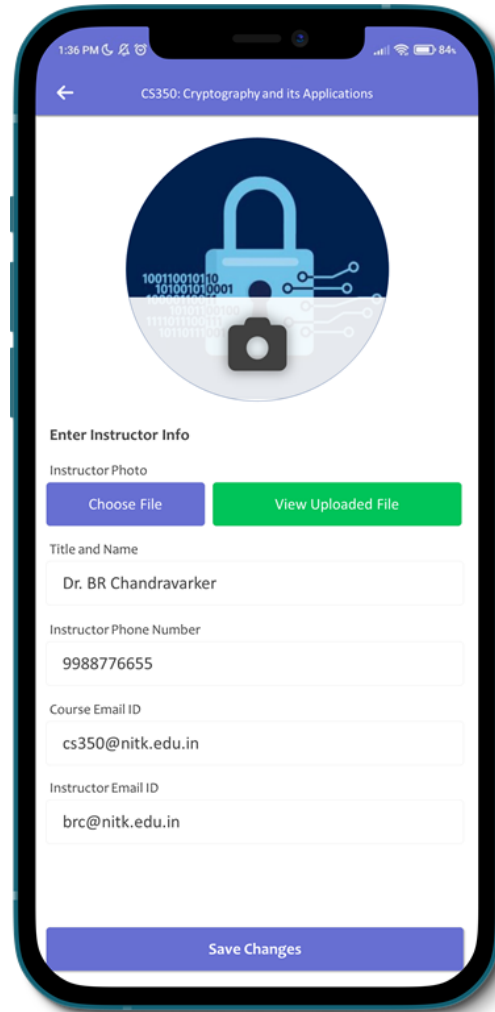
Your Name
Ishaan Singh

Select Academic Year
2021-2022

Academic Description
B Tech in CSE, at NITK Surathkal


Save Changes

Student Profile Edit Page





1:36 PM 84%

CS350: Cryptography and its Applications



Enter Instructor Info

Instructor Photo
 

Title and Name
Dr. BR Chandravarker

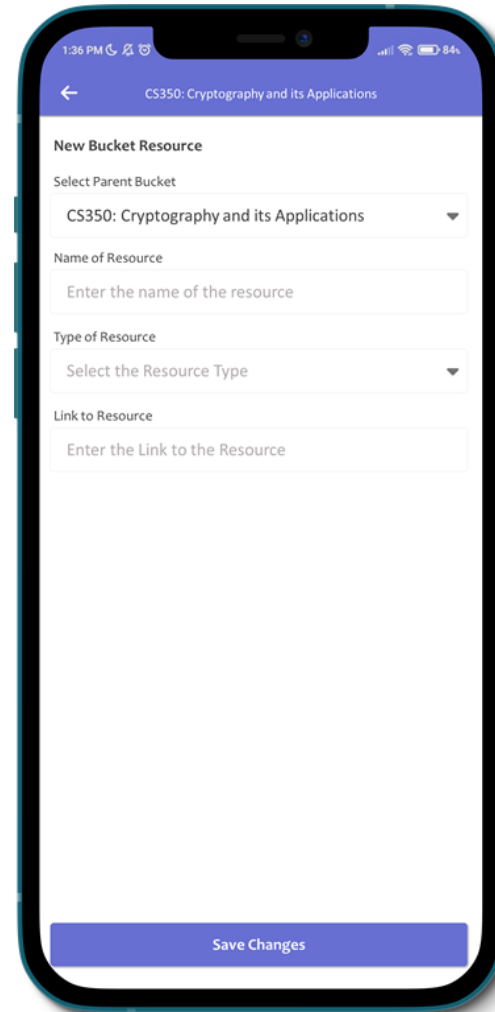
Instructor Phone Number
9988776655

Course Email ID
cs350@nitk.edu.in

Instructor Email ID
brc@nitk.edu.in

Save Changes

Bucket Info Edit Page



1:36 PM 84%

CS350: Cryptography and its Applications

New Bucket Resource

Select Parent Bucket
CS350: Cryptography and its Applications

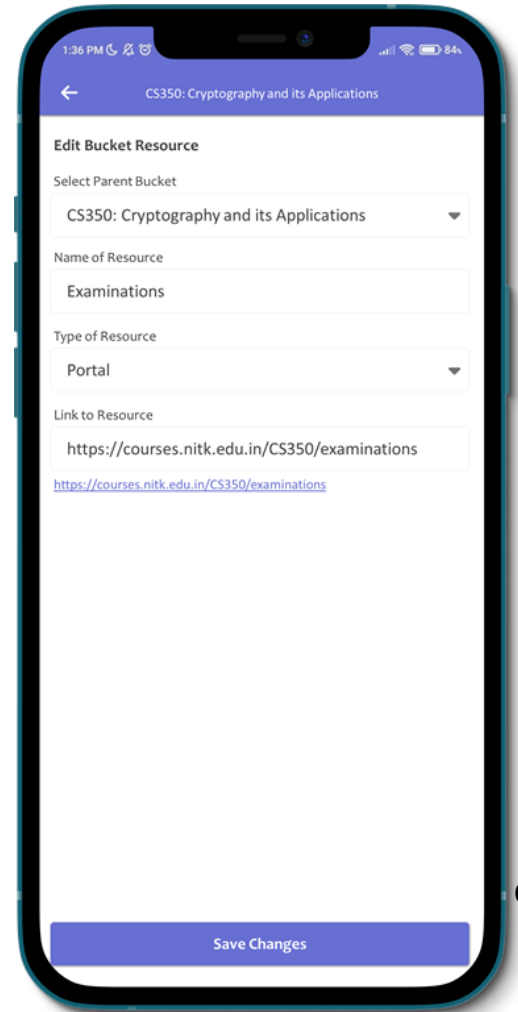
Name of Resource
Enter the name of the resource

Type of Resource
Select the Resource Type

Link to Resource
Enter the Link to the Resource

Save Changes

New Resource Item Page



1:36 PM 84%

CS350: Cryptography and its Applications

Edit Bucket Resource

Select Parent Bucket
CS350: Cryptography and its Applications

Name of Resource
Examinations

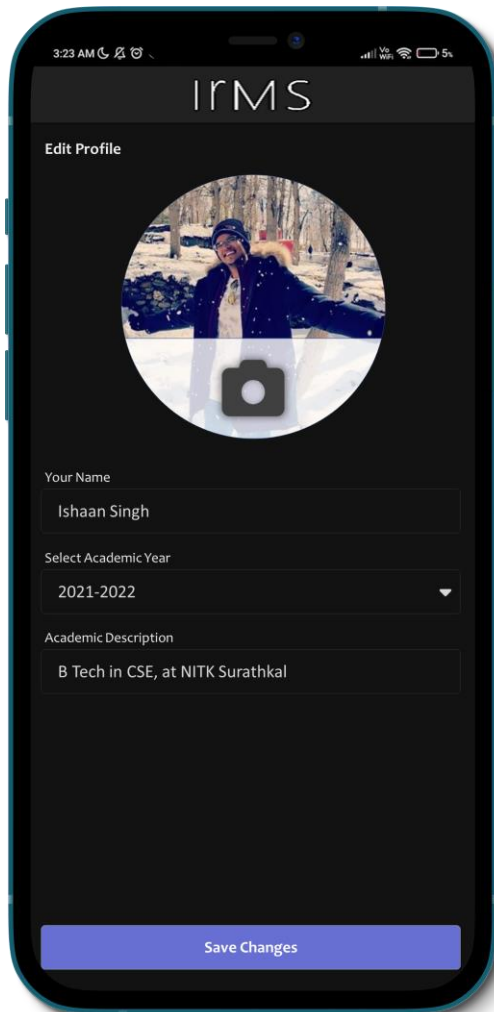
Type of Resource
Portal

Link to Resource
<https://courses.nitk.edu.in/CS350/examinations>

Save Changes


Edit Resource Item Page

FORMS ON THE APP



IrMS

Edit Profile



Your Name

Ishaan Singh

Select Academic Year

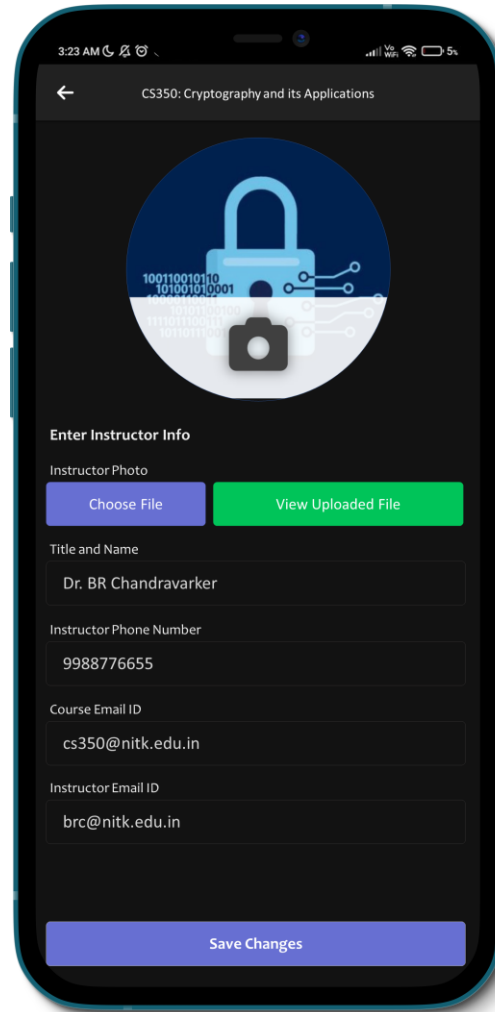
2021-2022

Academic Description


B Tech in CSE, at NITK Surathkal

Save Changes

Student Profile Edit Page





CS350: Cryptography and its Applications



Enter Instructor Info

Instructor Photo

Title and Name

Dr. BR Chandravarker

Instructor Phone Number

9988776655

Course Email ID

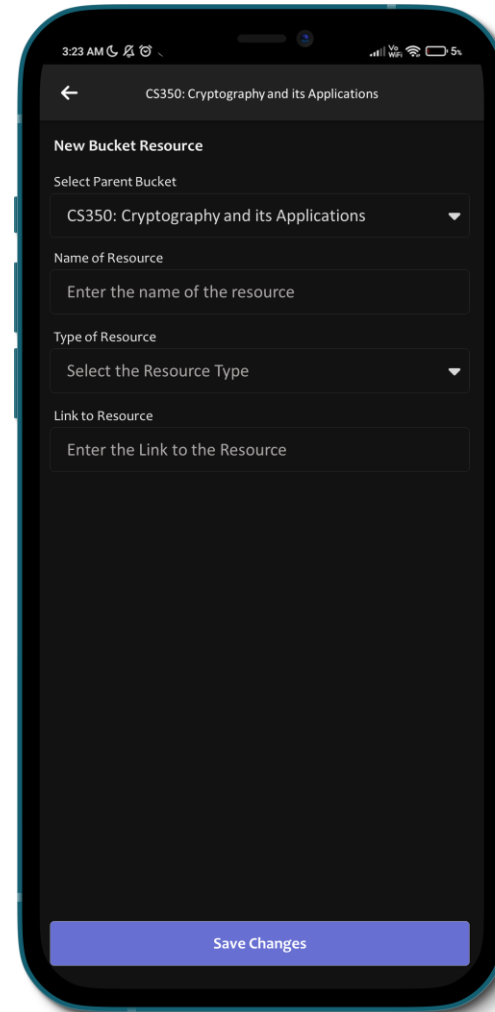
cs350@nitk.edu.in

Instructor Email ID

brc@nitk.edu.in

Save Changes

Bucket Info Edit Page



CS350: Cryptography and its Applications

New Bucket Resource

Select Parent Bucket

CS350: Cryptography and its Applications

Name of Resource

Enter the name of the resource

Type of Resource

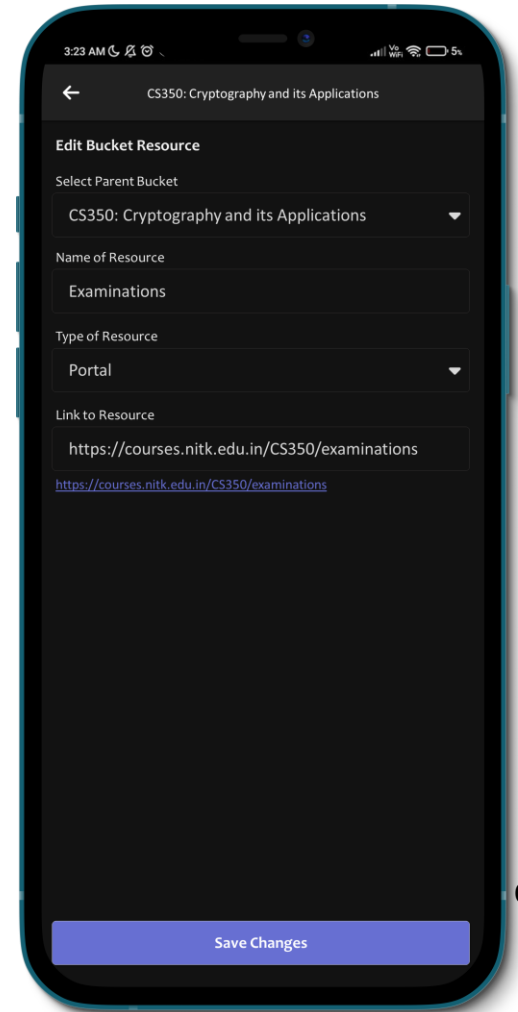
Select the Resource Type

Link to Resource

Enter the Link to the Resource

Save Changes

New Resource Item Page



CS350: Cryptography and its Applications

Edit Bucket Resource

Select Parent Bucket

CS350: Cryptography and its Applications

Name of Resource

Examinations

Type of Resource

Portal

Link to Resource

<https://courses.nitk.edu.in/CS350/examinations>

<https://courses.nitk.edu.in/CS350/examinations>

Save Changes

Edit Resource Item Page

CONCLUSION – LEARNING AND COLLABORATION

- UX design is a **powerful engine** that can bring ideas to life. However simple the idea may be, UX has the power to make it **impactful and resilient**.
- When I first came up with this idea based on my previous experience in Lockdown, I did not realize its potential right away. But **the more I thought about it, the more I saw relevance** – in the life of students, in the **Learning** sphere, that can help students **collaborate** in this hybrid world, track and share their resources, learn better and more efficiently.
- I was also shocked to see no such product in existence, and the fun of working on something new drives me, always.
- Helping students manage resources in this hybrid world is **an absolute need of the hour** and the existence of a solution like mine is something that **has to be brought to life**.
- This solution makes learning more efficient and meaningful, allowing students to have all their resources on the tip of their fingers, 2 clicks away.