

Quality Management System (QMS Ver. 1.0)

USER MANUAL



QMS (Quality Management System)



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Introduction

Quality Management System (QMS) is a web-based application package for tracking QA clearance status of all Airborne/Ground Units and to confirm QA cleared systems/subsystems are only integrated into the main system. This software gives an end-to-end solution to all QA activities online, reduces the number of paperwork, and minimizes the delay in QA clearance.

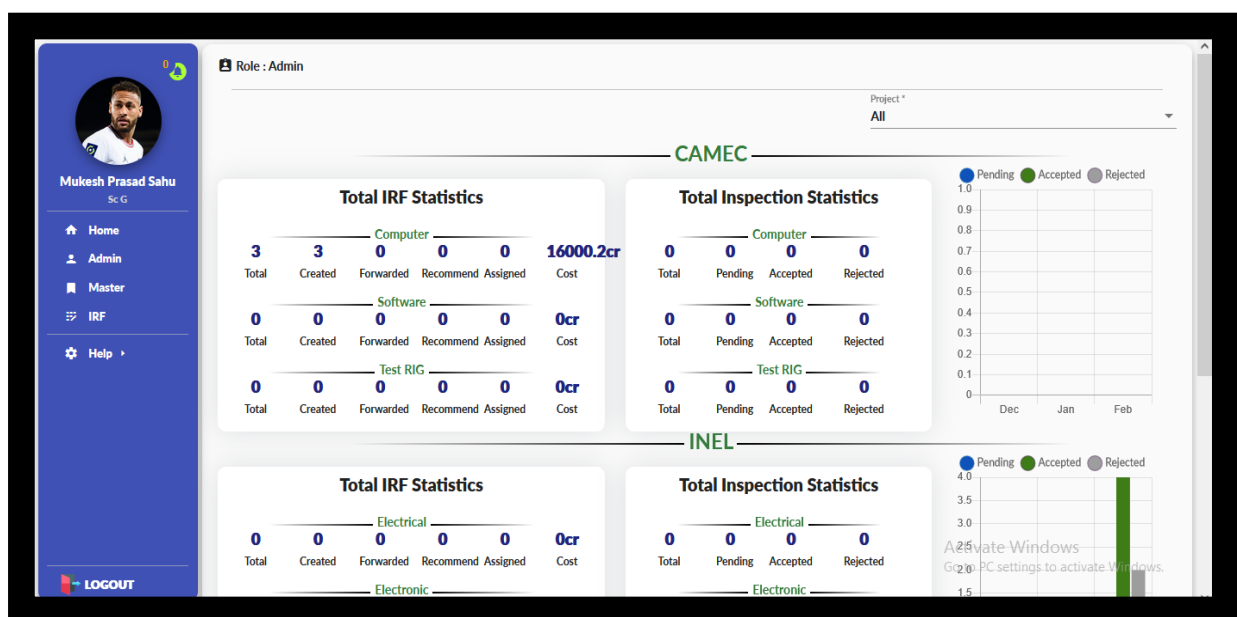
QMS has been developed using Java Programming Language, Java Spring Boot Framework, HTML, CSS, JavaScript, Bootstrap, React JS, JQuery User Interface, Apache Tomcat Application Server, and MySQL Database.

Modules

QMS software contains various modules such as Home, Admin, Master and IRF. The admin has the access to all the modules whereas the user has access to only Home and IRF module which is assigned by the admin.

1.Home

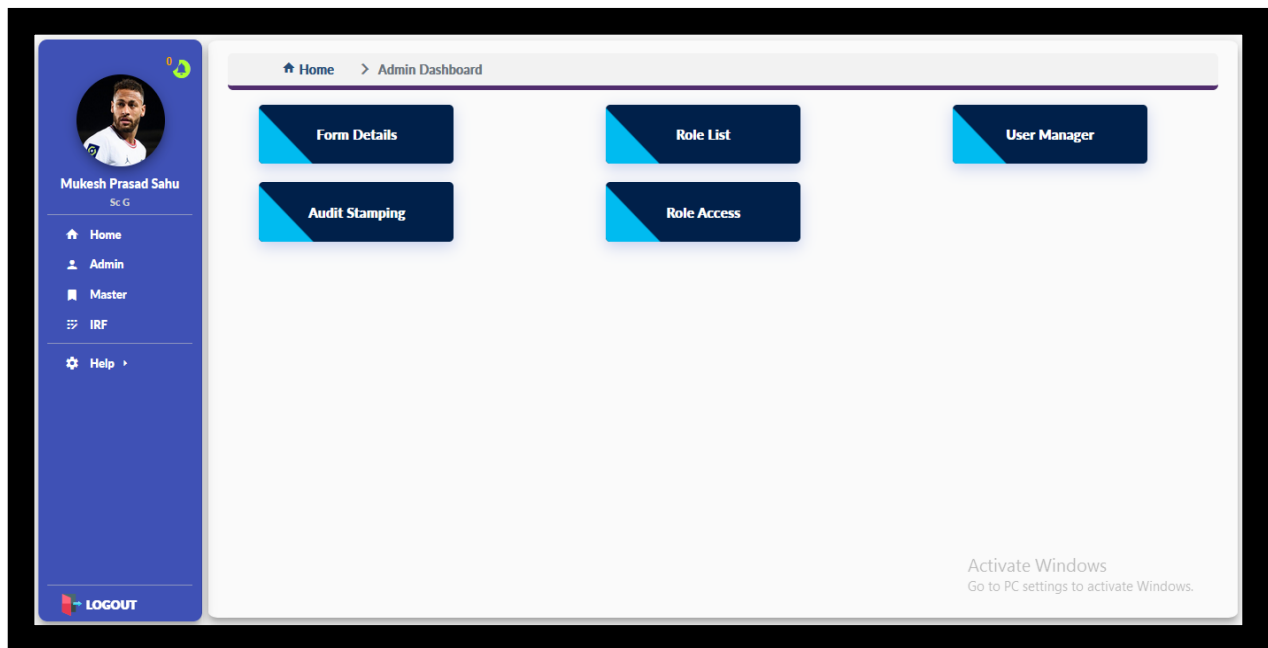
The home module consists of the graphical representation of the status of various types of IRF's which are created for the different types of projects. We can select the project from the project dropdown.



2.Admin

The admin module consists of various sections which is accessible only by the admin. In this module the admin can be able to

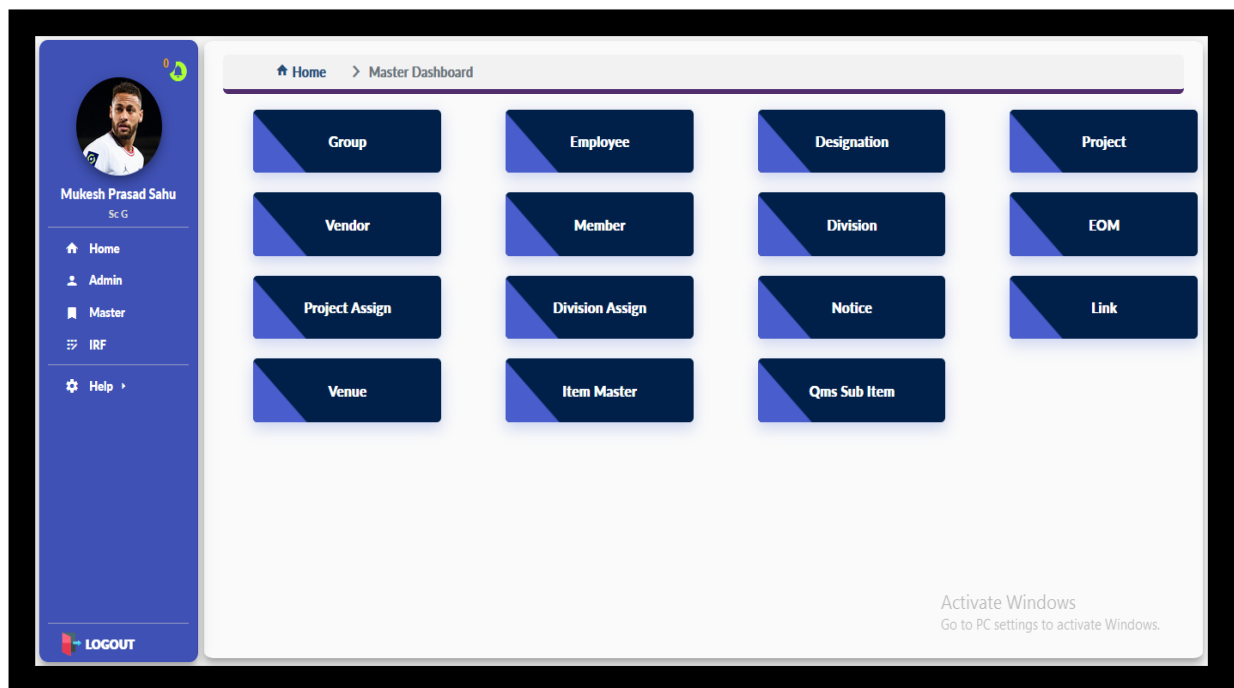
- Add new users and edit the details of the existing users from the usermanager section.
- View various roles that are available from role list section.
- Can provide access to the users based on their roles from role access section.



3.Masters

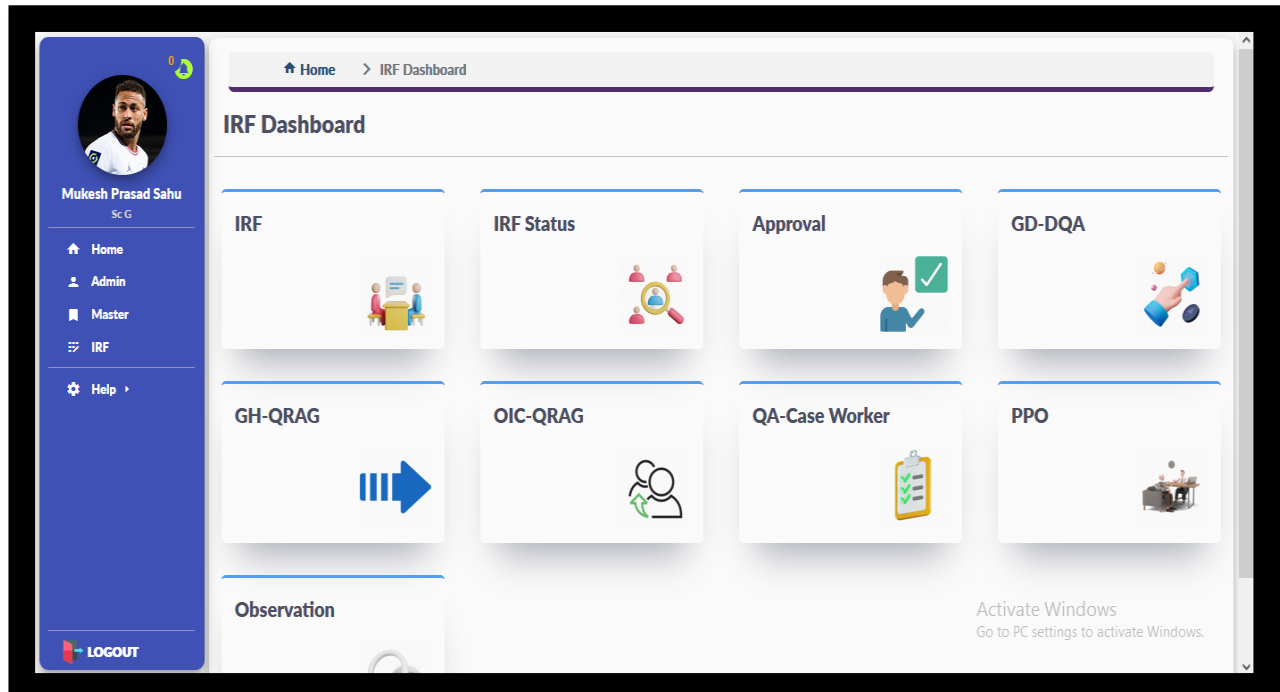
The master module consists of various sections which is accessible by the users based on their roles. The users can

- Add, edit and remove groups, employees, designations, projects, vendors, members, divisions, employer of the month, notice, links, venue, item master and QMS sub item.
- Assign projects and divisions.



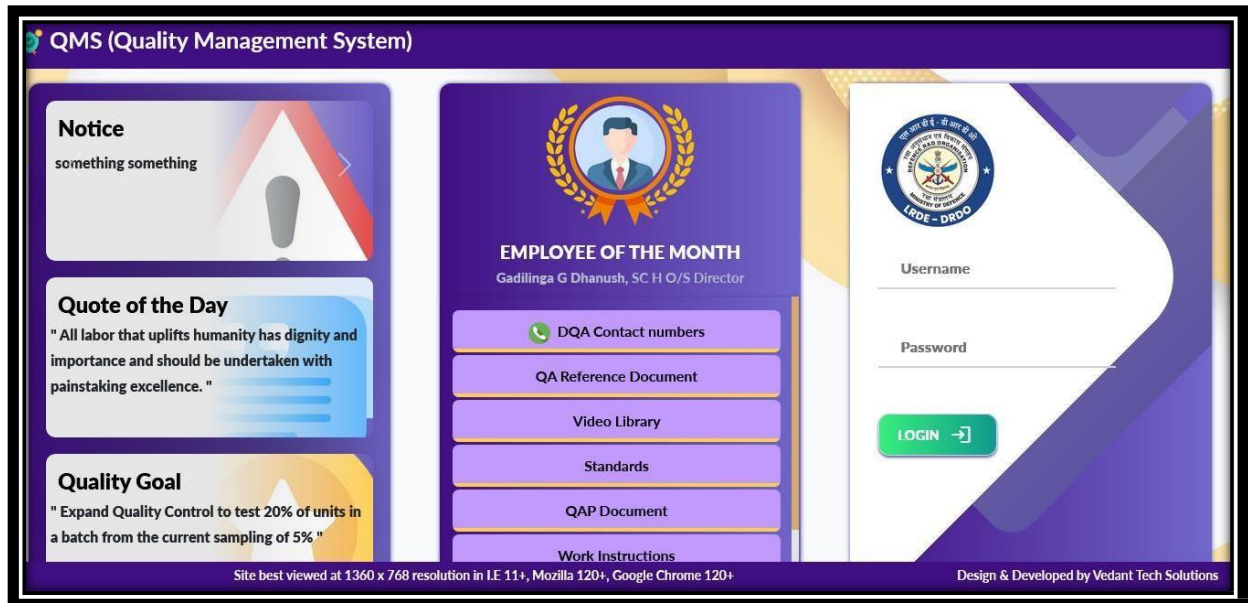
4.IRF

The IRF module is used to create the IRF and get approved by list of users. This module is accessible by all the users.



QMS Login Screen

The login screen is used to get the user's credential to login into the QMS application. It has Quick links for DQA Contacts, Quality Reference Documents, List of quality standards, Guidelines, Infrastructure of the Group and Test Facilities details. It also contains other information such as Notices, Quotes of the Day, Quality Goals and Employee of the Month.



Dashboard (Home Page)

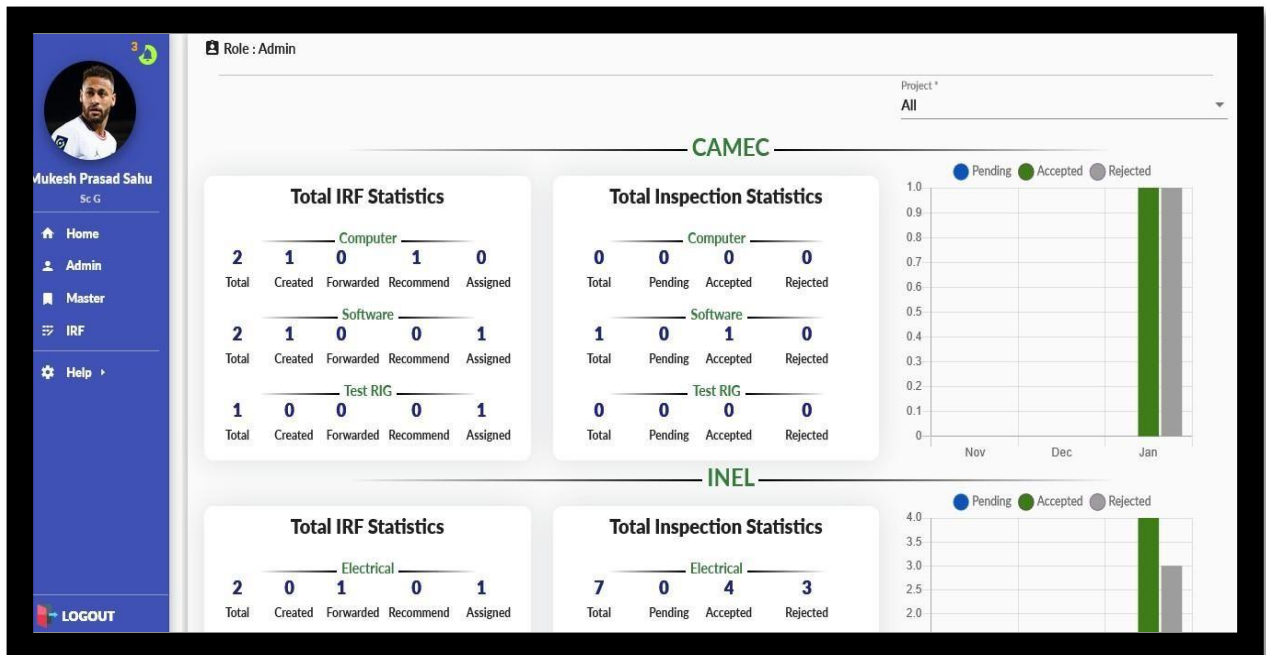
After logging in to QMS application, the first page you'll encounter is the homepage. This page shows the statistical representation of IRFs that are in the sequence in various stages from the user to the caseworkers. These IRFs can be forwarded or reverted by different authorized users. Graphical representation is shown for all the IRFs raised that belong to INEL, MSL and CAMEC. This dashboard contents will vary depending upon each user's login role. There are ten types of users namely, admin user, division user, division approver, OIC QRAG, QA users, GH-QRAG, GD-DQA, PPO, Director, and Project Director.

The different details in the form of graphical representations available in this dashboard are:

1. IRFs details in graphical representation which are in different stages such as total inspected, accepted, pending, and rejected IRFs.
2. Mouse hover on the graphical representation to get the exact number of the IRFs.

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3. In top left hand side of the dashboard there is a picture of the logged in user with name and designation.
4. On the right-hand side of the picture there is a notification icon where all the notifications will be updated and can be viewed from here.
5. Below the user details, there are main application menu items such as admin, master, IRF etc. These menus are accessed/ visible based on the user's authority.



Brief Detail

- Online raising of a IRF (Inspection Request Form) request by users and its approval online.
 - ✓ Registration of three types of requests such as INEL, MSL and CAMEC.
 - ✓ Each request type corresponding to specific domains
 - INEL - Electrical and Electronic,
 - MSL - Mechanical and any Other
 - CAMEC- Software Computer, Test RIG
 - ✓ Any user can raise the IRF request belonging to any division and for project.
- The approval process takes place in different stages which will be approved by different authorities as follows.
 - ✓ The user raises the IRF request and forwards it for approval, before forwarding user can modify the IRF if any changes before forwarding.
 - ✓ The remainder will be sent immediately once the user forwards the IRF request.
 - ✓ The Division Head/Group Head/Project Director can preview the IRF.
 - ✓ OIC-QRAG is the person who first who gets a notification for approval for the assignment of IRF request to the caseworkers to complete the IRF request. OIC-QRAG can recommend or send it back to the user if he does not satisfy with the request details.
 - ✓ Caseworkers are the dedicated employees who inspect the IRF request

in a stipulated time and report to the OIC-QRAG.

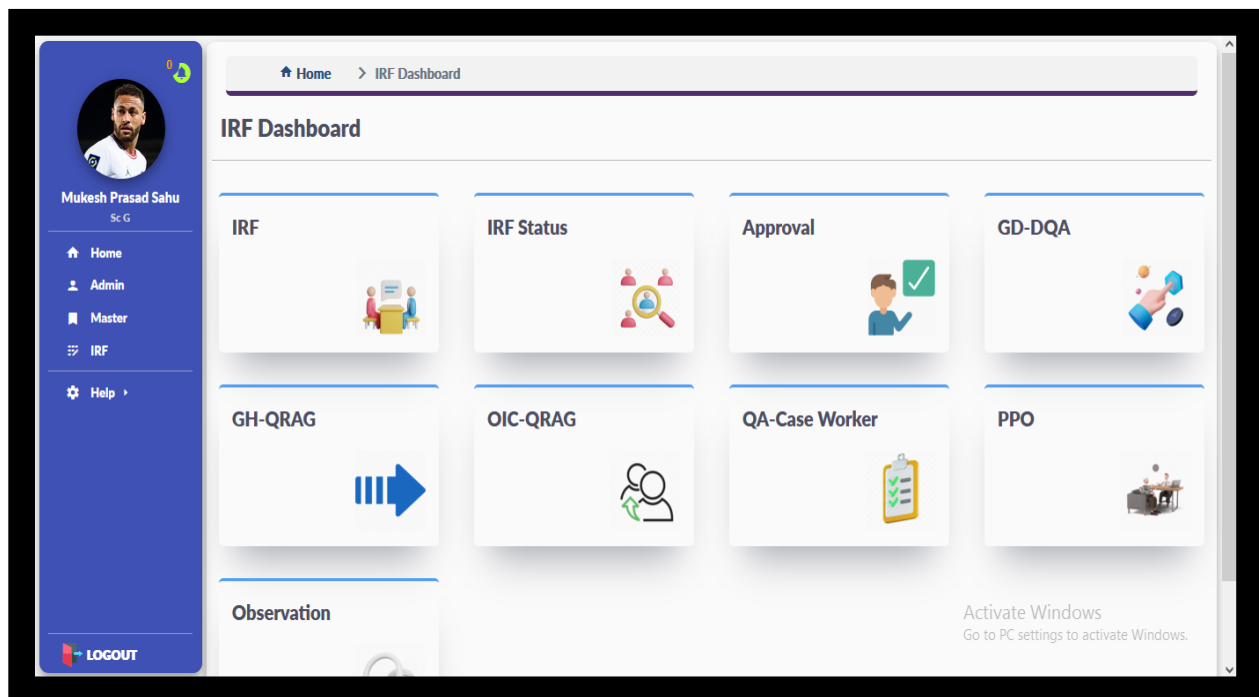
- ✓ In this process at any level, if the IRF request is rejected, it is directly sent back to the raised User.

IRF (Inspection Request Form)

At first the user will raise the request based on the type of the IRF request that is INEL or MSL or CAMEC by choosing from the IRF dashboard. IRF dashboard is having the menus related to IRF, INEL IRF, CAMEC IRF, MSL IRF and IRF Status. IRF request is raised by choosing a particular project, division, and name of the employee who raise the request and other information.




IRF Dashboard

IRF dashboard consists of three sub-modules namely IRF, IRF Status and Approval. Users can choose either INEL IRF or CAMEC IRF or MSL IRF based on the type of IRF request to be raised. IRF status consists of all electrical, electronic, software, any other, computer, test rig and mechanical IRFs segregated by selecting from the dropdown on the top right corner. To fetch any INEL/MSL/CAMEC IRF there is a search option on the top right corner in the listing page.



INEL/MSL/CAMEC IRF

Users can add INEL/MSL/CAMEC IRF request details and submit them by clicking on the ADD button. Add button is available in the IRF dashboard with the list of all raised electrical/mechanical/electronic/software/computer/any other/test rig. IRFs will appear on this page as newest first and each IRFs will have a set of actions such as forward, modify, and print/download. **Forward** is meant for sending the electrical/mechanical/electronic/software/computer/any other/test rig IRFs for approval and assigning the IRF for caseworkers. **Modify** is for editing any changes before forwarding for approval and **print** is for downloading or taking print out.

SN.	IRF NO	Item Nomenclature	Vendor	IRF Date	Status	Action
1.	LRDE/2024/PMS/DV3/16	Purchase of Fighter Jet	Dimic Technologies Pvt. Ltd	Jan 24, 2024	IRF Created	 
2.	LRDE/2024/PMS/DV3/15	War Flight	Centum Rakon India Pvt Ltd	Jan 24, 2024	IR Approved By GD-DQA	
3.	LRDE/2024/PFTS/DV3/13	Stationary materials	Canon India Pvt.Ltd	Jan 24, 2024	IR Reviewed By GH-QRAG	
4.	LRDE/2024/PMS/DV3/10	War Flight	Canon India Pvt.Ltd	Jan 24, 2024	IRF Rec By OIC-QRAG	
5.	LRDE/2024/PFTS/DV3/8	Purchase of Fighter Jet	Dimic Technologies Pvt. Ltd	Jan 24, 2024	IR Approved By GD-DQA	
6.	LRDE/2024/PMS/DV3/6	War Flight	Dharuni Enterprises	Jan 24, 2024	IRF Rec By DH	
7.	LRDE/2024/GN/DV3/5	464	Amit Enterprises	Jan 24, 2024	IRF Forwarded	

ADD INEL/MSL/CAMEC IRF

INEL/MSL/CAMEC IRF can be raised by entering the following details.

Navigation flow: **Login -> IRF -> ADD**

Submit button will be enabled only after filling in all the mandatory fields which are also mentioned on the page.

IRF Request Add

Division * DV3 Project Code - Project Name * PMS - Project Management System IRF Date: 24/01/2024

RIN Date: 24/01/2024 Indentor Name * Mukesh Prasad Sahu, Sc G Item - SO No - SO Date - Vendor Name - Cost * Launching Vehicle Fuel - 346536 - Apr 12, 2024

IRF Type *
 Electrical
 Electronic
 Mechanical
 Computer
 Software
 Test RIG

RIN No * Centre - 2200000

Remarks *

[Save And Next](#) [Back](#)

Enter all the mandatory fields to enable the Submit Button !!

IRF Status

IRF status is for tracking the requests. It consists of INEL, MSL and CAMEC IRFs in a separate list which can be viewed by selecting from the IRF Type dropdown at the top of the list. This page also consists of a search option for finding particular IRF requests.

This page consists status of all the IRF requests and some other actions such as tracking and printing. The different status types are IRF created, forwarded by the user, inspected by OIC QRAG, returned by OIC QRAG, reviewed by GH-QRAG and approved by GD-DQA. In the absence of GD-DQA, GH-QRAG will approve.

To fetch any IRF there is a **search** option on the top right corner of the listing page.

IRF Status List

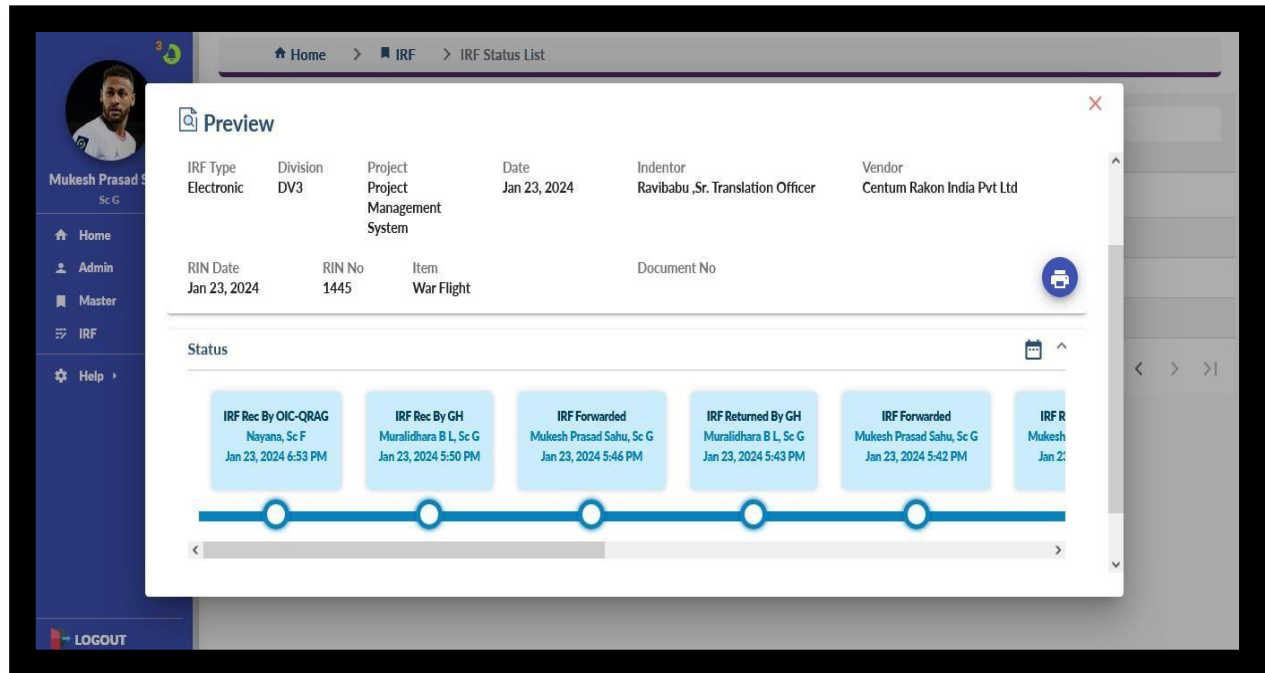
IRF Type * All Search

SN.	IRF NO	Date	Item	Status
1	LRDE/2024/PFTS/DV1/17	Jan 24, 2024	Purchase of Fighter Jet	IRF Rec By OIC-QRAG
2	LRDE/2024/PMS/DV3/16	Jan 24, 2024	Purchase of Fighter Jet	IRF Created
3	LRDE/2024/PMS/DV3/15	Jan 24, 2024	War Flight	IR Approved By GD-DQA
4	LRDE/2024/GN/DV5/14	Jan 24, 2024	Flight Parts	IRF Forwarded
5	LRDE/2024/PFTS/DV3/13	Jan 24, 2024	Stationary materials	IR Reviewed By GH-QRAG
6	LRDE/2024/GN/DV1/12	Jan 24, 2024	War Flight	IRF Created
7	LRDE/2024/PFTS/DV4/11	Jan 24, 2024	Stationary materials	IRF Revoked By User

Items per page: 7 1 - 7 of 17 |< < > >|

Tracking

This is an important action used for tracking the IRF request. It provides stage-wise approval details consisting of the approval date, approved by, remarks given by the approved authority, name and designation of the approved officer/employee.



Forward & Approvals

Before understanding the forward and approval process it is essential to know the different users of this application and their roles. There are ten different types of users in this application.

- i) Admin User
- ii) Division User
- iii) Division Approver
- iv) QA Users
- v) OIC-QRAG
- vi) GH-QRAG
- vii) GD-DQA
- viii) PPO
- ix) Director
- x) Project Director

Functional Specification:

Admin User: Admin user will manage all users and their roles. Master activities like database corrections of IRFS. Management of databases such as projects and its inspection requirements etc.

Division User: Division users can raise IRF's, check IRF status, modify IRF, download QA document, testing & inspection reports, trace the inspection stage and take printouts. This user can give a reply online for clearing any QA observation. This reply will be uploaded to the QA database after getting approval from the Division Head (Approver).

GH/DH/PD: GH/DH/PD can preview the IRF that is forwarded by the user.

OIC-QRAG: OIC-QRAG members can assign multiple caseworkers. There are different types of OICQRAG's for different IRF types such as CAMEC OIC-QRAG, MSL OIC-QRAG, and INEL OIC-QRAG. OIC-QRAG can reject/cancel with remarks. If rejected by OIC-QRAG it goes to user.

Case Worker: Case Worker receive the IRF from OIC-QRAG, then case worker starts the IR inspection, after inspection case worker can forward to OIC QRAG.

GH-QRAG: GH-QRAG receive the verified IR from OIC-QRAG, GH-QRAG can review IR & Forward to GD-DQA.

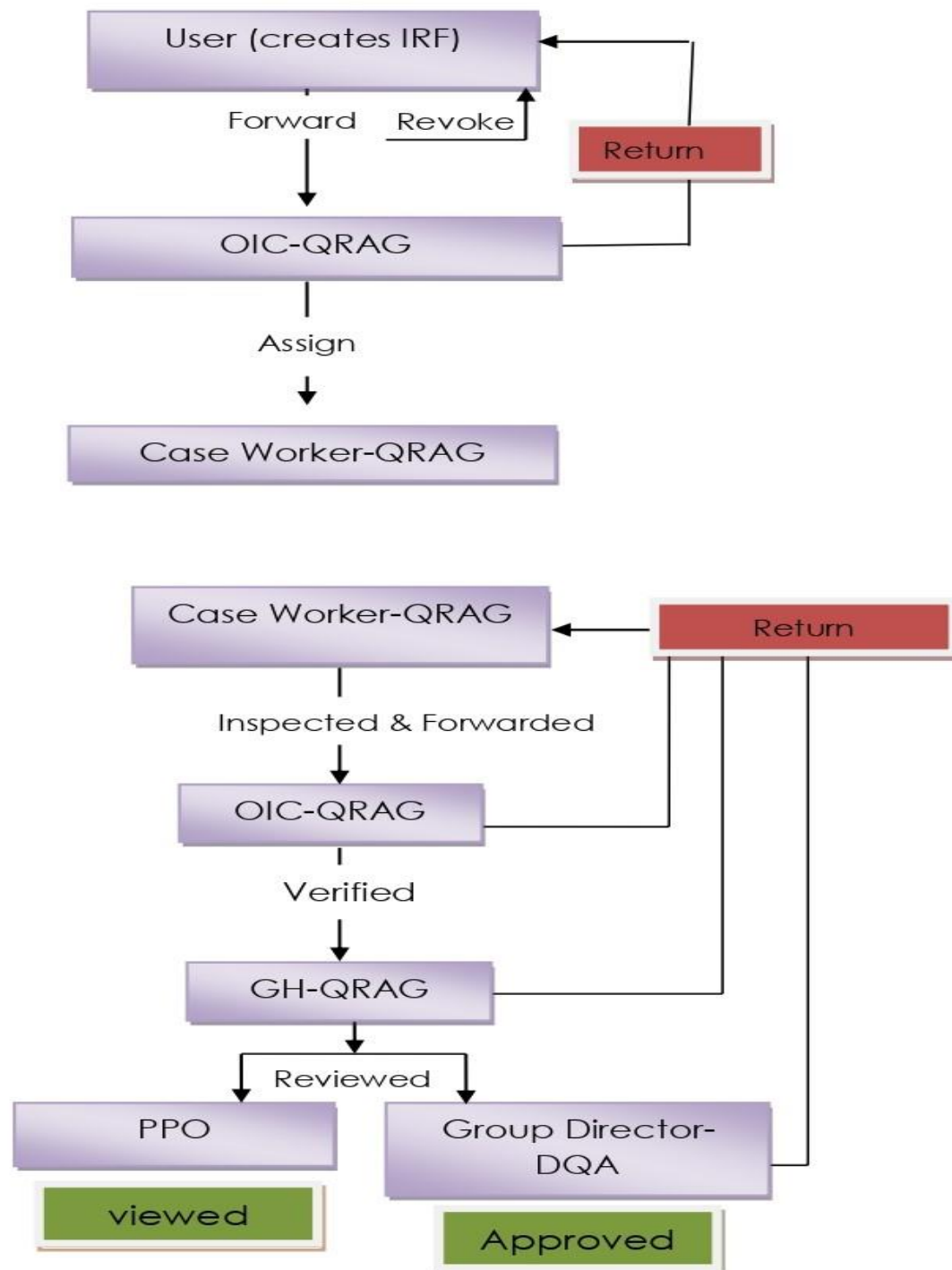
GD-DQA: Main authority to give final clearance for IR report, GD-DQA receives reviewed IR from GH-QRAG. GD-DQA can Approve IR & can reject/cancel with remarks. If rejected it goes to case workers.

PPO: PPO receives the verified IR from GH-QRAG and he can only be able to view the IR before it is approved by GD-DQA.

Director: This user can query and check all systems/subsystem clearance status like system/subsystem name, QA clearance status of all units, LRU Usage, and failure history of all projects.

Project Director: This user can query and check all systems/subsystem clearance status like system/subsystem name, QA clearance status of all units, LRU usage, and failure history, etc. of that Project.

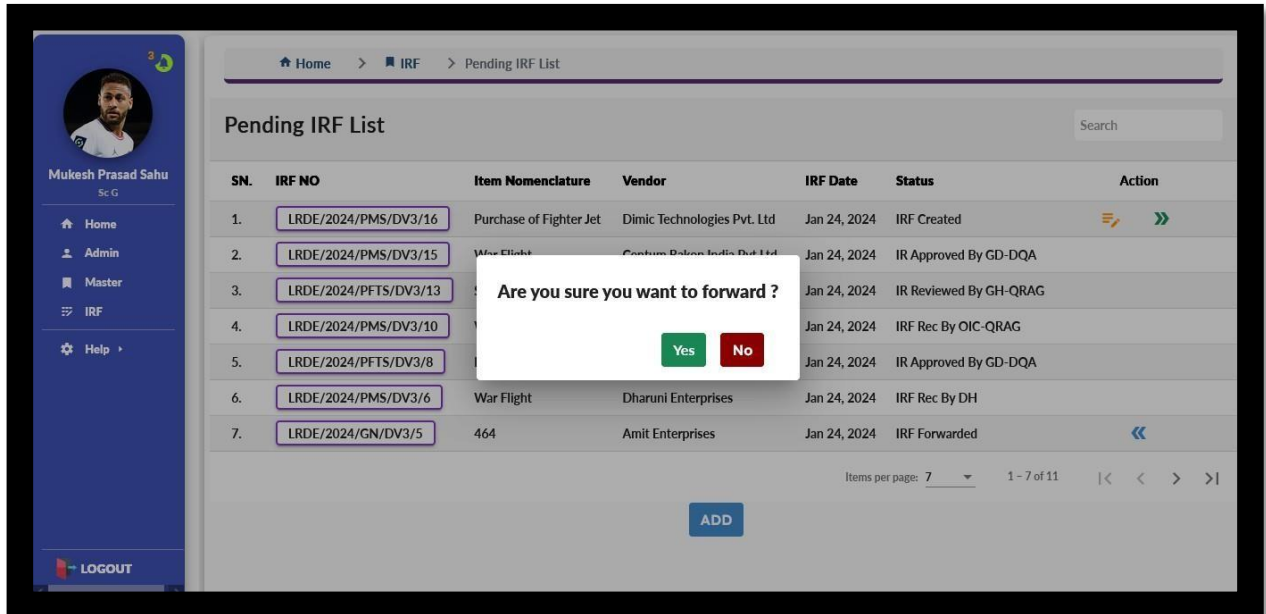
Approval & return Process flow chart



Steps of Approval Process

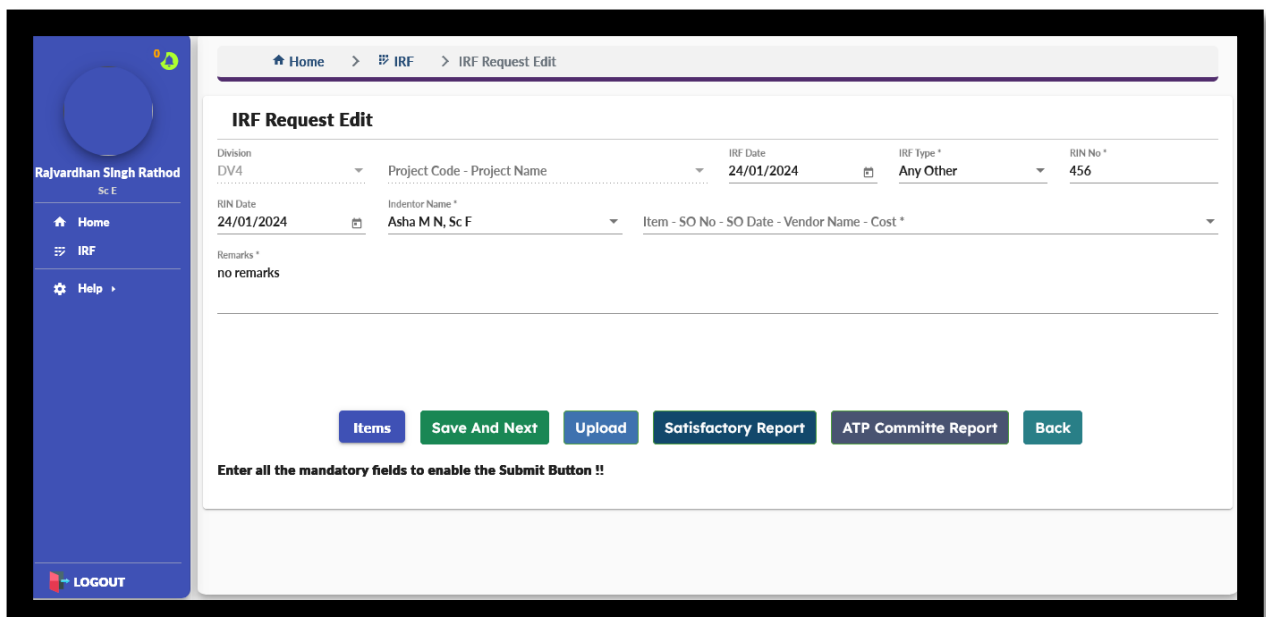
Step 1: User Login into the application and register the IRF by entering all the IRF request details & forward it just by clicking **Forward** Icon available in the action items.

Login -> IRF -> Choose CAMAC/INEL/MSL IRF -> ADD > Submit > Navigate back to list > click Forward



Immediately notification will send to the immediate approving authority as well as to the User. The first approval authority is the OIC-QRAG.

Forward will fail to process if any mandatory fields are left blank. IRF request can edit



Note: Notifications will be sent to the User all the time when the IRF request status changes whether it may be an approval or returned.

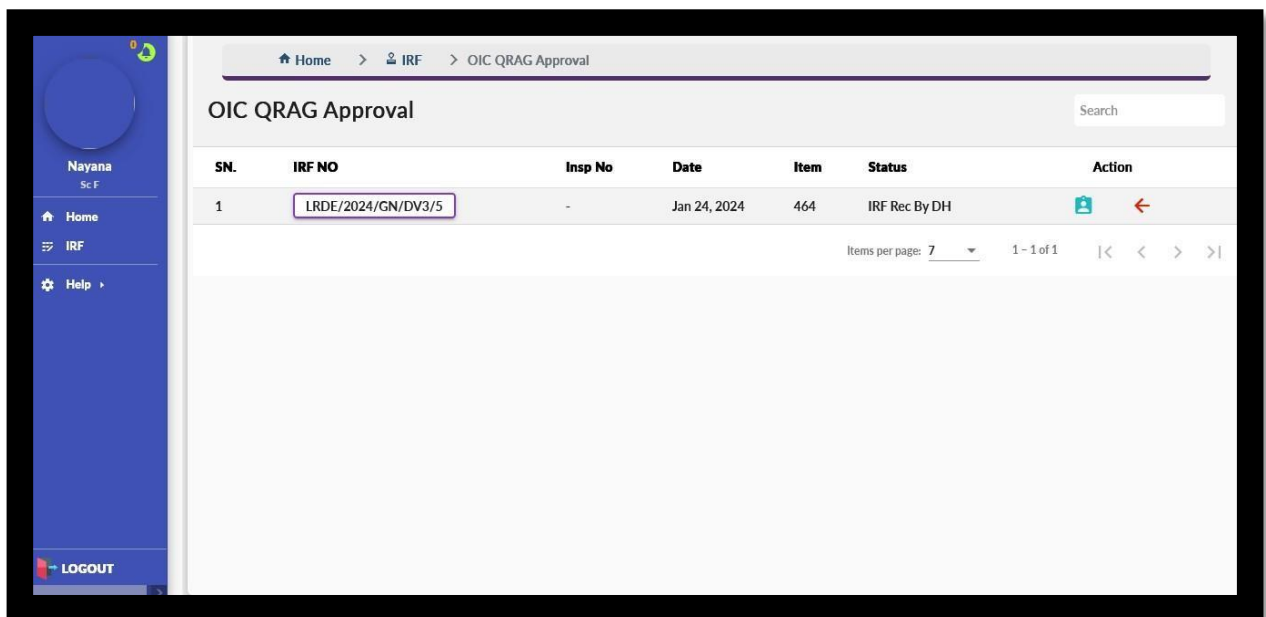
Step 2: Next authorized person is OIC-QRAG (Office in Charge-QRAG) login & will get the notification and the file can be viewed and take decisions.

OIC-QRAG will also have two actions in his hand.

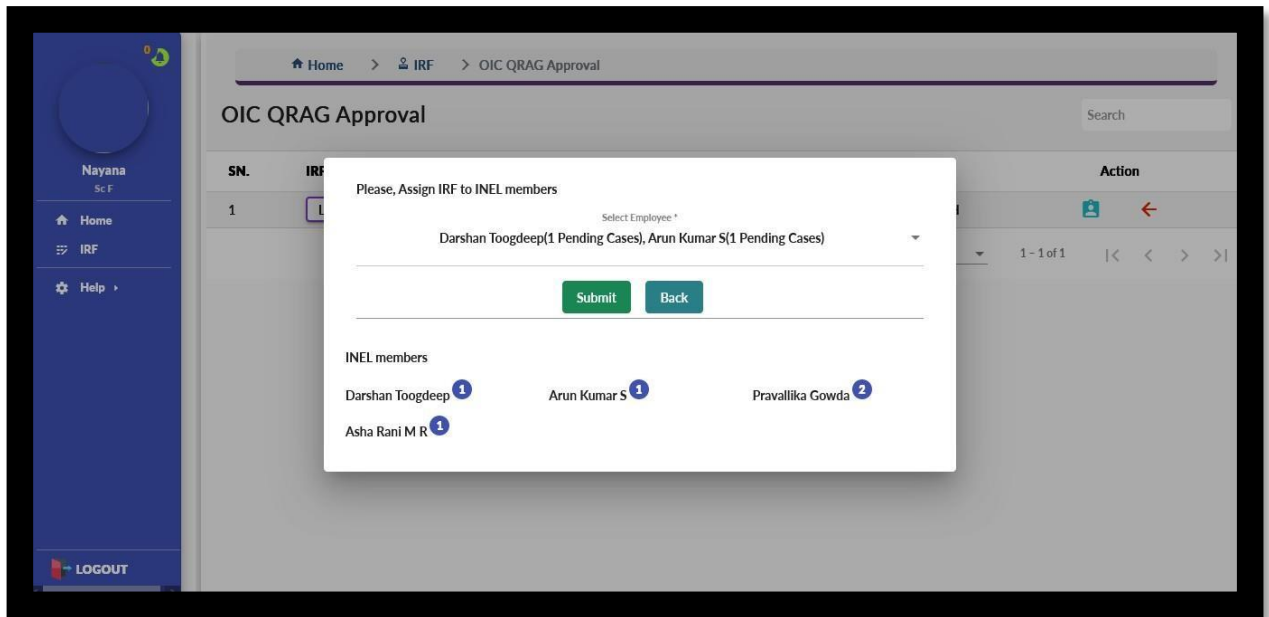
- Action 1: **Assign** – OIC-QRAG assign the IRF request for inspection to the Case Workers who are dedicated employees for inspection they are also called Quality Assurance Users (QAU).
- Action 2: **Return** – It will be returned to the User who raised and forwarded the IRF request.

If OIC-QRAG returns the IRF request, the User will get the notification, and the IRF request will return to him. The user can again modify if any changes/corrections suggested by the OIC-QRAG through his message and forward them to the division head for approval again.

OIC-QRAG can view and select the employees for inspection they are called Case Workers. OIC-QRAG can assign the IRF for inspection more than 1 person. And can see status of all the IRFs assigned. Total IRFs assigned for particular Case Worker, in progress and closed IRFs from the Dashboard/homepage.



OIC-QRAG select the caseworkers (QAUs) on his choice based on the IRF request he received. Assignment can be for any number of caseworkers. If the OIC-QRAG Assign the IRF to the dedicated Case Workers (QAUs), notification will send to the assigned Case Workers (QAUs).



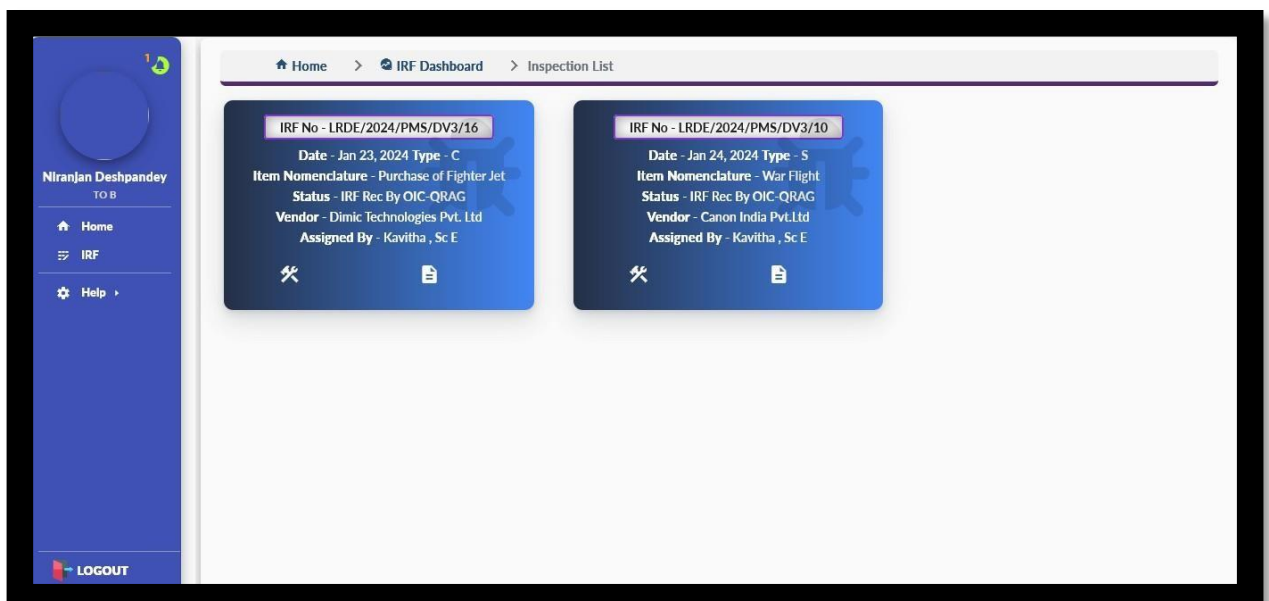
Step 3: Next, Case workers (QAUs) login into the application and they will receive the notification from the OIC-QRAG.

In this stage depending upon inspection IRF Result status will change to different status namely Accepted, Rejected, pending,

Accepted: IRF is passed to the next stage.

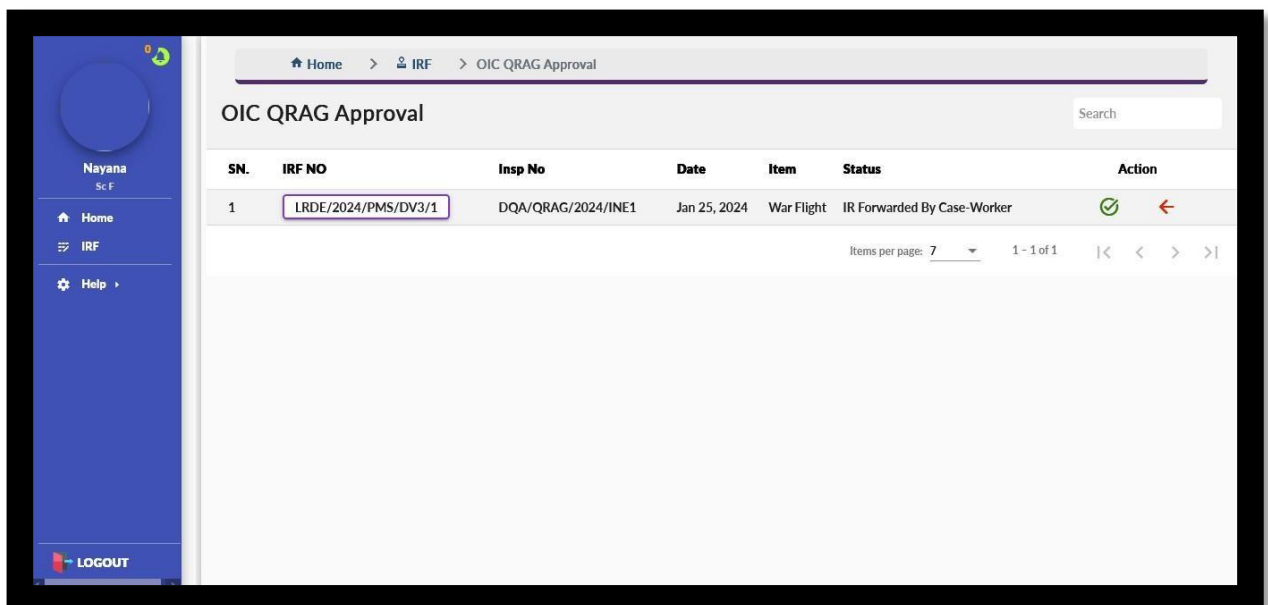
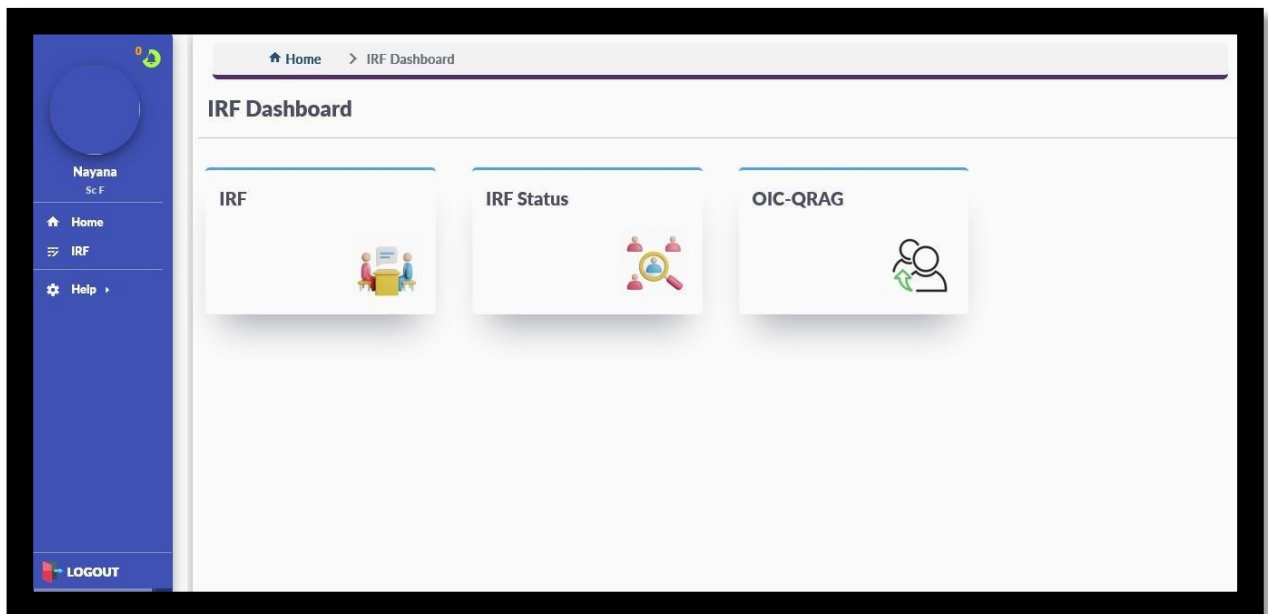
Pending: IRF is returned for the re work that needs to be created new or modified.

Reject: IRF get rejected there no any further actions. There ends the IRF.



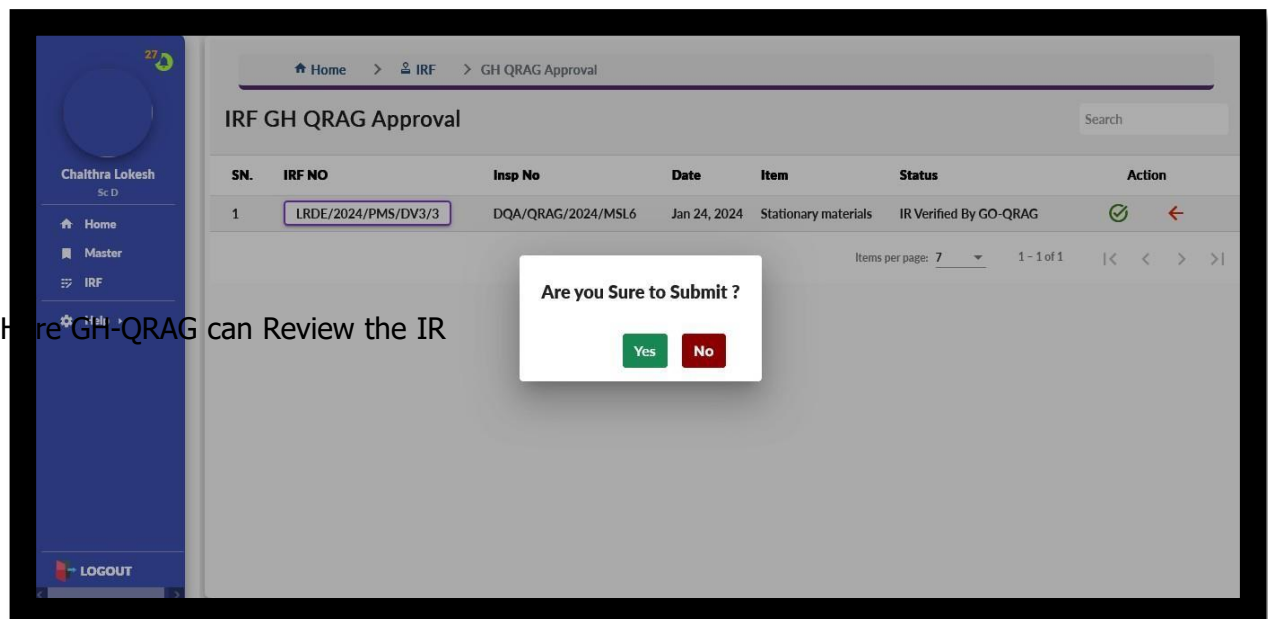
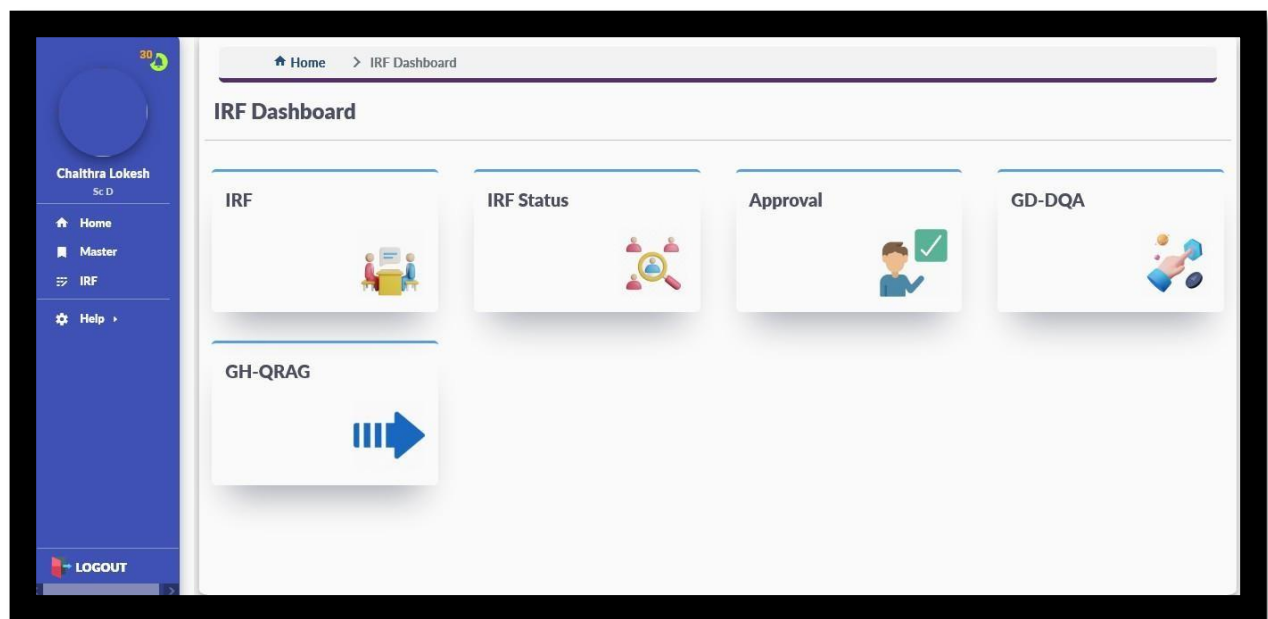
In the case of QAH, it will be Assignment in place of Approval & if in case of Caseworkers they can access it by navigating to **INSP-> INSPECTION -> list of assigned tasks**

Step 4: Once the inspection has done, result will be forwarded to the OIC-QRAG. OIC-QRAG will have the authority to inspect and do changes if any and forward to the GH-QRAG. OIC-QRAG can view this IRFs under **forwarded list** of OIC QRAG Approval.



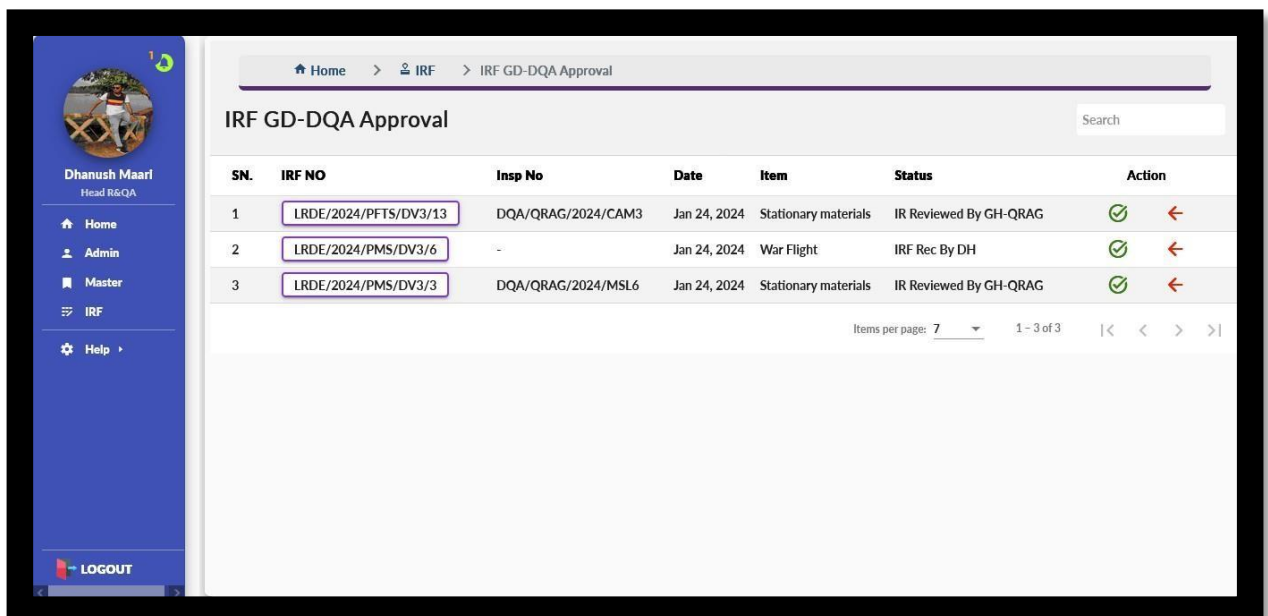
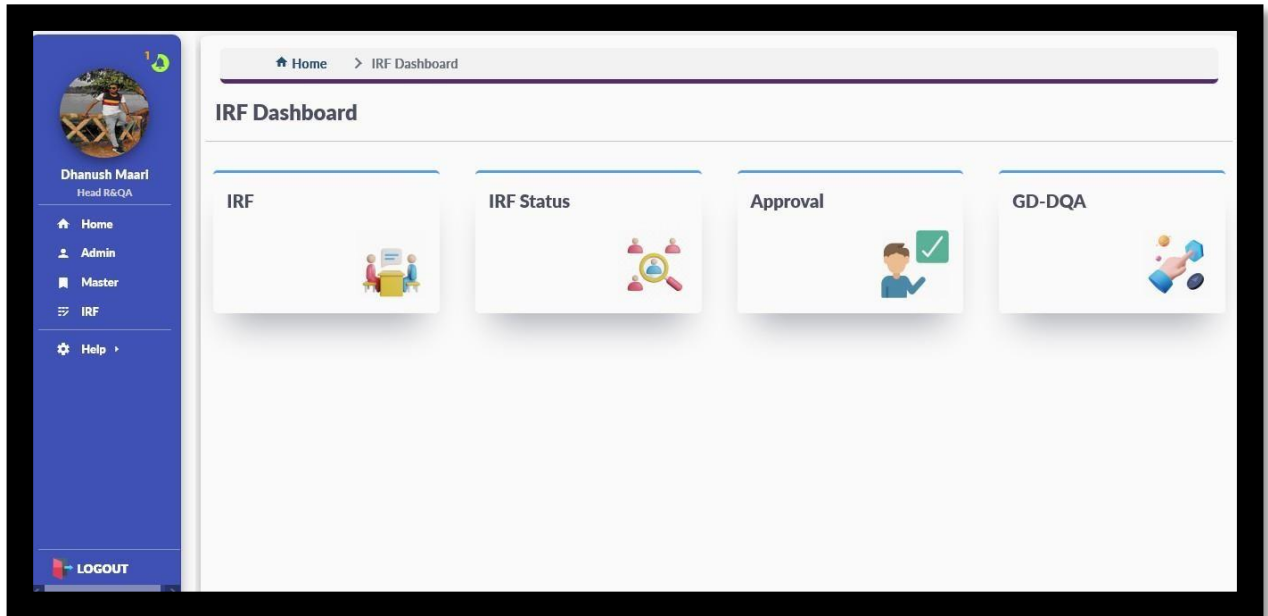
Here OIC-QRAG can Approval for next stage or can also reject/cancel with remarks. If rejected/cancelled it goes to Caseworkers.

Step 5: GH-QRAG receives verified IR from OIC-QRAG, GH-QRAG can review IR & Forward to GD-DQA and PPO(Project planning Officer).



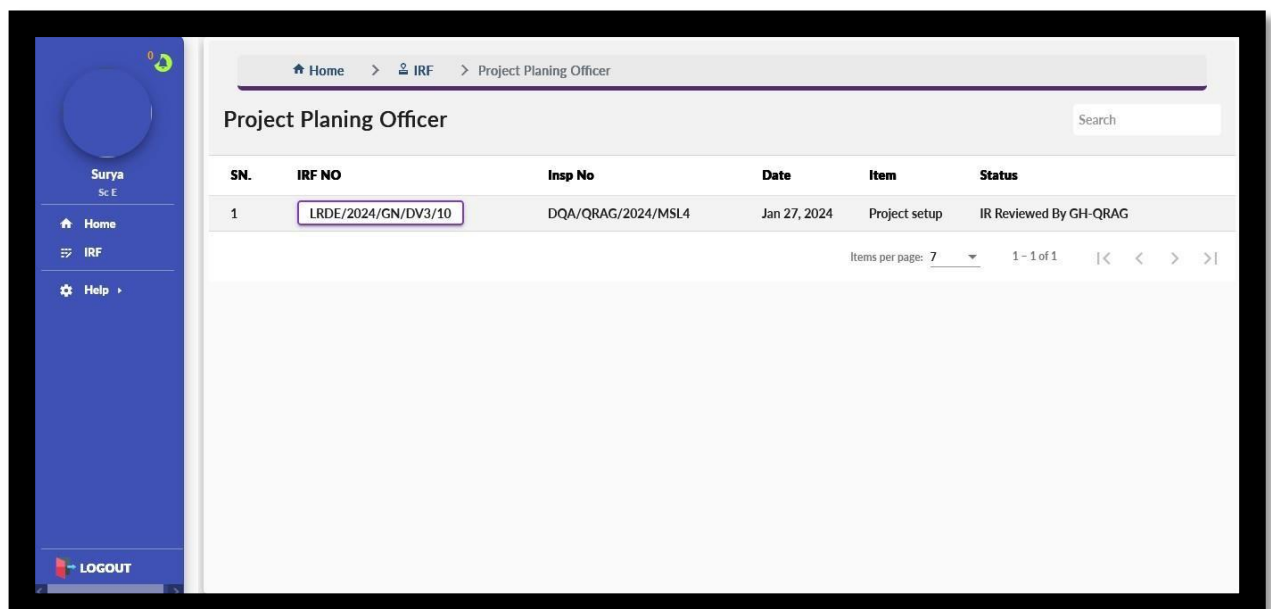
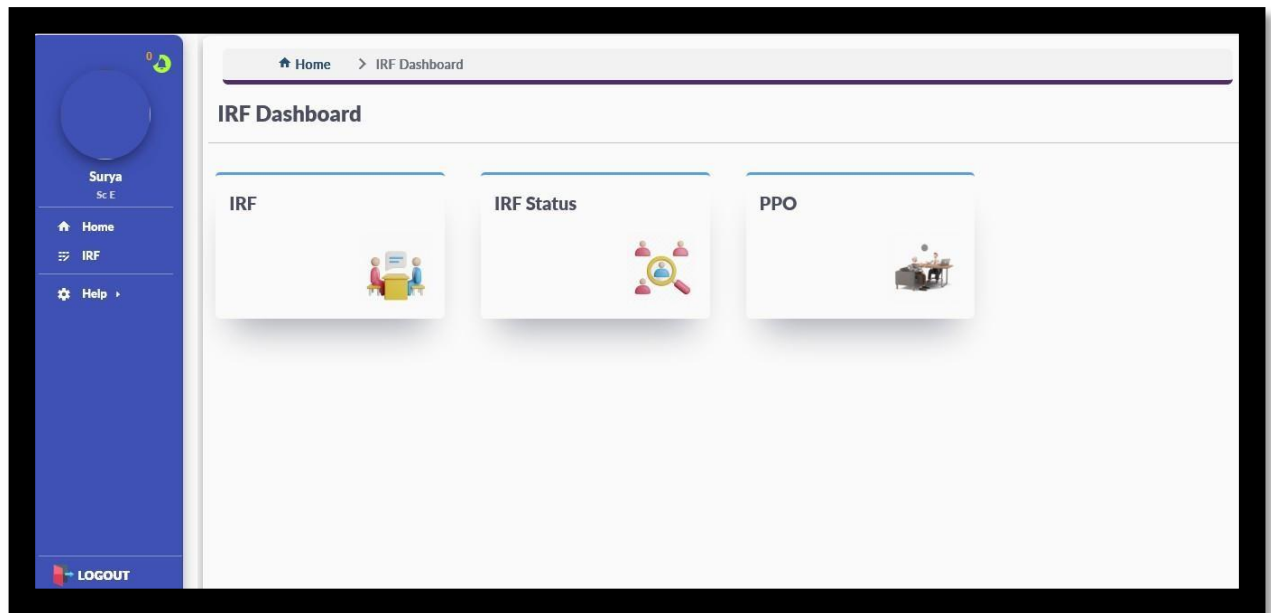
Here GH-QRAG can Review the IR

Step 6(a): GD-DQA is the final approval authority. If GD-DQA will approve then IR request closes, GD-DQA can also reject/cancel with remarks. If rejected/cancelled it goes to Caseworkers.



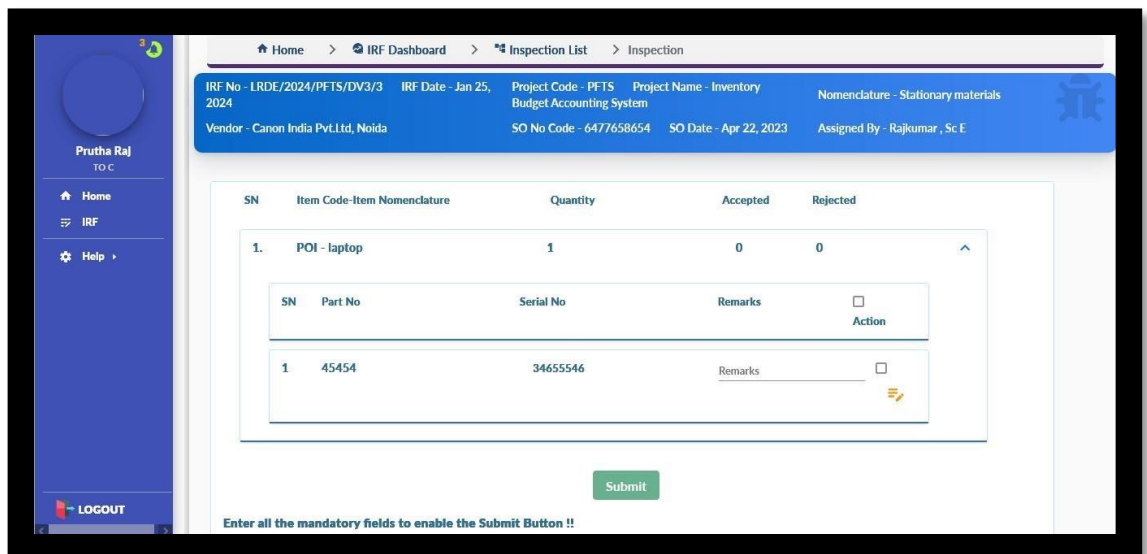
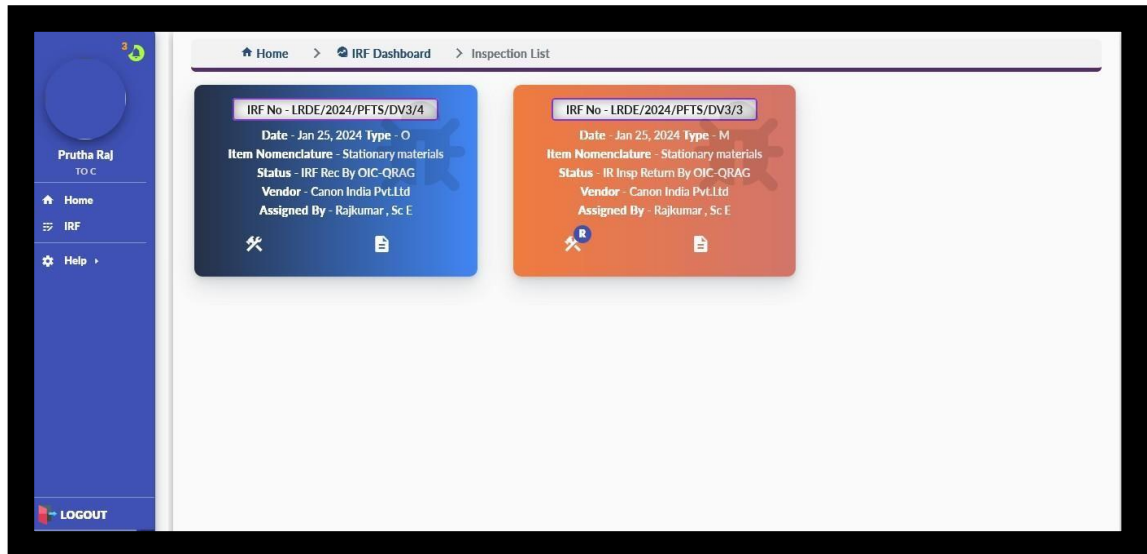
Here GD-DQA will approve the IR and closes the IR request

Step 6(b): Project Planning Officer(PPO) can only view the IR, after the GH-QRAG Review the IR



Inspection Process

1. **Start Inspection:** Case Worker open the assigned IRF and start the inspection by submitting the 'tool button'. No other Case Workers can work on that IRF now if that IRF is assigned to many case workers. New assigned IRFs will be in blue colour and Suppose once it is return it will turn to Orange colour for easy identification.



Inspection stages depending on DI(Defect Investigation) committee Suggestion in case of any system failure occurred during ATP test or any System

Case Worker has the responsibility to inspect items. They can either accept or reject an item based on its condition. If the item is deemed good, the Case Worker accepts it, and if it has defects, the Case Worker rejects it. Following rejection, the Case Worker forwarded to OIC-QRAG

2. **Observation Test:** It is the stage where we add Observation by case workers with Observation date. Observation test contains number of inspection points which needs to be satisfied and all the points are to be answered by the Case Workers. Observation answers are Provided, Checked and found Satisfactory, Audited vendor report, etc. by saving the inspection observation result will generate.

The screenshot shows the 'Observation Sheet' form in the QMS system. The left sidebar contains the user profile 'Prutha Raj TO C' and navigation links for Home, IRF, and Help. The main content area has a breadcrumb trail: Home > IRF Dashboard > Inspection List > Observation Sheet. Below this is a header section with the following details: IRF No - LRDE/2024/PFTS/DV3/4, IRF Date - Jan 25, 2024, Project Code - PFTS Accounting System, Project Name - Inventory Budget, Nomenclature - Stationary materials, Vendor - Canon India Pvt.Ltd, Noida, SO No Code - 6477658654, SO Date - Apr 22, 2023, and Assigned By - Rajkumar, Sc E. The main form area has a table with columns for 'Obs Date' and 'Observation *'. The first row shows '25/01/2024' and 'gbgfh'. A blue 'Add' button is located at the top right of the table. The user's name 'Prutha Raj, TO C' and role 'QA - Case Worker' are displayed at the bottom right of the form.

3. **Forward:** Case Worker forward the inspect items and observation result of the inspection along with Total Accepted QTY & Total Rejected QTY to the OIC-QRAG. OIC-QRAG will Forwarded to GH-QRAG.

The screenshot shows the 'Forward' form in the QMS system. The left sidebar is the same as the previous screenshot. The main content area has a breadcrumb trail: Home > IRF Dashboard > Inspection List > Forward. Below this is a table with columns for 'SN', 'Part No', 'Serial No', 'Remarks', and 'Action'. The table contains three rows of data: Row 1: SN 1, Part No 3535, Serial No 54545, Remarks sdadasd, Action checkbox checked; Row 2: SN 2, Part No 543454, Serial No, Remarks asdasd, Action checkbox unchecked; Row 3: SN 3, Part No 3455454, Serial No, Remarks, Action checkbox checked. A confirmation dialog box is overlaid on the table, asking 'Are you sure to submit?' and displaying 'Total Accepted QTY is 2' and 'Total Rejected QTY is 1'. The dialog has 'Yes' and 'No' buttons. A green 'Submit' button is located at the bottom of the form. A message at the bottom of the form reads: 'Enter all the mandatory fields to enable the Submit Button !!'.

Abbreviations

DH: Division Head

GH: Group Head

PD: Project Director

OIC-QRAG: Office in Charge-QRAG

GH- QRAG: Group Head-QRAG

PPO: Project Planning Officer

GD-DQA: Group Director-DQA

QMS: Quality Management System

QAU: Quality Assurance User