Development Engineering Project (CP301)



RnD Grant Management Portal

Team:	Y2
Anshu Kumar	2019csb1074
Ayush Verma	2019csb1147
Himanshu Yadav	2019csb1263
Vishawam Datta	2019csb1305

Mentor: Dr. Puneet Goyal
Department of Computer Science and Engineering
IIT Ropar

https://github.com/Ayushverma37/DEP

https://wonderful-youtiao-7246a1.netlify.app

Short Summary

Designed a web based application to fulfill the purpose of automated research grant management. Necessary functions such as the generation of summary, commenting on problematic rows, searching etc. were implemented to reduce the human effort involved and to provide a smooth user experience.

Techstack/Technologies used

FRONT END:

- ☐ REACT JS
- □ REACT BOOTSTRAP
- MATERIAL UI
- □ SHEET JS

DATABASE:

PostgresSQL

BACK END:

- NODE JS
- EXPRESS
- □ Google oAuth

DEPLOYMENT:

- Netlify
- Heroku

Features

- Backend API routes are secured using JWT so as to prevent unauthorised API calls to the backend server.
- □ Supports secured Google oAuth2 based login.
- Authorisation of users as professors or Admins.
- Searching capabilities on project lists by different attributes to reduce the manual efforts.
- Automated summary table generation and updation dynamically.
- CRUD operation support on expense rows.
- Commenting feature for each row of all the tables with email based notification.
- Appropriate checks are imposed so as to avoid erroneous inputs(such as expenditure exceeding the sanctioned amount, DOS exceeding DOC)

Implemented functionalities to incorporate the conversion of committed expenses to possibly different actual expenses. **Exporting** the contents of expenditure and summary table as an **excel** file. **Importing** the contents of the funds from an **excel file**. Division of funds and expenses into 2 major heads of Recurring and Non-Recurring with focus on different subheads as well. The total balance of a project may temporarily be negative as long as the expenditure does not exceed the sanctioned amount. Database design implemented keeping efficiency of **CRUD operation** in mind (For ex: A separate table for each professor's projects).

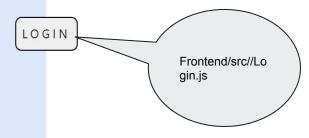
Home Page and Login



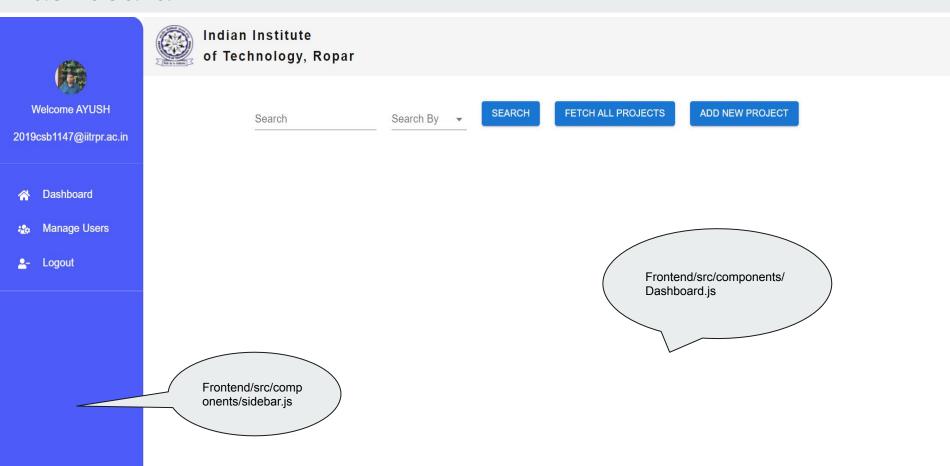


Welcome To

RnD Grant Management Portal



Dashboard



List of Projects



Indian Institute of Technology, Ropar

Backend/comp onents/listOfPr ojects.js

Backend/comp onents/create Project.js

Welcome AYUSH

2019csb1147@iitrpr.ac.in

- Dashboard
- Manage Users
- ♣- Logout

Search Search By

SEARCH

FETCH ALL PROJECTS

ADD NEW PROJECT

Export Project List Table to Excel Sheet

		PI		Agency	Title	Sanctioned order no.	Sanctioned date	Project Cost	Duration	Year Sanctioned	DOS	DOC	View Project	Delete Project
3	Dr. Puneet	-	CSE	IIT Ropar	DEP2	125	2022-05-03	100000	1 yr	2020	2020- 05-17	2021- 05-17	0	ī
2	Dr. Rajeev Ahuja	-	Material Science	IIT Ropar	DEP Eval	103	2022-05-17	100000	2 yr	2022	2022- 05-17	2024- 05-17	•	•
1	Vishawam	-	CSE	IIT Ropar	DEP1	101	2022-05-09	90000	2 yrs	2020	2020- 05-09	2022- 05-17	0	ī

Frontend/src/compon ents/ProjectsTable.js

Search Projects



2- Logout

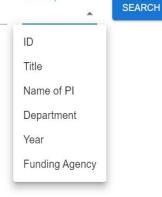


Search

Backend/comp onents/specific Project.js

FETCH ALL PROJECTS

ADD NEW PROJECT



Search By

Manage Users



Indian Institute of Technology, Ropar

Backend/compon ents/addUser.js

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- Dashboard
- Manage Users
- ≜- Logout

Backend/compon ents/getUser.js

Email Address Name

Role (Admin/Professor)

ADD NEW USER

Name	Email	Role	Remove
Ayush	2019csb1147@iitrpr.ac.in	Admin	
Anshu Kumar	2019csb1074@iitrpr.ac.in	Admin	Θ
Vishawam Datta	2019csb1305@iitrpr.ac.in	Admin	Θ
Dr. Rajeev Ahuja	iashverm@gmail.com	Professor	Θ
Dr. Puneet	vishawamd94@gmail.com	Professor	A
			rontend/src/compon nts/manageuser.js

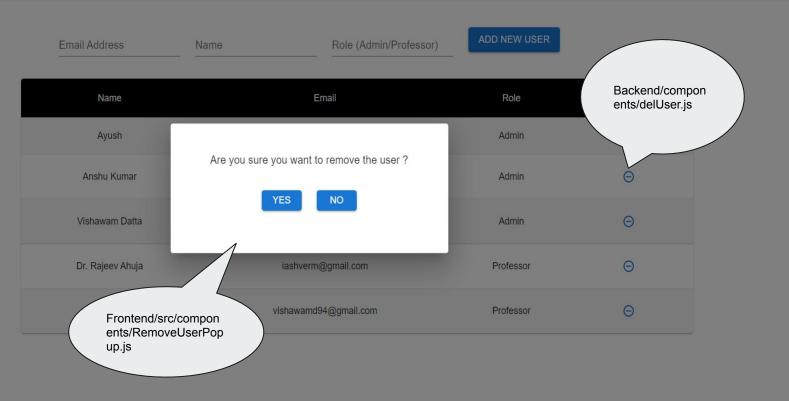
Remove User



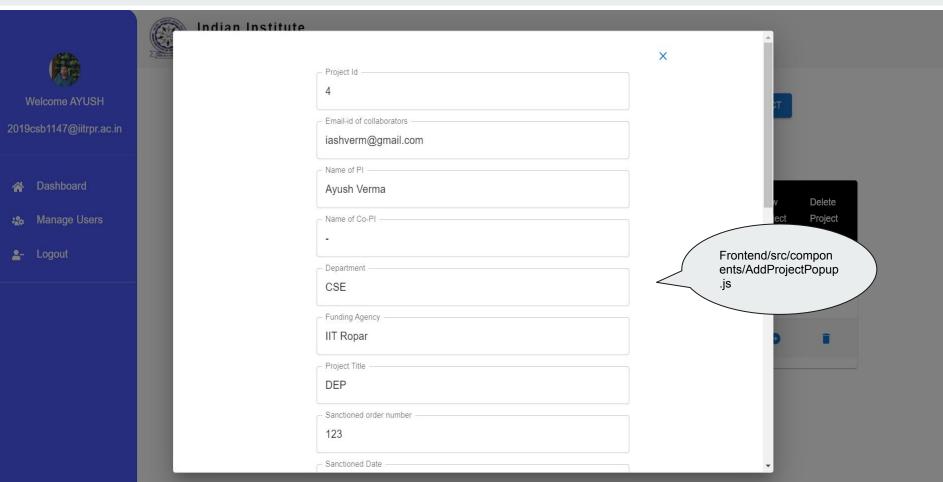
2019csb1147@iitrpr.ac.in

- Dashboar
- Manage User
- 2- Logout





Add New Project Popup



Delete Project



2019csb1147@iitrpr.ac.in

- Dashboard
- Manage Users
- Logout



Indian Institute of Technology, Ropar

Search Search By SEARCH FETCH ALL PROJECTS ADD NEW PROJECT

Export Project List Table to Excel Sheet

ID	Pl	Co- Pl	Dept	Funding Agency	Title	Sanctioned order no.	Sanctioned date	Total Project Cost	Duration	Year Sanctioned	DOS	DOC	View Project	Delete Project
3	Dr. Puneet	-	CSE	IIT Ropar	DEP2	125	2022-05-03	100000	1 yr	2020	2020- 05-17	2021- 05-17	0	
2	Dr. Rajeev Ahuja	-	Material Science	IIT Ropar	DEP Eval	103	2022-05-17	100000	2 yr	2022	2022- 05-17	2024- 05-17	0	
1	Vishawam	1.	CSE	IIT Ropar	DEP1	101	2022-05-09	90000	2 yrs	2020	2020- 05-09	2022- 05-17	0	

Backend/compon ents/delProject.js

Project Main Page



Welcome AYUSH

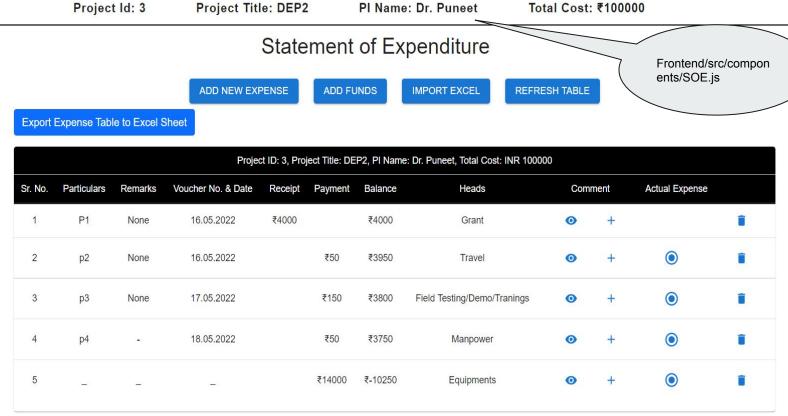
2019csb1147@iitrpr.ac.in



Manage Users

Logout





PI Name: Dr. Puneet

Total Cost: ₹100000

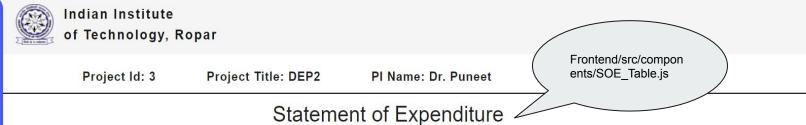
Statement Of expenditure Table



Dashboard

Manage Users

Logout



ADD NEW EXPENSE

ADD FUNDS

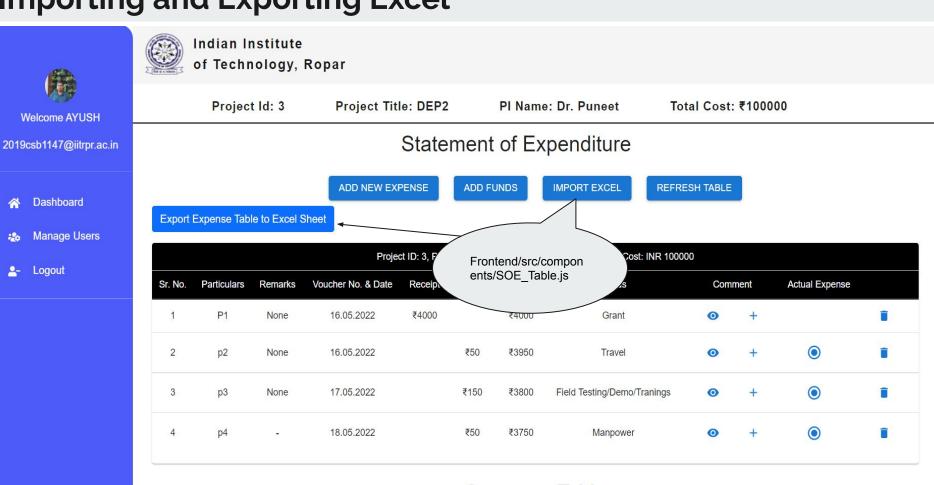
IMPORT EXCEL

REFRESH TABLE

Export Expense Table to Excel Sheet

		Projec	ct ID: 3, Pro	ject Title: DE	P2, Pl Name	: Dr. Puneet, Total Cost: INR 10000	00		
Particulars	Remarks	Voucher No. & Date	Receipt	Payment	Balance	Heads	Comme	er	Backend/component
P1	None	16.05.2022	₹4000		₹4000	Grant	0		s/getMainTable.js
p2	None	16.05.2022		₹50	₹3950	Travel	0	+	
р3	None	17.05.2022		₹150	₹3800	Field Testing/Demo/Tranings	0	+	•
р4	-	18.05.2022		₹50	₹3750	Manpower	0	+	•
-	-	-		₹14000	₹-10250	Equipments	•	+	•
	P1 p2 p3	P1 None p2 None p3 None	Particulars Remarks Voucher No. & Date P1 None 16.05.2022 p2 None 16.05.2022 p3 None 17.05.2022	Particulars Remarks Voucher No. & Date Receipt P1 None 16.05.2022 ₹4000 p2 None 16.05.2022 p3 None 17.05.2022	Particulars Remarks Voucher No. & Date Receipt Payment P1 None 16.05.2022 ₹4000 ₹50 p2 None 16.05.2022 ₹50 p3 None 17.05.2022 ₹150 p4 - 18.05.2022 ₹50	Particulars Remarks Voucher No. & Date Receipt Payment Balance P1 None 16.05.2022 ₹4000 ₹4000 ₹4000 p2 None 16.05.2022 ₹50 ₹3950 p3 None 17.05.2022 ₹150 ₹3800 p4 - 18.05.2022 ₹50 ₹3750	Particulars Remarks Voucher No. & Date Receipt Payment Balance Heads P1 None 16.05.2022 ₹4000 ₹4000 Grant p2 None 16.05.2022 ₹50 ₹3950 Travel p3 None 17.05.2022 ₹150 ₹3800 Field Testing/Demo/Tranings p4 - 18.05.2022 ₹50 ₹3750 Manpower	Particulars Remarks Voucher No. & Date Receipt Payment Balance Heads Common P1 None 16.05.2022 ₹4000 ₹4000 Grant ● p2 None 16.05.2022 ₹50 ₹3950 Travel ● p3 None 17.05.2022 ₹150 ₹3800 Field Testing/Demo/Tranings ● p4 - 18.05.2022 ₹50 ₹3750 Manpower ●	P1 None 16.05.2022 ₹4000 ₹4000 Grant p2 None 16.05.2022 ₹50 ₹3950 Travel + p3 None 17.05.2022 ₹150 ₹3800 Field Testing/Demo/Tranings • + p4 - 18.05.2022 ₹50 ₹3750 Manpower • +

Importing and Exporting Excel



Summary Table

Summary Table

Frontend/src/compon ents/SOE_Table.js

Summary Table 4

Export Summary Table to Excel Sheet

	Project ID: 3, Project Title: DEP2, PI Name: Dr. Puneet, Total Cost: INR 100000											
Sr. No.	Heads	Sanctioned Amount	Funds 1YR	Funds 2YR	Funds 3YR	Expenditure	Balance	Commen	t			
1	Rec.	₹80000	₹3000	₹0	₹0	₹250	₹2750	•	+	-		
2	Non-Rec.	₹20000	₹1000	₹0	₹0	₹14000	₹-13000	0	+	1		
3	Manpower	₹20000	₹0	₹0	₹0	₹50	3			/		
	Consumables	₹10000	₹0	₹0	₹0	₹0		kend/con tSumma				
5	Travel	₹10000	₹0	₹0	₹0	₹50	- 0/gc	Camina	, y.jo	//		
5	Field Testing/Demo/Tranings	₹10000	₹0	₹0	₹0	₹150	₹0		+	1		
7	Overheads	₹10000	₹0	₹0	₹0	₹0	₹0	•	+	1		
3	Unforseen Expenses	₹10000	₹0	₹0	₹0	₹0	₹0	0	+	1		
(Equipments	₹15000	₹0	₹0	₹0	₹14000	₹0	0	+	1		
0	Construction	₹5000	₹0	₹0	₹0	₹0	₹0	0	+	1		
1	Fabrication	₹10000	₹0	₹0	₹0	₹0	₹0	0	+	_		

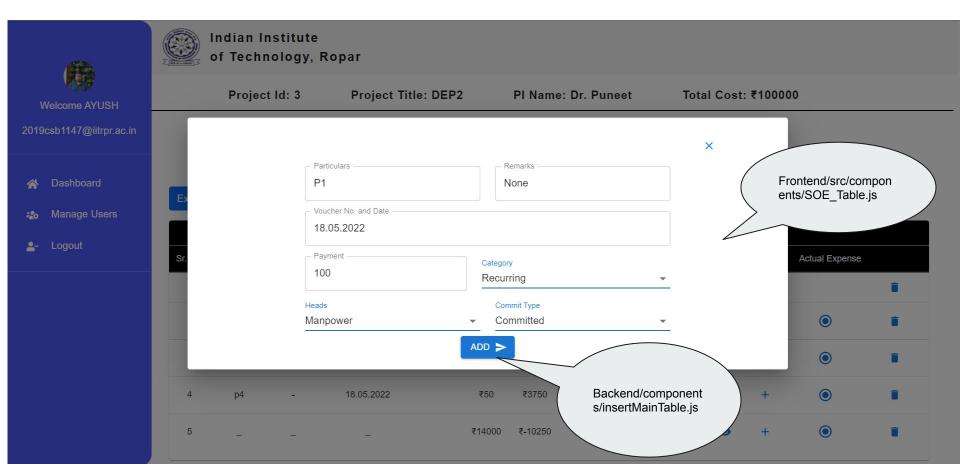
Welcome AYUSH 2019csb1147@iitrpr.ac.in



Manage Users

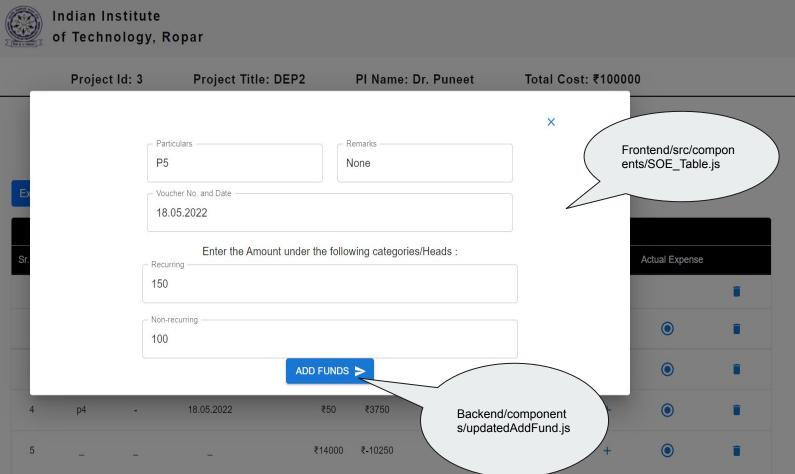
2- Logout

Add New Expense Popup

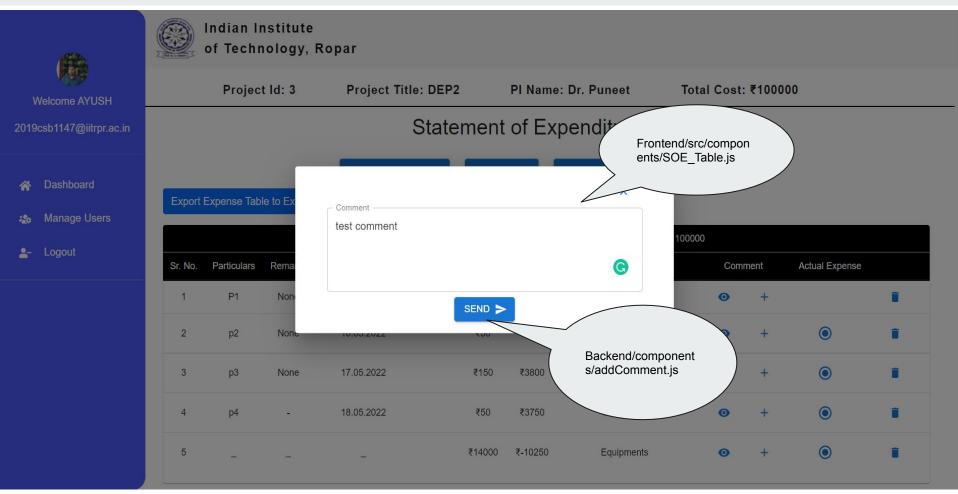


Add Funds Popup



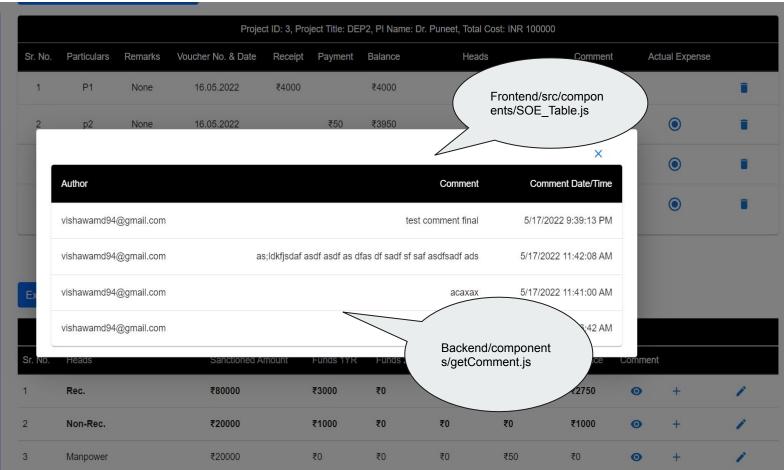


Comment Popup on Expenditure Table

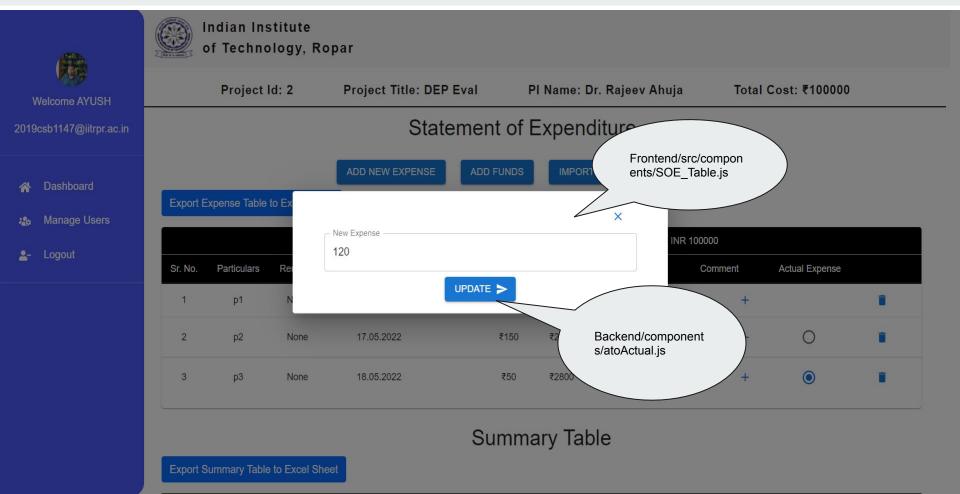


View Comment Popup on expenditure Table



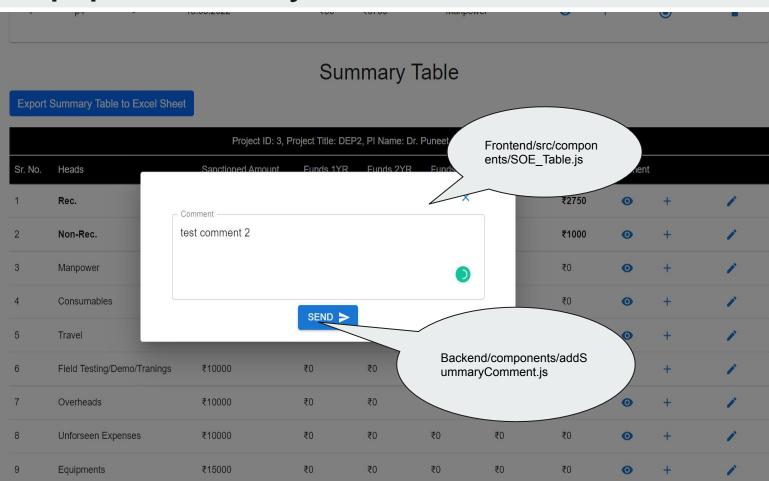


Committed to actual expense

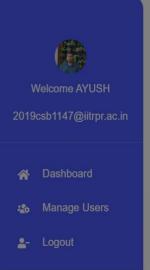


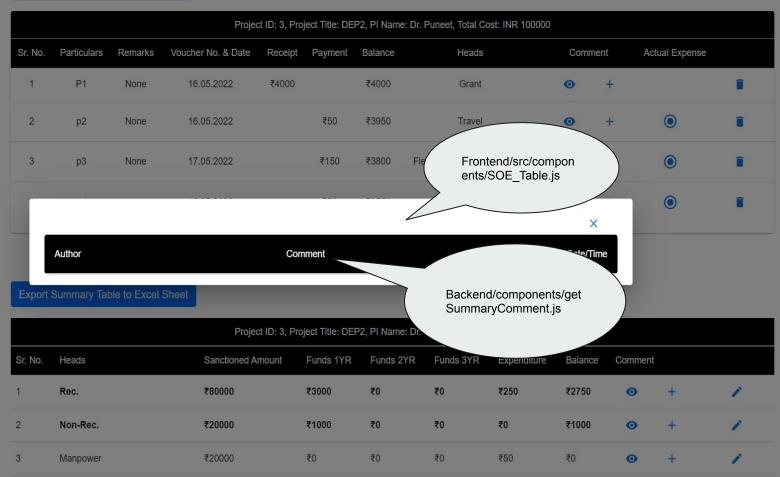
Comment Popup on Summary Table



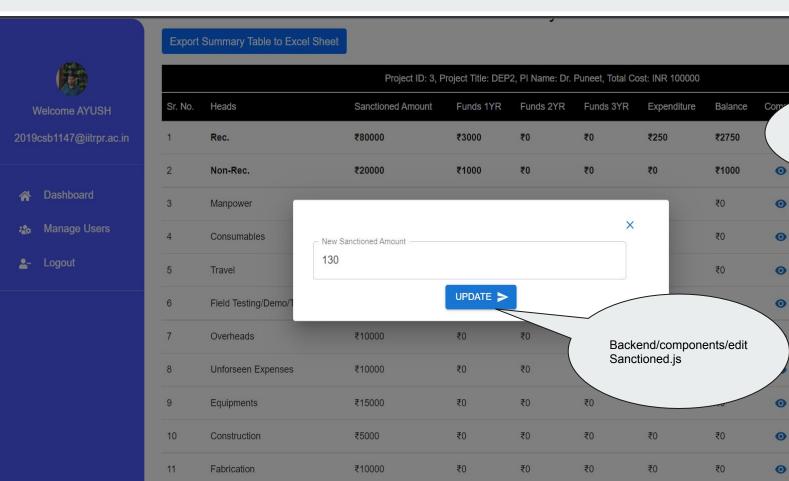


View Comment Popup on Summary Table





Edit Sanctioned Amount



Frontend/src/compon

ents/SOE Table.js

Readme/Steps to run the code

For accessing/running the portal locally, Follow the following steps:

- Download code from github as zip.
- Extract the zip file.
- cd into the folder
- cd Frontend
- npm install
- npm start

For accessing the deployed portal:

Paste the url "https://wonderful-youtiao-7246a1.netlify.app" in web browser