भा.क.नि.
CCI

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TENDER FOR ANNUAL SUPPORT, MAINTENANCE AND ENHANCEMENT FOR BITS. BALE IDENTIFICATION AND TRACEABILITY SYSTEM (BITS)

The Cotton Corporation of India Ltd. (CCI), a Mini Ratna Public Sector Undertaking (PSU), is the only Central Nodal Agency to undertake Minimum Support Price (MSP) operations of cotton in the country. The MSP operations are carried out by CCI at more than 500 procurement centres through a network of 19 branches located in 12 states. Major role of the CCI is to undertake price support operations, whenever the market price of kapas (seed cotton) falls below the Minimum Support Price (MSP) announced by Govt. of India from time to time without any quantitative limit.

The BITS system will apply to all the cotton procured by Cotton Corporation of India at its authorized procurment centers. After the ginning and pressing when the full pressed bales are formed at the ginning factory, the QR code stickers will be pasted on the bales and will be tracked through Bale Identification and Traceability system (BITS) here onwards. All the movement of the bales from Factory to warehouse and any movement in between to other warehouses till the bales are moved out of the warehouse after the final sale is done and the buyer takes delivery of the bales.

The system will consist of a portal and a mobile app which will be used by the users for scanning and updating the information of bales during the bale lifecycle at CCI. Different users based on their roles in the system will be able to perform the tasks authorized to them on the information they are authorized to view based on the role-based access mechanism.

The selected agency shall deploy adequate manpower, infrastructure, technology tools, reporting mechanisms, and support processes to deliver efficient, responsive, and high-quality support services in accordance with the scope of work and service level requirements specified in this tender document.

The tender should be addressed to Chief General Manager (IT) latest by 05.08.2026 up to 3.00 PM. The Technical Bid-I will be opened on 05.08.2026 at 3.30 PM upon successfully technically qualified bidders financial bid will be opened.

for The Cotton Corporation of India Limited

Chief General Manager (IT)

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Part-A
Tender Details

Particulars	Details
Name of Work	Tender for annual support, maintenance and enhancement for BITS "bale identification and traceability system"
Tender Number	To be specified
Tender Type	Open Tender
Mode of Tender	GeM Portal
Bid System	Two Bid System
Evaluation Method	L1 Basis
Contract Period	(5) Five Years
Performance Security	As per Tender Conditions
Bid Validity	90 Days
Pre-Bid Meeting Date	22nd July 2026 at 3:00 PM, CCI, H.O, Navi Mumbai
Tender Inviting Authority	The Cotton Corporation of India Ltd.

Part- B
(Eligibility Criteria)

The Minimum Prequalification criteria for the work under reference is given below:

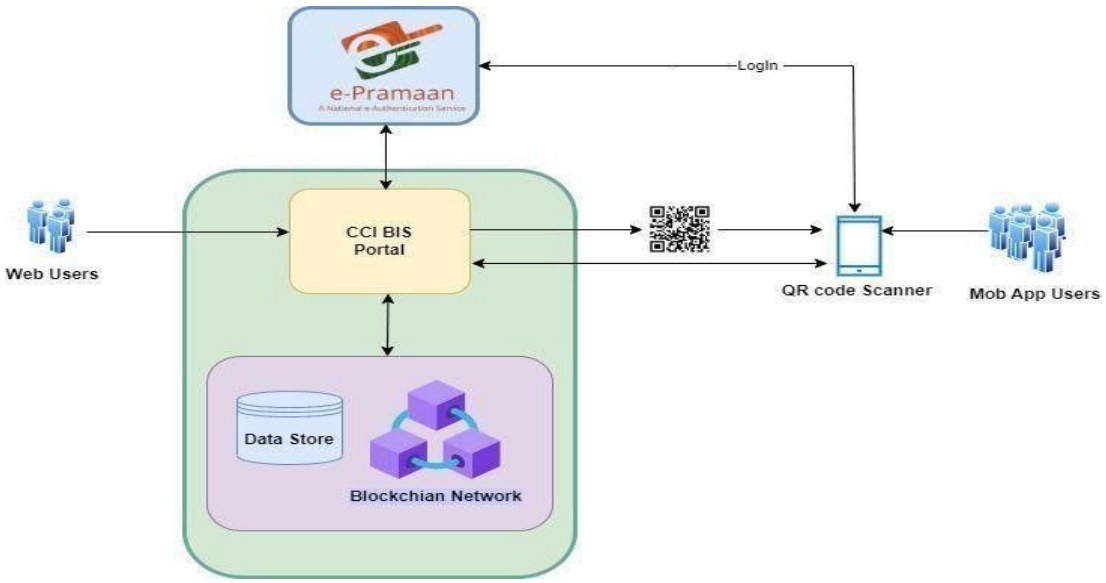
Sr. No.	Description
1.	Tenderers will have to deposit EMD of Rs. 3,50,000 by way of Online payment. The bidders which fall under SME category and are registered bidders with SME authorities are exempted from EMD on production of valid SME certificate.
	No interest will be paid on EMD and EMD will be refunded after satisfactory completion of work.
2.	The company should have an office in Mumbai /Navi Mumbai/Thane/Mumbai Metropolitan Region. (Proof to be given, Latest Electricity bill/Latest Water bill, Rental agreement, etc.)
3.	The bidder must have successfully implemented at least two (02) web browser-based applications and one (1) Mobile Application for any Central/State Government Departments, Public Sector Undertakings (PSUs), or reputed Public/Private sector organizations during the last three (05) years from the bid submission date. The bidder shall submit documentary evidence in support of the same, such as: • Copies of Completion Certificates / Work Completion Orders, or • Client Certificates confirming successful implementation.
4.	The bidder must be duly registered in India under applicable laws, such as the Companies Act, 2013 / Companies Act, 1956, or registered as a Partnership Firm, Proprietorship Firm, Limited Liability Partnership (LLP), or any other legally recognized entity, engaged in IT / ITES services. The bidder must possess valid registrations with relevant Government / statutory authorities, including but not limited to the Goods and Services Tax (GST) and the Income Tax Department, as applicable for providing such services. The bidder shall submit self-attested copies of the following documents: • Certificate of Incorporation / Registration • Permanent Account Number (PAN) • GST Registration Certificate.
5.	The company should have average turnover of Rs 1 Crores each during the last three financial year i.e. (2022-23, 2023-24, 2024-25). (Proof to be given)
6.	The Vendor must hold a valid ISO 9001:2015/ISO 27001:2022 Certificate. The scope of this certification should cover software design, development, maintenance and system integration. (Proof to be given)
7.	The bidder should not have been blacklisted by any PSU / Government Department in the past. Self-declaration certificate on letter head by authorized signatory should be submitted.

Part- C
(Existing Work Flow & Scope Of Work)

The BITS system will apply to all the cotton procured by Cotton Corporation of India at its authorized centers. After the ginning and pressing when the full presses bales are formed at the ginning factory, the QR code stickers will be pasted on the bales and will be tracked through Bale Identification and Traceability system here onwards. All the movement of the bales from Factory to warehouse and any movement in between to other warehouses till the bales are moved out of the warehouse after the final sale is done and the buyer takes delivery of the bales.

The system will consist of a portal and a mobile app which will be used by the users for scanning and updating the information of bales during the bale lifecycle at CCI. Different users based on their roles in the system will be able to perform the tasks authorized to them on the information they are authorized to view based on the role-based access mechanism.

The high-level message flow in the BITS is as follows:



The critical information will be stored in blockchain network to make it tamper proof and cannot be altered during the movement in entire supply chain.

Product Functions

Design and Implementation of BITS system components

1. Role-based framework for Authentication, Authorization and Access Control of BITS users using e-Pramaan.
2. BITS Portal for entering the bale information and tracking.
3. BITS Mobile Application for scanning and updating the tracking information using QR Code.
4. Audit Logging.

5. Reporting Generation.
6. Information storage in Blockchain Network.

User Classes and Characteristics

The stakeholders of the CCI-BITS system are listed below:

1. Cotton Corporation of India Users at following roles:
   a) CCI Executive – Entering data at Ginning Factory.
   b) CCI Officer (Centre Incharge) – Approver at Ginning Factory.
   c) Warehouse Incharge.
   d) BO Official – Branch Officer.
   e) HO Official – Head Office Officer.
   f) Lab Incharge – Upload the Test Results.
2. CCI Administrator

User Documentation

User Manuals will be delivered along with the software.

User Interface Requirements

- BITS Web Portal Interface.
- BITS Mobile Application Interface.

Technology Stack

Sr. No.	Description	Proposed Solution Stack
1.	Programming Language	Java (Open JDK)
2.	Application Stack	Spring Boot
3.	Application Server	Apache Tomcat / Nginx
4.	Database	PostgreSQL
5.	Blockchain	Hyperledger Fabric
6.	Mobile App	Android & iOS
7.	Front End UI Design	Angular
8.	Reporting	Tibco Jaspersoft
9.	Operating System	Ubuntu
10.	Source Code Management	Gitlab
12.	Build Automation Tool	Maven

Functional Requirements

Use Cases

Use Case Id:	UC-CCI-1
Use Case Name:	User Login
Actors:	Any user
Description:	This functionality allows user's role-based login to system.
Pre-Conditions:	The user must be registered.
Normal Flow:	1. User will visit login page by clicking "Login with MeriPehchaan" option on home page. 2. User will enter username and password on MeriPehchaan Login page. 3. Validation of username and password will be done. 4. If username and password is validated, a confirmation dialogue will appear after which system will allow particular user to login with his role details. 5. If a user is functioning under more than one role, then user will have option to select role as well. 6. If username and password is incorrect, user will see error message as "Invalid credentials". 7. After login failed, re-login will be required.
Alternative Flows:	None
Exceptions:	None
Post Conditions:	Display BITS home page.
Remark:	User login will be done based on user role in the system.

Use Case Id:	UC-CCI-2
Use Case Name:	Forgot Password
Actors:	Any user
Description:	This functionality allows users to change/update the password.
Pre-Conditions:	User must be registered.

Normal Flow:	1. User click on “Forgot Password” option on home page. 2. System displays the MeriPehchaan “Forgot Your Password” page where he/she needs to enter the required details they had set during account creation. 3. User receives OTP on mobile no. Verify OTP. 4. User can click reset password to reset the password. 5. The system notifies user that the password has been successfully changed. 6. User is informed that account password is successfully changed and updated.
Alternative Flows:	None
Exceptions:	None
Post Conditions:	User redirected to the login page.
Remark:	Forgot password use case set new password in case user forgets password.

Use Case Id:	UC-CCI-3
Use Case Name:	Public User Registration
Actors:	Any user
Description:	This functionality allows users to register in the system.
Pre-Conditions:	The user must not be registered.
Normal Flow:	1. User clicks on the “New user? Sign up for MeriPehchaan” option on the home page. 2. MeriPehchaan “Sign up for ePramaan” page opens. 3. User needs to enter all the required registration details, including the Mobile Number. 4. Generates and verifies the OTP sent to the registered mobile number. 5. Sets and confirms the password. 6. User is registered successfully. 8. The user can now log in through the “Login with MeriPehchaan” option on home page.
Alternative Flows:	None
Exceptions:	None
Post Conditions:	User will get the successful registration message.

Remark:	Use case for public user to register in system.

Use Case Id:	UC-CCI-4
Use Case Name:	Update/Add Profile
Actors:	Any User
Description:	This functionality allows users to Update/Add its own profile.
Pre-Conditions:	The user must be registered in the system.
Normal Flow:	1. User will login to the system based on role. 2. Open the profile page and edit profile. 3. Profile will be saved in the database. 4. Update information will also be saved in blockchain.
Alternative Flows:	None
Exceptions:	None
Post Conditions:	User is informed that profile is updated successfully.
Remark:	User is able to edit/update its own profile.

Use Case Id:	UC-CCI-5
Use Case Name:	Bale Registration
Actors:	CCI Executive, CCI Official
Description:	This functionality allows CCI Executive user to register bales in system.
Pre-Conditions:	The user must be registered as a CCI Executive in the system.
Normal Flow:	1. CCI Executive will be login on the system based on role. 2. Then navigate to “Lot Creation” enter lot detail under which bales are to be registered. 3. User will enter bale registration details and submit the form. 4. Bale will be registered successfully.
Alternative Flows:	None
Exceptions:	None
Post Conditions:	Bale registered successfully and status as ‘Pending’ approval from CCI Official.

Remark:	Bale registration details will be sent for approval of CCI Official.

Use Case Id:	UC-CCI-6
Use Case Name:	Bale Information Update
Actors:	CCI Executive, CCI Official
Description:	This functionality allows CCI executive/CCI official to update the bale registration details.
Pre-Conditions:	The user must be registered as a CCI executive/CCI official in the system
Normal Flow:	1. Authorized user will login in the system as a CCI official/CCI Executive. 2. CCI official will preview the bale details. 3. If the bale details are incorrect, CCI official may update the bale details. 4. In case of more or multiple corrections, CCI official will reject the bale information to be updated by CCI Executive. 5. CCI Executive will get the access to update the bale registration details for the rejected bales. 6. CCI Executive will update the bale details and submit for approval. 7. Bale Information will also be saved in blockchain.
Alternative Flows:	1. Authorized user will login in the system as a CCI executive/official. 2. Update/Edit and submit the updated details.
Exceptions:	None
Post Conditions:	None
Remark:	CCI Official can edit/update and approve the registration details or can reject the bale details to be updated by the CCI Executive.

Use Case Id:	UC-CCI-7
Use Case Name:	View Reports
Actors:	Any user
Description:	This functionality allows users to view the reports.
Pre-Conditions:	The user must be registered in the system

Normal Flow:	1. Authorized user will login in the system based on their role. 2. User will select crop year to view the report. 3. The report can be downloaded.
Alternative Flows:	None
Exceptions:	None
Post Conditions:	The user will get the report to view in system.
Remark:	User will get all the reports which it has access to view.

Use Case Id:	UC-CCI-8
Use Case Name:	Approve/Reject Bale Registration
Actors:	CCI Official
Description:	This functionality allows user to approve/reject bale registration.
Pre-Conditions:	1. User must be registered in the system. 2. Bale registration should be done.
Normal Flow:	1. User will login in the system as CCI official by selecting the role. 2. User will get all the bales detail with status 'Pending' approval from CCI Official. 3. If the details are invalid/incorrect the bale registration will be rejected with remark. 4. The rejected bale registration will then be available to CCI executive for update. 5. If all the details are valid and correct then CCI official will approve the bale registration. 6. Bale Registration Information will also be saved in blockchain
Alternative Flows:	None
Exceptions:	None
Post Conditions:	Validation of bale registration details will be done successfully and bale status will be updated as approved/rejected.
Remark:	The CCI Official user is able to approve/reject the bales registration after data validation.

Use Case Id:	UC-CCI-9
Use Case Name:	Update Bales Tracking Details
Actors:	CCI Official, Warehouse In-charge.
Description:	This functionality allows authorized user to update the tracking status of bales.
Pre-Conditions:	The user must be registered in the system.
Normal Flow:	1. Authorized user will login in the system based on role. 2. Scan the QR code/Enter UBIN manually to update the tracking status. 3. Enter the tracking details and status. 4. The bales tracking details and status is updated for the whole lot of bales to which the scanned bale belongs. 5. Bale Tracking Information will also be saved in blockchain.
Alternative Flows:	If QR code is degraded or the user is not able to scan the QR code then the user will have to enter QR code UBIN manually to update the bale tracking status.
Exceptions:	None
Post Conditions:	The bale tracking status will be updated and user will be redirected to bales list page.
Remark:	Bale tracking status can be updated by authorized user only by scanning the QR code.

Use Case Id:	UC-CCI-10
Use Case Name:	View Bales Tracking Details
Actors:	Any user
Description:	This System allow users to scan the QR code on the bale and view the tracking status of bales.
Pre-Conditions:	The QR code should be able to be scanned or QR code UBIN should be clearly visible.
Normal Flow:	1. User will login to the system based on role. 2. User will select the ‘Scan QR code’ or ‘Enter UBIN manually’ option to view the tracking details of bale. 3. Authorized user will scan the QR code for a bale and the bale tracking details are displayed.

Alternative Flows:	1. If QR code is not visible properly then the user will have to enter the UBIN for that particular bale manually. 2. Public/unauthorized user will scan the QR code through the application. 3. Public/unauthorized user will only be able to view the bale tracking details if the bale status is "SOLD".
Exceptions:	None
Post Conditions:	After scanning QR code, updated bale tracking status will be shown to the authorized users and the details to unauthorized users are only shown when the bale status is "SOLD".
Remark:	The bale tracking details are shown to public/unauthorized users only when the bale status is "SOLD".

Use Case Id:	UC-CCI-11
Use Case Name:	Upload Test Result
Actors:	Lab In-charge
Description:	This functionality allows the registered lab in-charge to upload the sample bale's test results.
Pre-Conditions:	The user must be registered in the system as a lab in-charge.
Normal Flow:	1. Authorized user will login in the system based on role. 2. Fill in the details of the bale from which the cotton sample is taken for testing. 3. Upload the quality test report.
Alternative Flows:	None
Exceptions:	None
Post Conditions:	Test reports will be available to all authorized users to view.
Remark:	The cotton is taken for test from any randomly selected bale and is then sent for testing to the lab which is certified lab. The result uploaded for one bale will be uploaded for all other bales which are sent for testing from that lot.

Use Case Id:	UC-CCI-12
Use Case Name:	Update CCI User Profile
Actors:	CCI HO Official, CCI BO Official, CCI Admin
Description:	Any user's profile can be updated by highly authorized user in the system.
Pre-Conditions:	User must be registered in the system.
Normal Flow:	1. Authorized user will login in the system based on role. 2. Enter the details of user whose profile to be updated. 3. Update the user's profile and submit. 4. User profile updated successfully. 5. User profile detail will also be saved in blockchain.
Alternative Flows:	None
Exceptions:	None
Post Conditions:	User's profile will be updated.
Remark:	None

Use Case Id:	UC-CCI-13
Use Case Name:	Revert Bale for Update
Actors:	CCI HO Official, CCI BO Official, CCI Admin
Description:	This functionality allows authorized CCI user to revert the bale for update the bale details.
Pre-Conditions:	1. Authorized CCI users must be registered in the system. 2. Bale must be registered in the system.
Normal Flow:	1. CCI user will login in the system based on the role. 2. CCI user will search the bale by entering the UBIN or by scanning the QR code. 3. The selected bale is reverted back for any change in its details or for any suggested update/correction with the remark.
Alternative Flows:	None

Exceptions:	None
Post Conditions:	Bales are reverted to the authorized user for update/correction in details.
Remark:	Any higher authority in the system can revert the bale back for change in details or correction or modification on observation of incorrect or invalid details.

Use Case Id:	UC-CCI-14
Use Case Name:	Deregister User
Actors:	CCI Admin, CCI HO Official
Description:	CCI Admin, CCI HO Official user can deregister a registered user as and when required.
Pre-Conditions:	1. User to be deregistered must be present in the system. 2. Authorized user must be registered in the system and must be having either CCI Admin or CCI HO Official role.
Normal Flow:	1. Admin/CCI HO Official will login in system. 2. Authorized user will select the user management. 3. Authorized user will select the user to be deregistered. 4. Selected user will then be deregistered and will no longer be able to login the system. 5. User deregistration information will also be saved in blockchain.
Alternative Flows:	None
Exceptions:	None
Post Conditions:	User deregistered success message will be displayed.
Remark:	Deregistered user will not be able to login after deregistered.

Use Case Id:	UC-CCI-15
Use Case Name:	View Test Result
Actors:	CCI Admin, CCI HO Official, CCI BO Official, Lab In-charge, Warehouse In-charge, CCI Official

Description:	Test results for particular bales samples will be visible.
Pre-Conditions:	The authorized user must be registered in the system.
Normal Flow:	1. User will login to the system based on the role. 2. User will Scan the QR code/enter UBIN to view the test results. 3. Test Results will be displayed.
Alternative Flows:	None
Exceptions:	None
Post Conditions:	Test results are viewed in browser and can be downloaded.
Remark:	The test results of bale from which cotton is taken for test in certified lab can be viewed by scanning the QR code or entering the UBIN.

Use Case Id:	UC-CCI-16
Use Case Name:	User Role Management
Actors:	CCI Admin
Description:	Roles for all users will be provided and changes in roles will also be done. Based on roles, access will be provided to users.
Pre-Conditions:	Users must be registered.
Normal Flow:	1. CCI Admin login to the system. 2. CCI Admin will search for registered user or search user from the user. 3. User will assign roles to particular user or can also remove existing roles of any particular user. 4. The changes are saved in database.
Alternative Flows:	None
Exceptions:	None
Post Conditions:	User role will be updated.
Remark:	In system any user's roles can be updated by Admin user.

Use Case Id:	UC-CCI-17
Use Case Name:	Role Activity Mapping
Actors:	CCI Admin
Description:	Activities are assigned to respective roles.
Pre-Conditions:	User must be registered.
Normal Flow:	1. User login to system as Admin. 2. User will select the role to assign activities. 3. User will select activities to assign to particular role. 4. Changes are then saved in the database.
Alternative Flows:	None
Exceptions:	None
Post Conditions:	User activity info will be updated.
Remark:	CCI Admin user will map the activities with a role.

Use Case Id:	UC-CCI-18
Use Case Name:	CCI User Registration
Actors:	CCI BO Official
Description:	This functionality allows CCI BO Official to register CCI Users in the system.
Pre-Conditions:	CCI User must be registered in the system.
Normal Flow:	1. User visit home page for the registration. 2. Fill all the required data and submit the registration form. 3. User details will be saved in database. 4. CCI User Registration information will also be saved in blockchain.
Alternative Flows:	None
Exceptions:	None
Post Conditions:	CCI user will be registered in the system.
Remark:	None

Use Case Id:	UC-CCI-19
Use Case Name:	Assign Workplace
Actors:	CCI Admin, CCI HO Official, CCI BO Official.
Description:	This functionality allows CCI Official users to assign work place to CCI users.
Pre-Conditions:	1. CCI User must be registered in the system. 2. Factories, Centers must be registered in the system.
Normal Flow:	1. User visit login with credential to assign workplace. 2. User will select a user and assign center/factory and submit. 3. Data will be saved in database.
Alternative Flows:	None
Exceptions:	None
Post Conditions:	Workplace will be updated for the selected user.
Remark:	None

Use Case Id:	UC-CCI-20
Use Case Name:	Add CCI Branch/Centre/Factory/Warehouse
Actors:	CCI Admin, CCI HO Official, CCI BO Official
Description:	This functionality allows CCI users to add CCI Centre/ CCI Branch/ Factory/ Warehouse in the system.
Pre-Conditions:	CCI User must be registered in the system.
Normal Flow:	1. User Log in to the system. 2. Click Add Branch/Add Centre/Add Factory/Add Warehouse. 3. Fill in the details and submit. 4. Data will be saved in database.
Alternative Flows:	None
Exceptions:	None
Post Conditions:	Details will be saved in database.
Remark:	None

Use Case Id:	UC-CCI-21
Use Case Name:	CCI User Registration Approval
Actors:	CCI Admin, CCI HO Official, CCI BO Official
Description:	This functionality allows CCI authorized users to approve registration of CCI users in the system.
Pre-Conditions:	1. CCI User must be registered in the system.
Normal Flow:	1. User Log in to the system as CCI Admin/CCI HO Official/CCI BO Official. 2. Lists the CCI user registrations pending approval. 3. Review the details of the CCI user. 3. Approve the CCI user registration. 4. Data will be saved in database.
Alternative Flows:	None
Exceptions:	None
Post Conditions:	CCI user registration will be approved.
Remark:	None

Use Case Id:	UC-CCI-22
Use Case Name:	Update Bale Status Lost/Damaged/Theft
Actors:	CCI Admin
Description:	CCI Admin will have the authority to update status of bale to Lost/Damaged/Theft with supporting document upload.
Pre-Conditions:	The user must be registered in the system.
Normal Flow:	1. User will login on the system as CCI Admin. 2. User will select the bale by scanning UBIN or entering UBIN manually or by selecting lot first and then selecting the bale from the selected lot. Or the user can select the whole lot for updating its status. 3. User will update the bale/lot status to Lost/Damaged/Theft and upload the necessary supporting document for updating the status. 4. Changes are saved in database.

	5. Updated Bale Status information will also be saved in blockchain.
Alternative Flows:	None
Exceptions:	None
Post Conditions:	Bale information will be updated.
Remark:	None

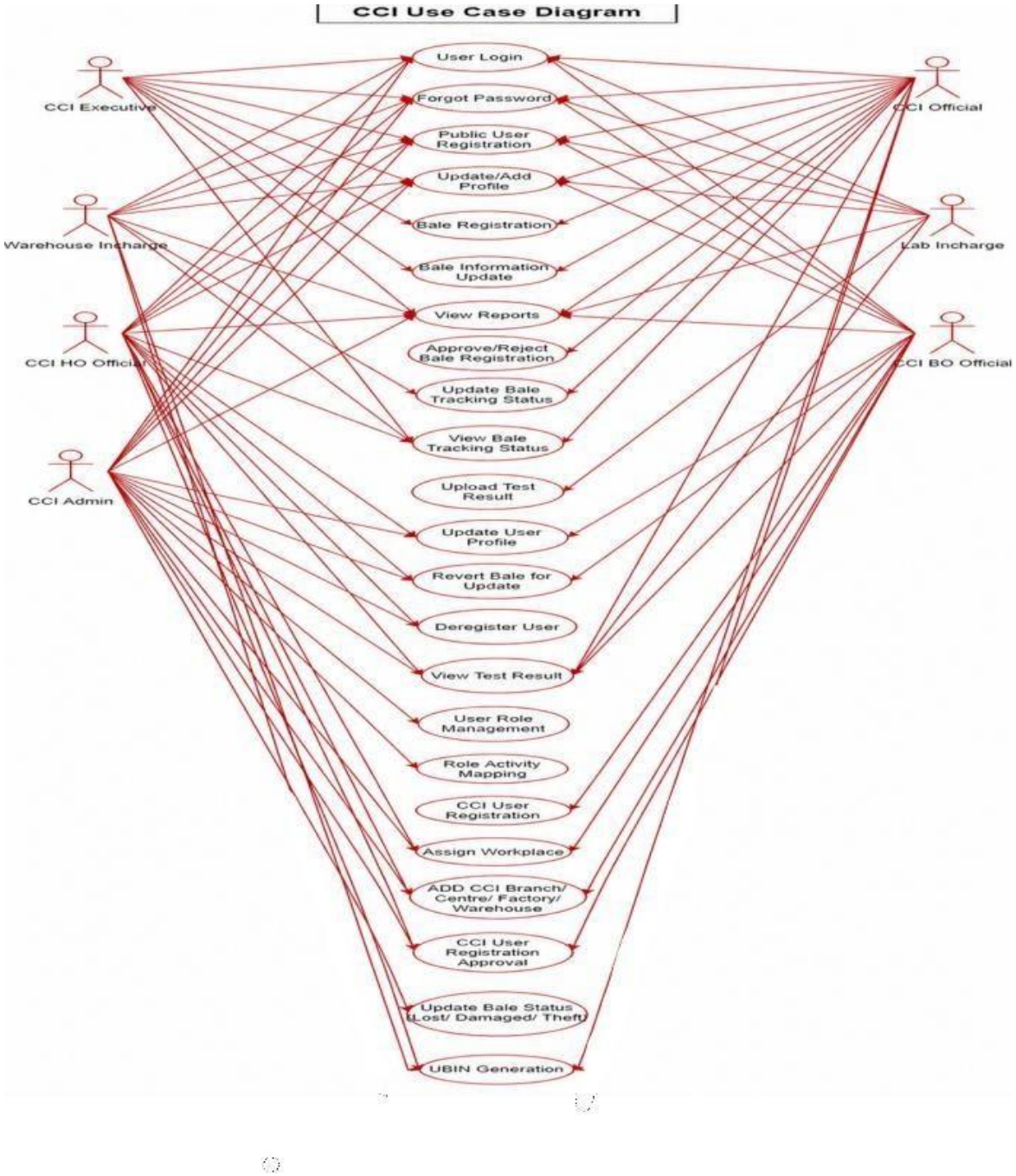
Use Case Id:	UC-CCI-23
Use Case Name:	UBIN Generation
Actors:	CCI HO Official
Description:	CCI HO Official will generate Excel of UBINS.
Pre-Conditions:	The user must be registered in the system.
Normal Flow:	1. User will login on the system as CCI HO Official. 2. User will enter crop year, branch code and number of UBINS he wanted to be generated (UBIN COUNT). 3. Excel will be generated which will then use by respective branch.
Alternative Flows:	None
Exceptions:	None
Post Conditions:	Excel of UBINS will be generated.
Remark:	None

Use Case Id:	UC-CCI-24
Use Case Name:	Generate Gate Pass
Actors:	CCI Warehouse In-charge, CCI Centre In-charge
Description:	CCI Warehouse In-charge/ Centre In-charge will be able to generate gate pass for the lot leaving Warehouse/Godown/Factory.
Pre-Conditions:	The user must be registered in the system.
Normal Flow:	1. User will login to the system with proper credential. 2. User will select the option to generate the gate pass. 3. User will enter lot number, transporter detail, truck detail, L. R.

	number and generate gate pass. 4. Gate pass will be generated which will then be printed and handed over to transporter/truck driver.
Alternative Flows:	None
Exceptions:	None
Post Conditions:	Gate pass will be generated.
Remark:	None

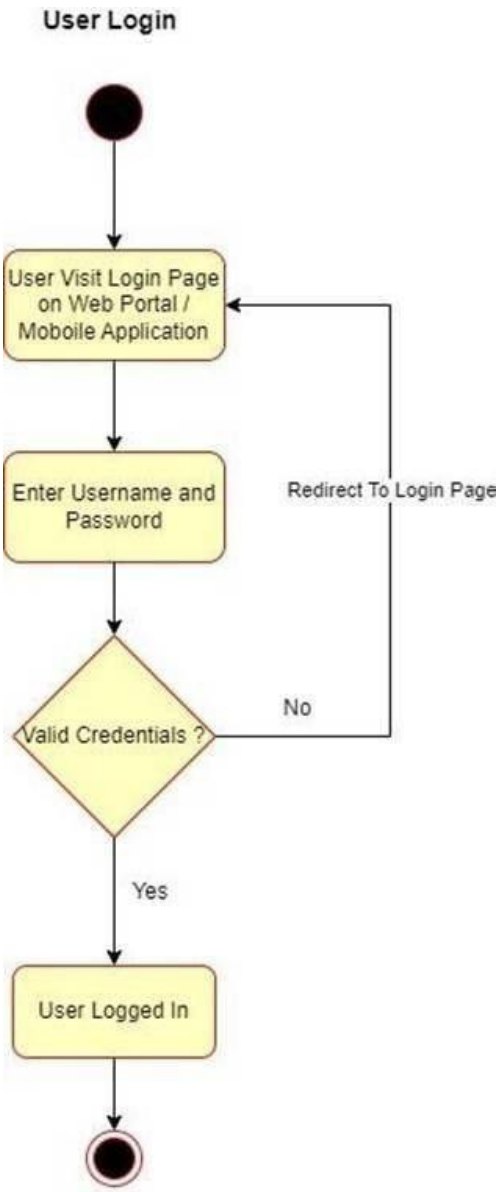
Analysis Models

Use Case Diagram



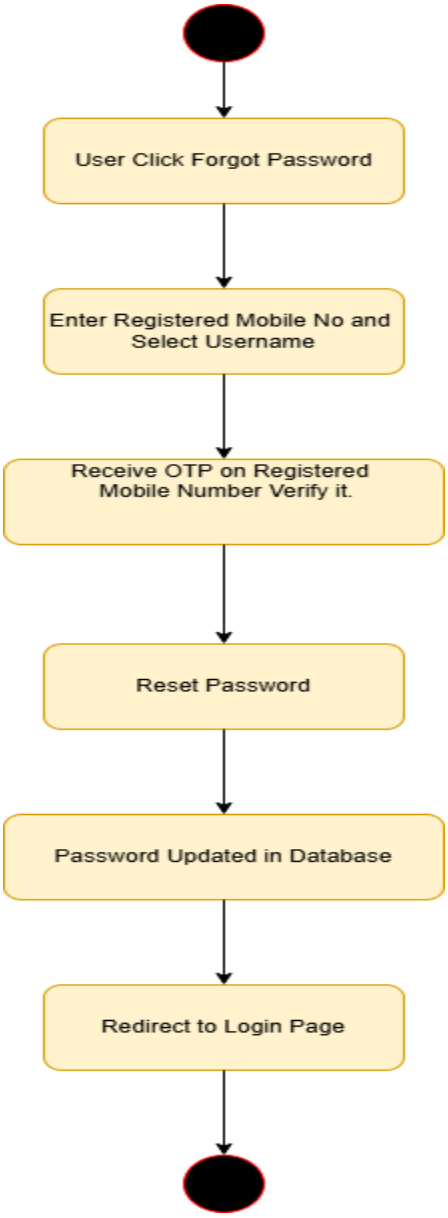
Activity Diagrams

1. **UC-CCI-1**

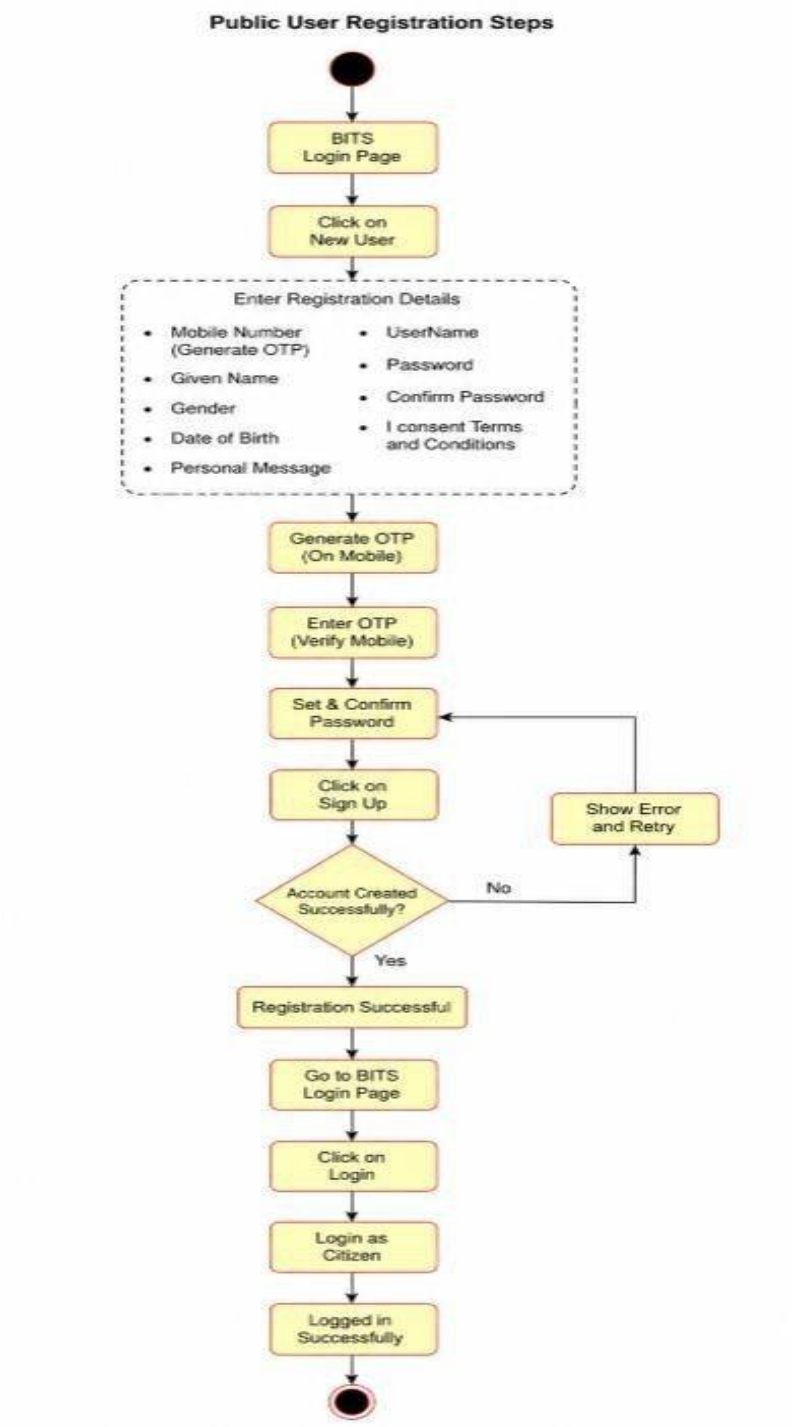


2. UC-CCI-2

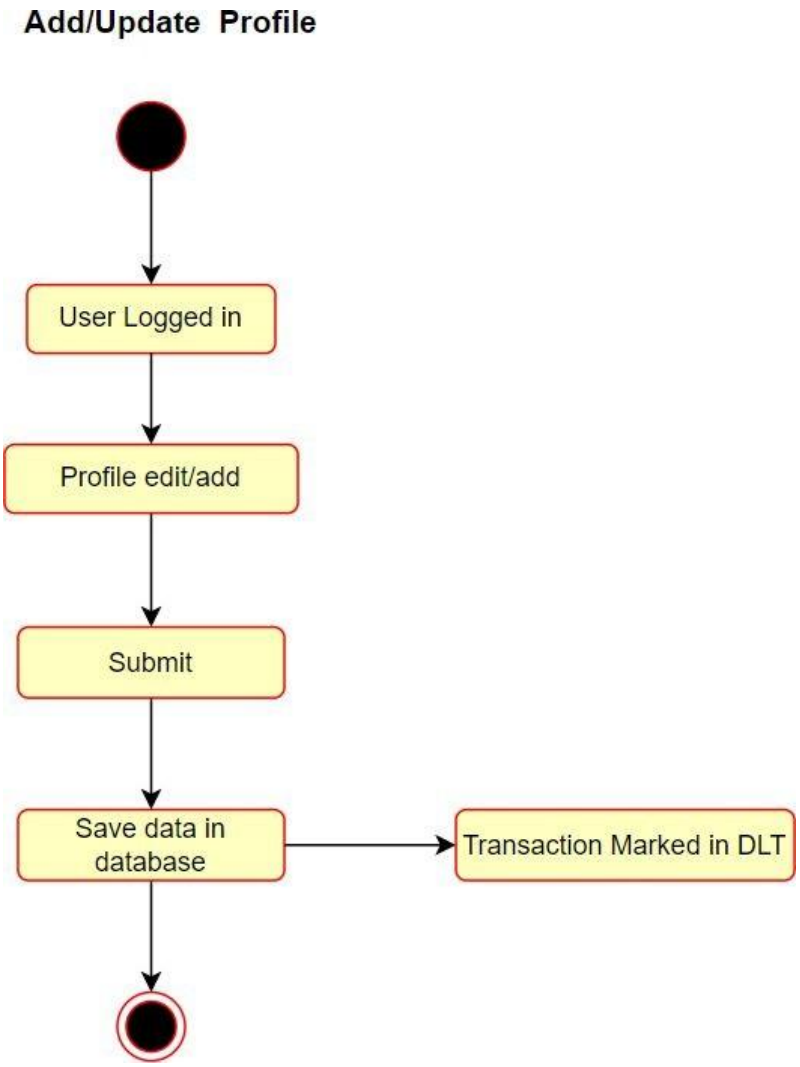
Forgot Password



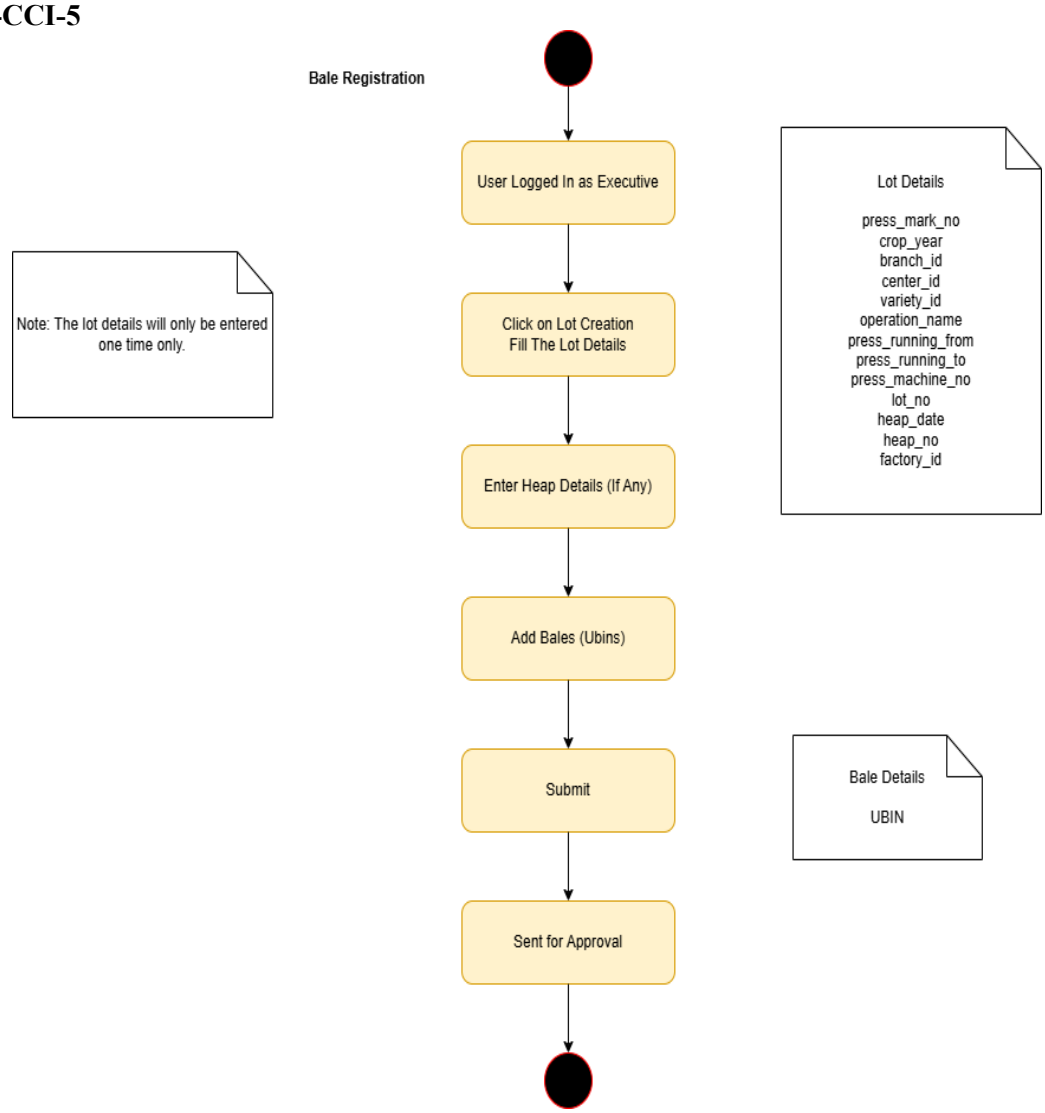
3. UC-CCI-3


Public User Registration Steps
BITS Login Page
Click on New User
Enter Registration Details
Mobile Number (Generate OTP)
Given Name
Gender
Date of Birth
Personal Message
UserName
Password
Confirm Password
I consent Terms and Conditions
Generate OTP (On Mobile)
Enter OTP (Verify Mobile)
Set & Confirm Password
Click on Sign Up
Account Created Successfully?
No
Show Error and Retry
Yes
Registration Successful
Go to BITS Login Page
Click on Login
Login as Citizen
Logged in Successfully

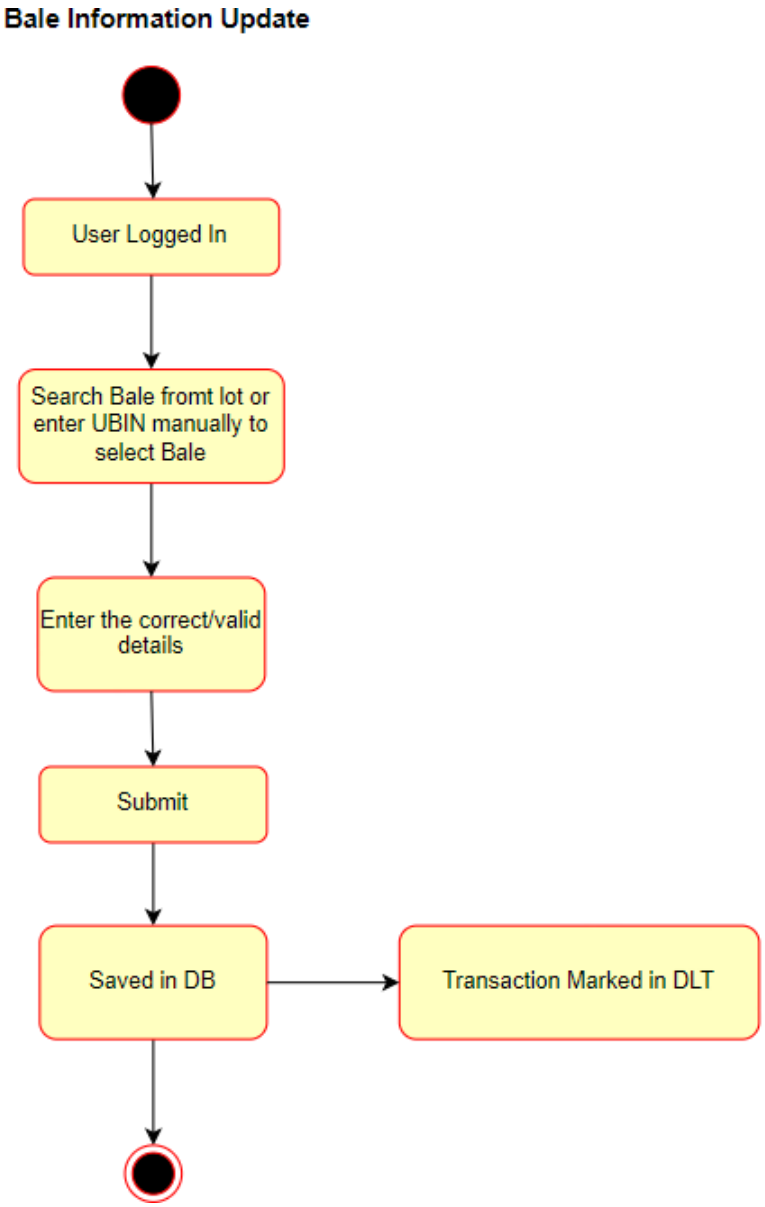
4. **UC-CCI-4**


Add/Update Profile
User Logged in
Profile edit/add
Submit
Save data in database
Transaction Marked in DLT

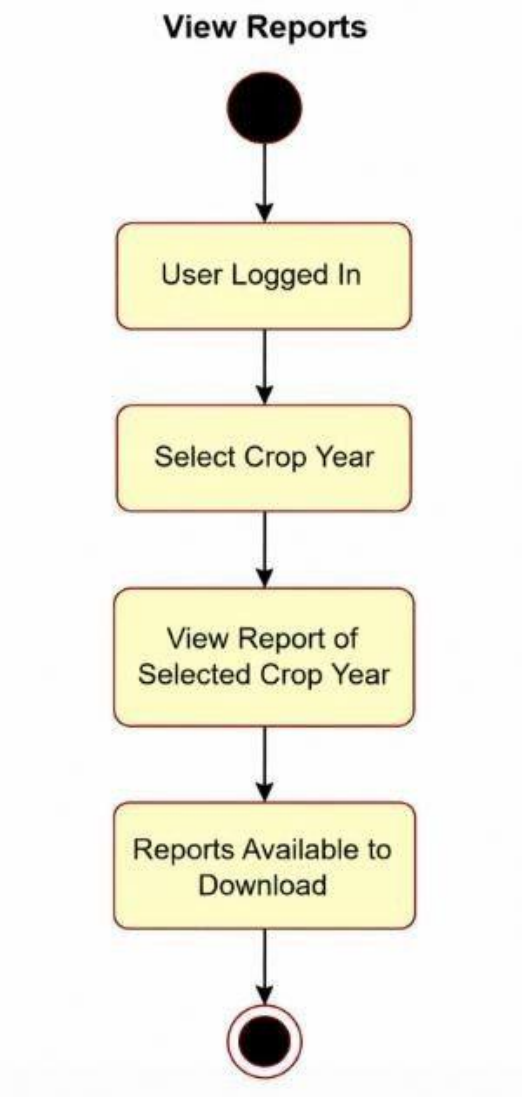
5. UC-CCI-5


Bale Registration
User Logged In as Executive
Click on Lot Creation
Fill The Lot Details
Enter Heap Details (If Any)
Add Bales (Ubins)
Submit
Sent for Approval
Note: The lot details will only be entered one time only.
Lot Details
press_mark_no
crop_year
branch_id
center_id
variety_id
operation_name
press_running_from
press_running_to
press_machine_no
lot_no
heap_date
heap_no
factory_id
Bale Details
UBIN

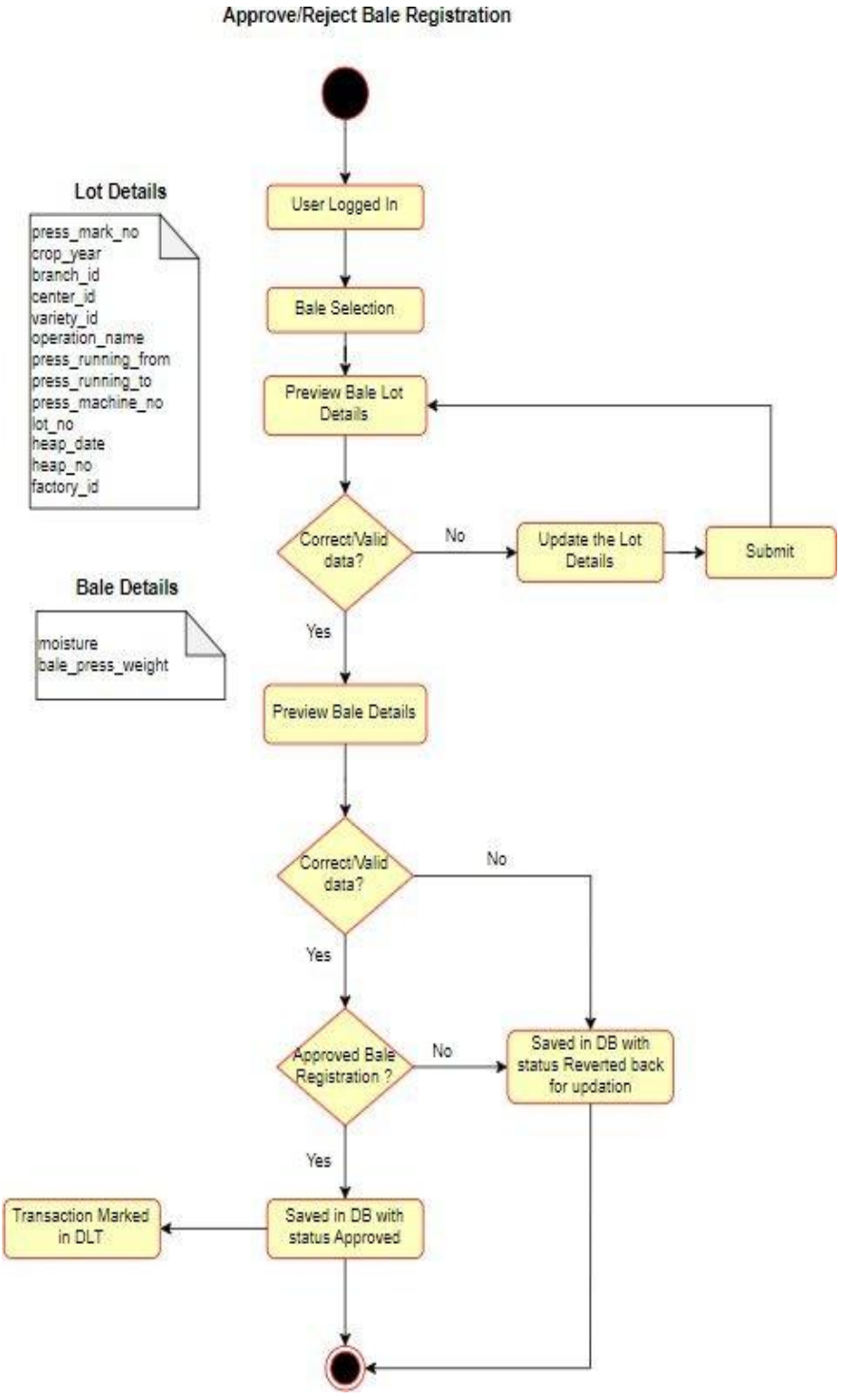
6. UC-CCI-6


Bale Information Update
User Logged In
Search Bale fromt lot or enter UBIN manually to select Bale
Enter the correct/valid details
Submit
Saved in DB
Transaction Marked in DLT

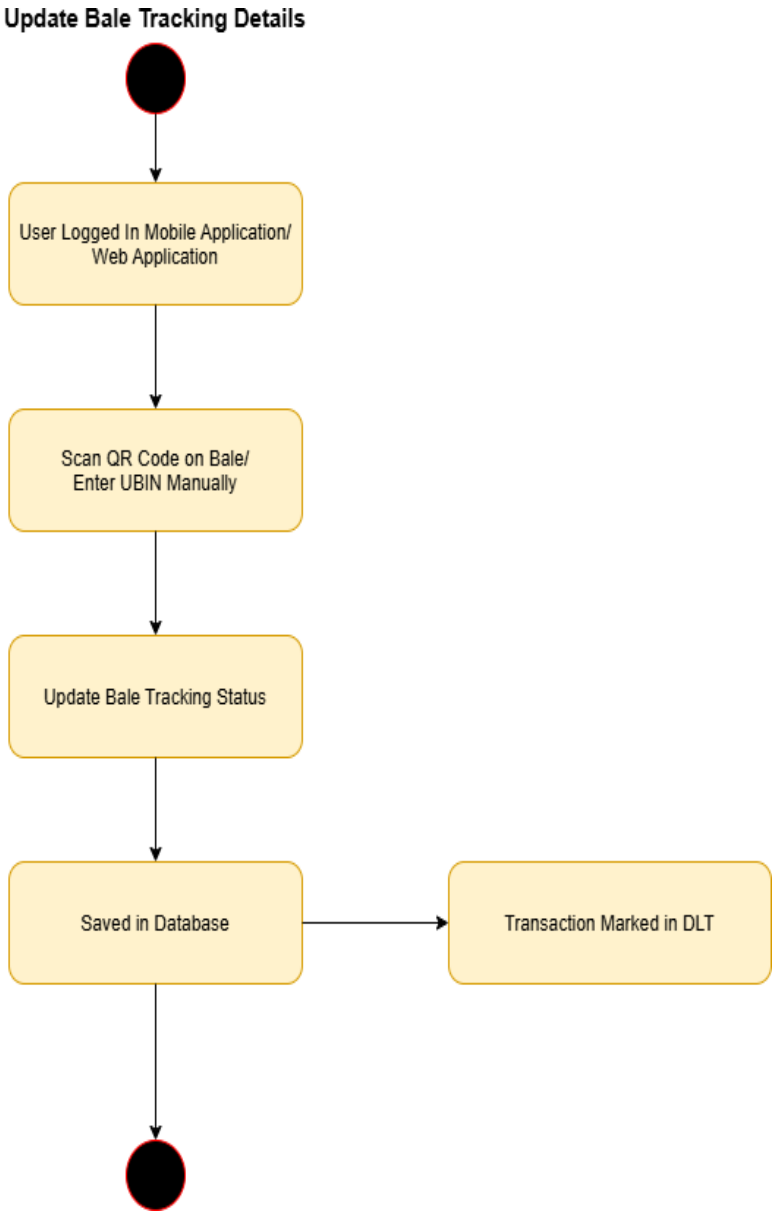
7. **UC-CCI-7**


View Reports
User Logged In
Select Crop Year
View Report of Selected Crop Year
Reports Available to Download

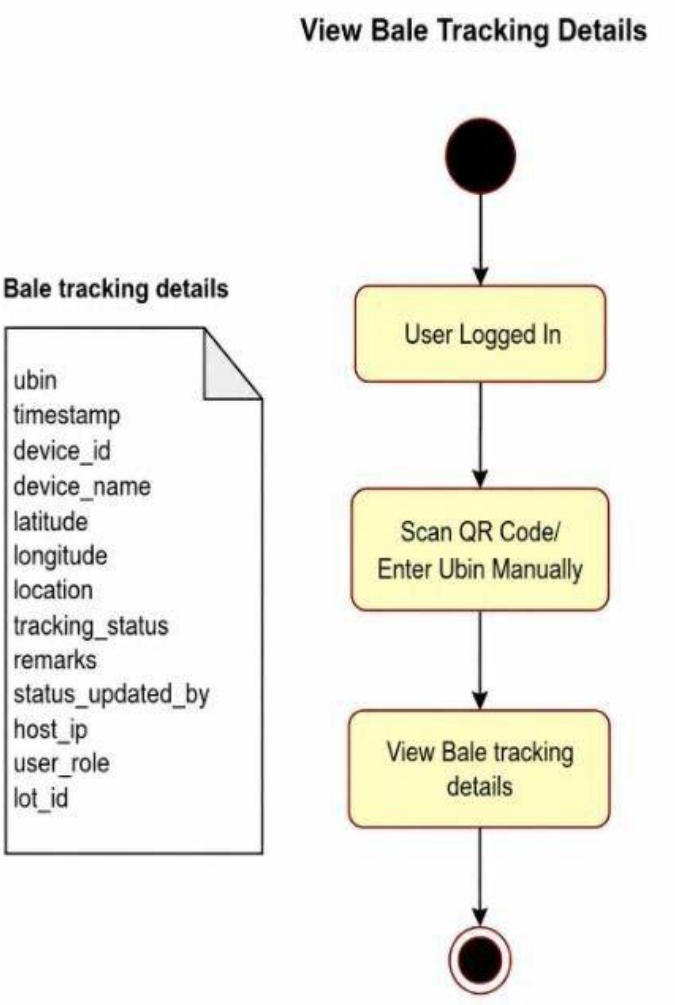
8. UC-CCI-8


Approve/Reject Bale Registration
Lot Details
press_mark_no
crop_year
branch_id
center_id
variety_id
operation_name
press_running_from
press_running_to
press_machine_no
lot_no
heap_date
heap_no
factory_id
Bale Details
moisture
bale_press_weight
User Logged In
Bale Selection
Preview Bale Lot Details
Correct/Valid data?
No
Update the Lot Details
Submit
Yes
Preview Bale Details
Correct/Valid data?
No
Yes
Approved Bale Registration ?
No
Saved in DB with status Reverted back for updation
Yes
Transaction Marked in DLT
Saved in DB with status Approved

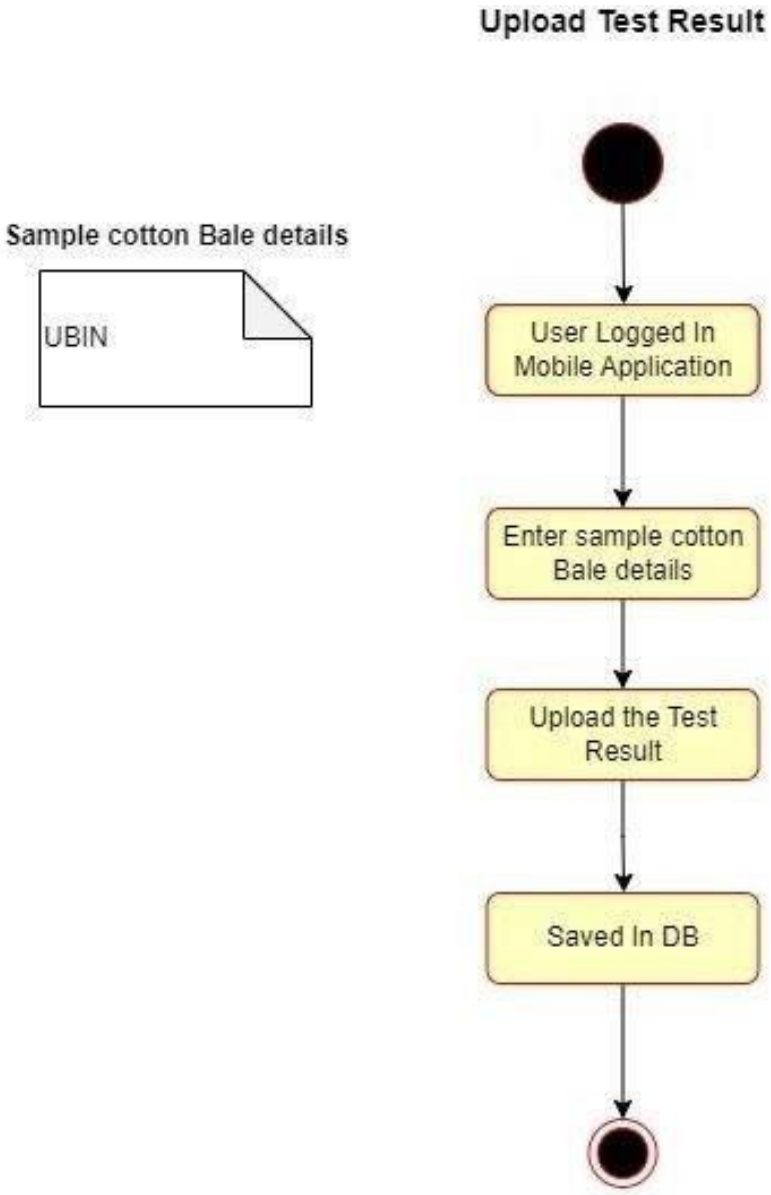
9. UC-CCI-9


Update Bale Tracking Details
User Logged In Mobile Application/ Web Application
Scan QR Code on Bale/ Enter UBIN Manually
Update Bale Tracking Status
Saved in Database
Transaction Marked in DLT

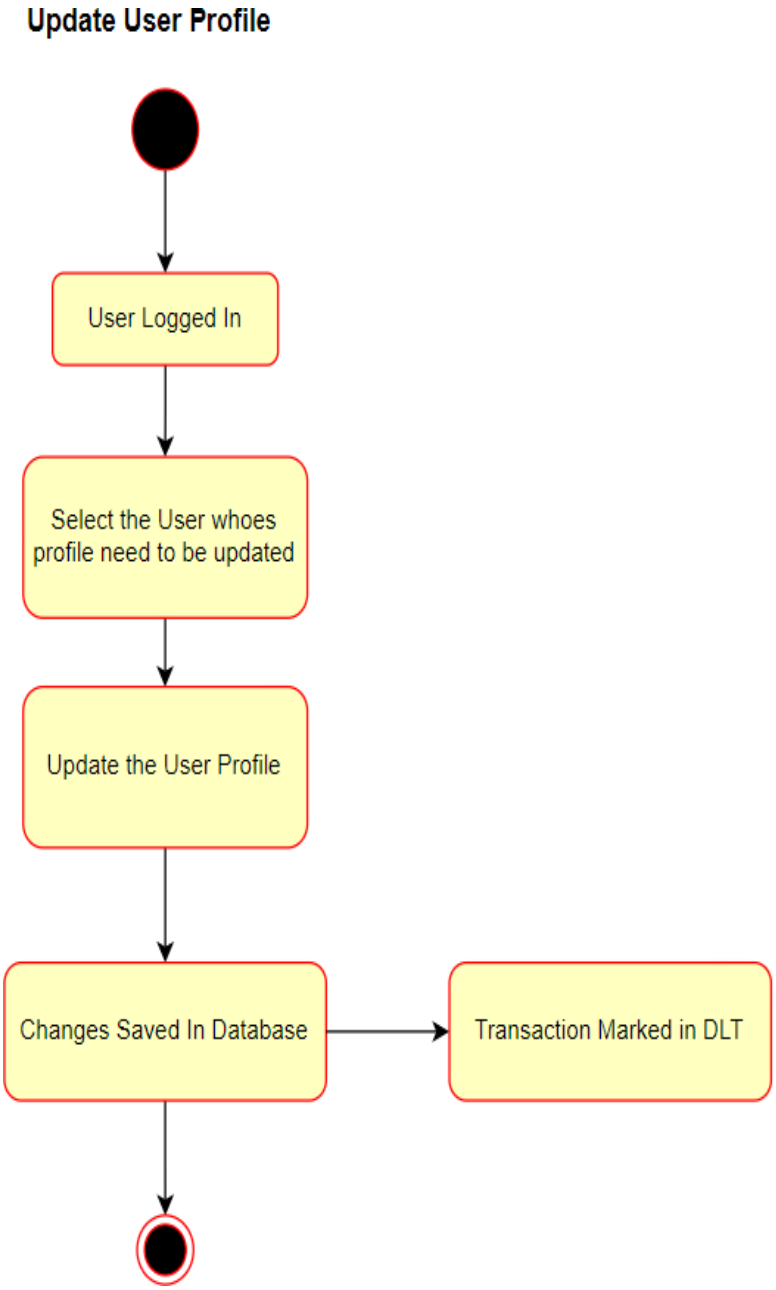
10. UC-CCI-10


View Bale Tracking Details
Bale tracking details
ubin
timestamp
device_id
device_name
latitude
longitude
location
tracking_status
remarks
status_updated_by
host_ip
user_role
lot_id
User Logged In
Scan QR Code/
Enter Ubin Manually
View Bale tracking
details

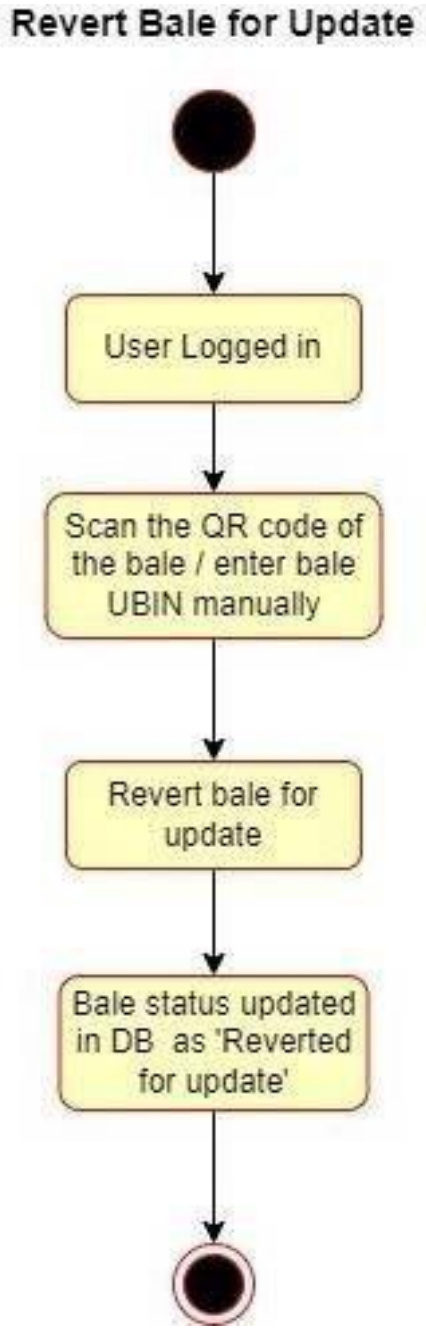
11. UC-CCI-11


Upload Test Result
Sample cotton Bale details
UBIN
User Logged In Mobile Application
Enter sample cotton Bale details
Upload the Test Result
Saved In DB

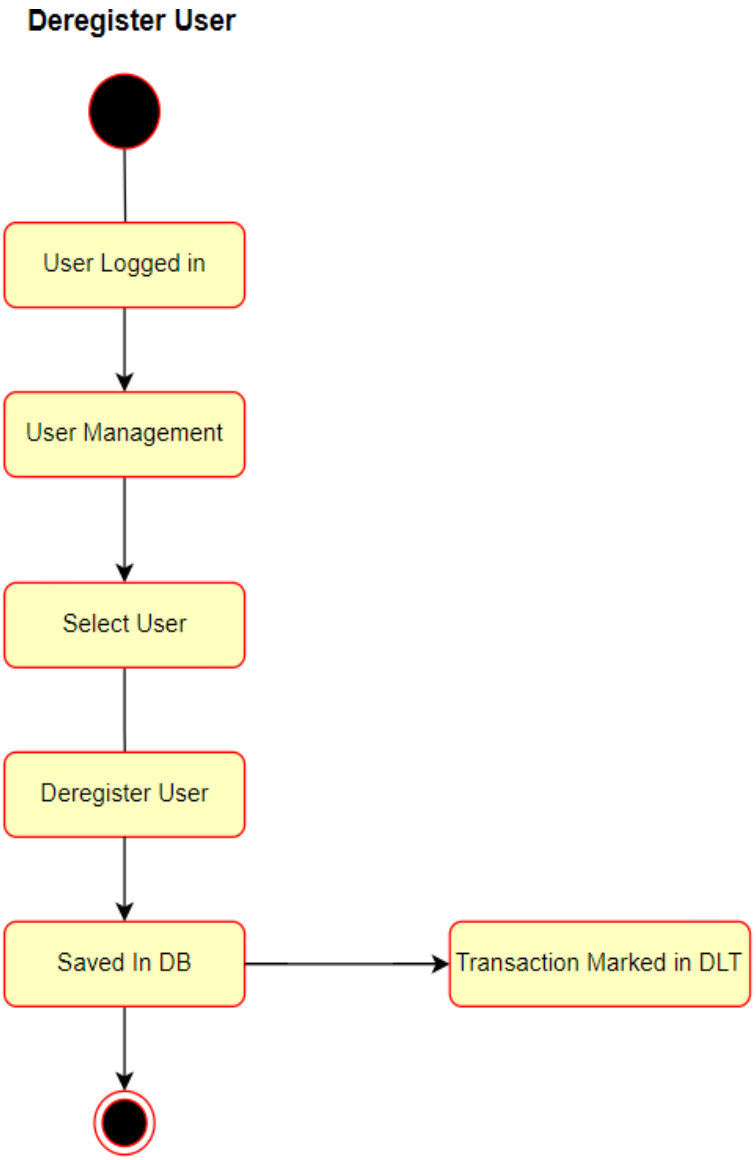
12. UC-CCI-12


Update User Profile
User Logged In
Select the User whoes profile need to be updated
Update the User Profile
Changes Saved In Database
Transaction Marked in DLT

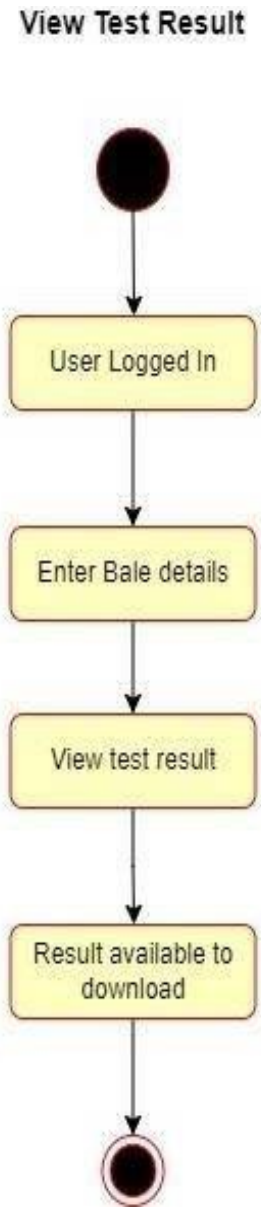
13. UC-CCI-13


Revert Bale for Update
User Logged in
Scan the QR code of the bale / enter bale UBIN manually
Revert bale for update
Bale status updated in DB as 'Reverted for update'

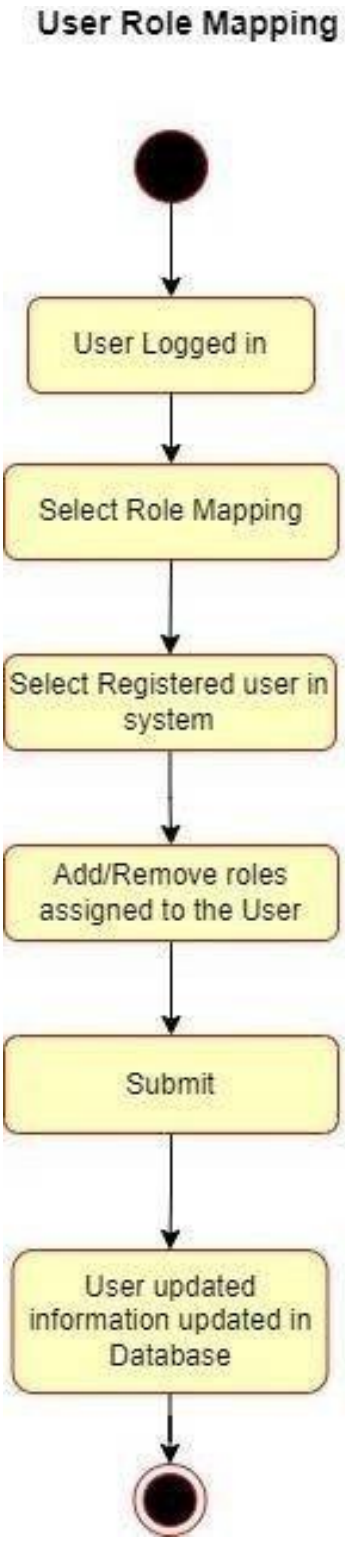
14. UC-CCI-14


Deregister User
User Logged in
User Management
Select User
Deregister User
Saved In DB
Transaction Marked in DLT

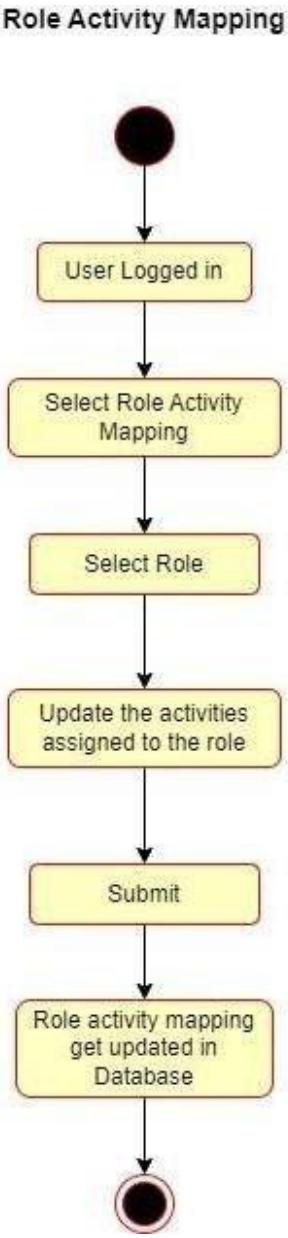
15. UC-CCI-15


View Test Result
User Logged In
Enter Bale details
View test result
Result available to download

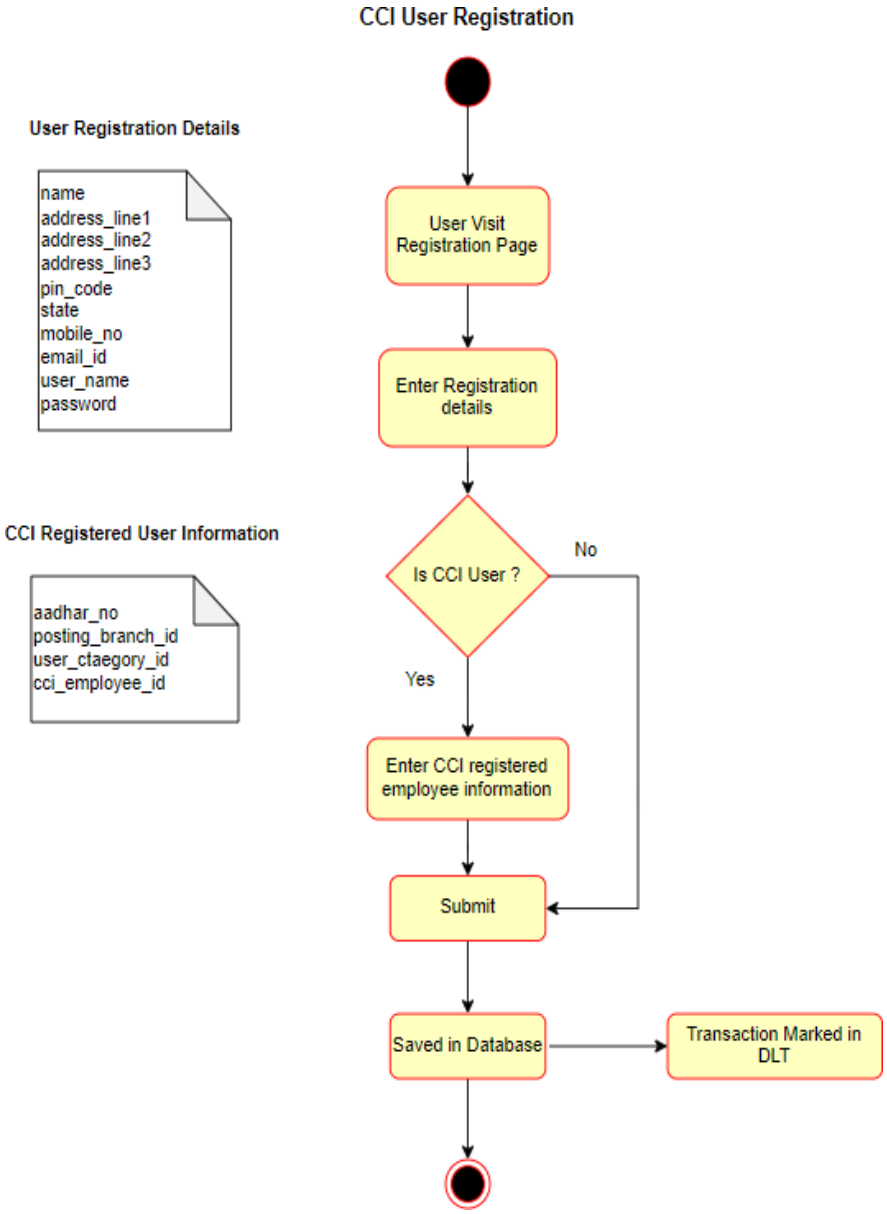
16. UC-CCI-16


User Role Mapping
User Logged in
Select Role Mapping
Select Registered user in system
Add/Remove roles assigned to the User
Submit
User updated information updated in Database

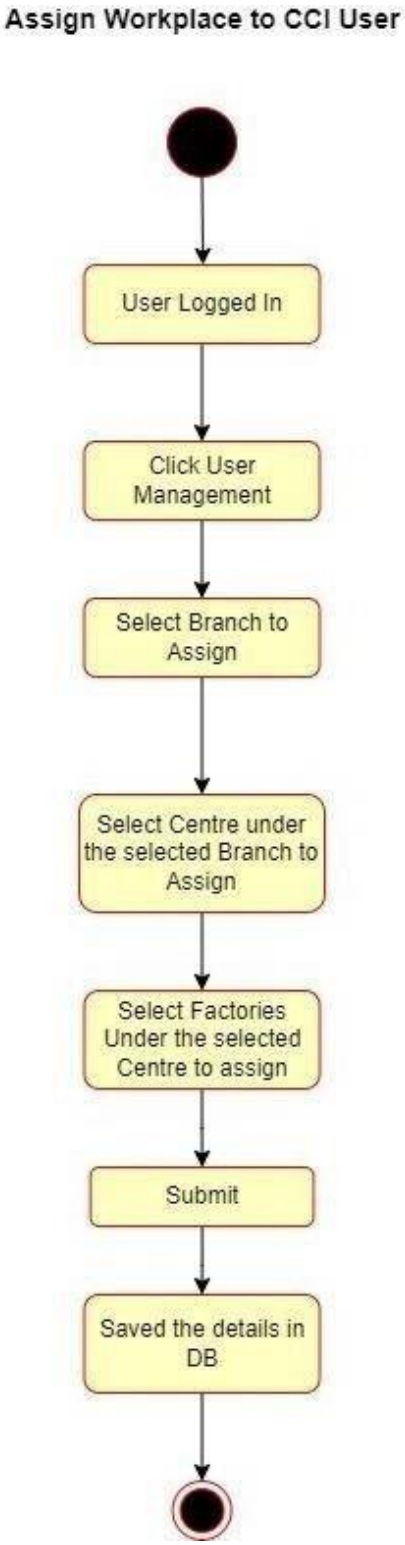
17. UC-CCI-17


Role Activity Mapping
User Logged in
Select Role Activity Mapping
Select Role
Update the activities assigned to the role
Submit
Role activity mapping get updated in Database

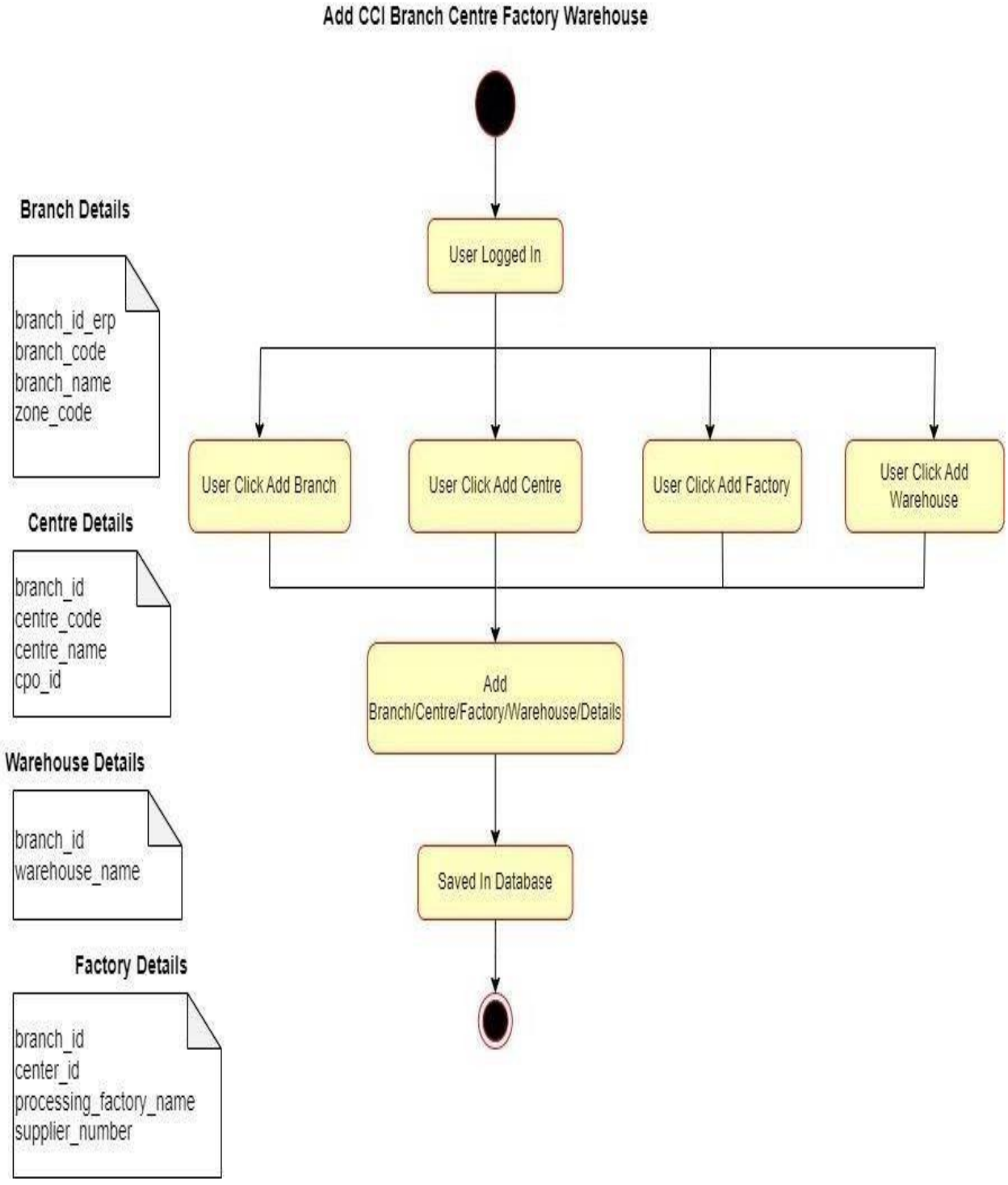
18. UC-CCI-18


CCI User Registration
User Registration Details
name
address_line1
address_line2
address_line3
pin_code
state
mobile_no
email_id
user_name
password
CCI Registered User Information
aadhar_no
posting_branch_id
user_ctaegory_id
cci_employee_id
User Visit Registration Page
Enter Registration details
Is CCI User ?
No
Yes
Enter CCI registered employee information
Submit
Saved in Database
Transaction Marked in DLT

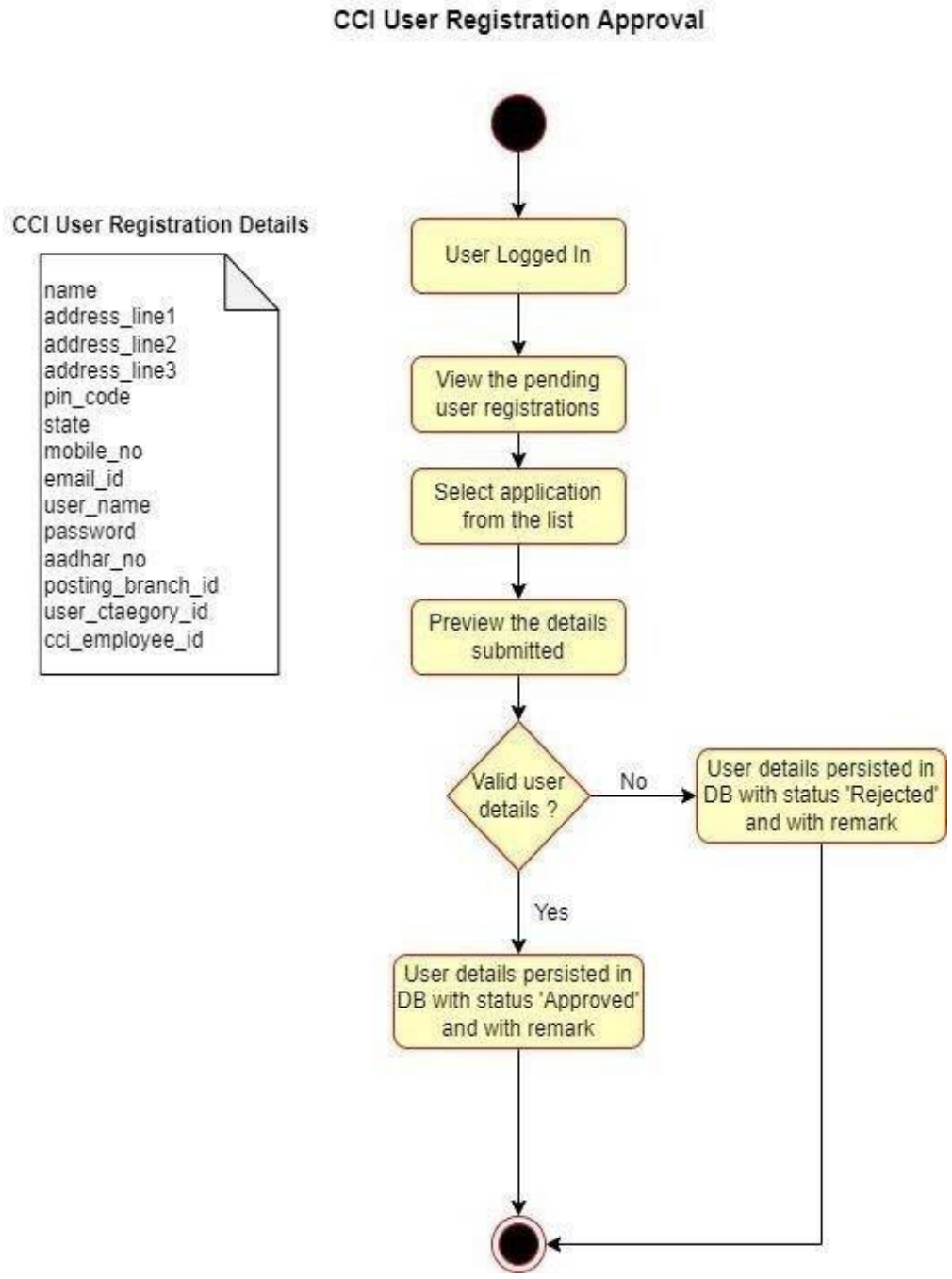
19. UC-CCI-19


Assign Workplace to CCI User
User Logged In
Click User Management
Select Branch to Assign
Select Centre under the selected Branch to Assign
Select Factories Under the selected Centre to assign
Submit
Saved the details in DB

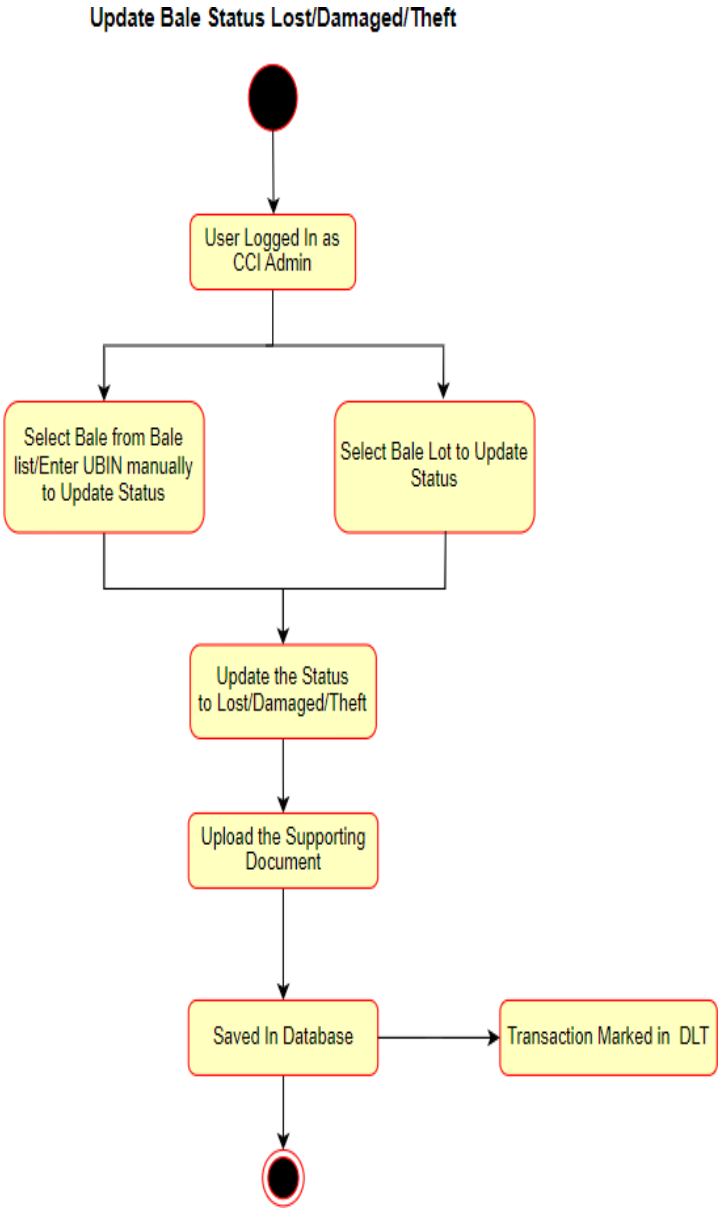
20. UC-CCI-20


Add CCI Branch Centre Factory Warehouse
User Logged In
User Click Add Branch
User Click Add Centre
User Click Add Factory
User Click Add Warehouse
Add Branch/Centre/Factory/Warehouse/Details
Saved In Database
Branch Details
branch_id_erp
branch_code
branch_name
zone_code
Centre Details
branch_id
centre_code
centre_name
cpo_id
Warehouse Details
branch_id
warehouse_name
Factory Details
branch_id
center_id
processing_factory_name
supplier_number

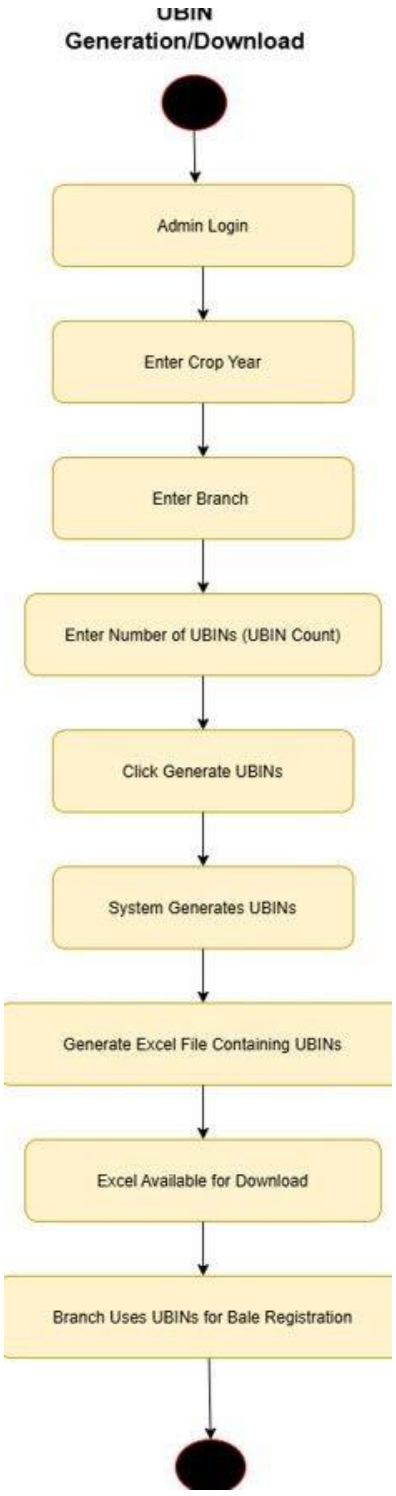
21. UC-CCI-21


CCI User Registration Approval
CCI User Registration Details
name
address_line1
address_line2
address_line3
pin_code
state
mobile_no
email_id
user_name
password
aadhar_no
posting_branch_id
user_ctaegory_id
cci_employee_id
User Logged In
View the pending user registrations
Select application from the list
Preview the details submitted
Valid user details ?
No
User details persisted in DB with status 'Rejected' and with remark
Yes
User details persisted in DB with status 'Approved' and with remark

22. UC-CCI-22

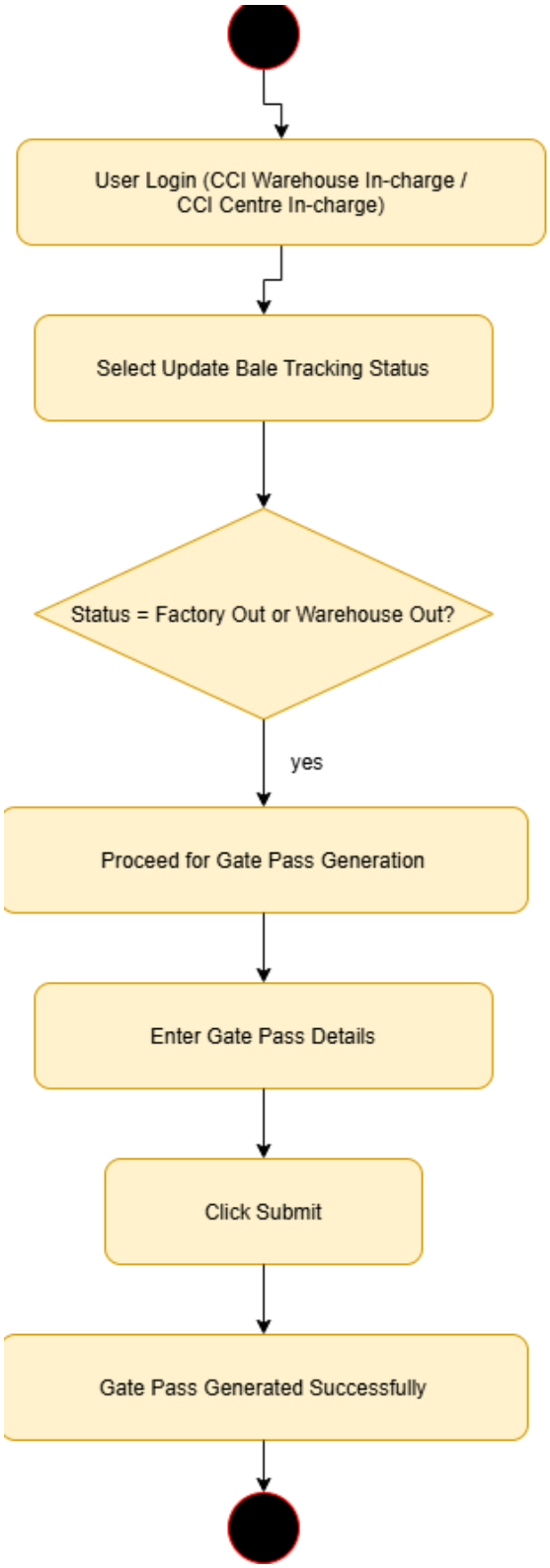

Update Bale Status Lost/Damaged/Theft
User Logged In as CCI Admin
Select Bale from Bale list/Enter UBIN manually to Update Status
Select Bale Lot to Update Status
Update the Status to Lost/Damaged/Theft
Upload the Supporting Document
Saved In Database
Transaction Marked in DLT

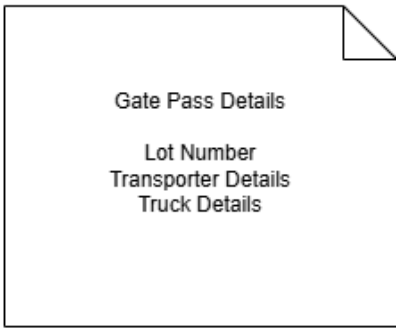
23. UC-CCI-23


UBIN
Generation/Download
Admin Login
Enter Crop Year
Enter Branch
Enter Number of UBINs (UBIN Count)
Click Generate UBINs
System Generates UBINs
Generate Excel File Containing UBINs
Excel Available for Download
Branch Uses UBINs for Bale Registration

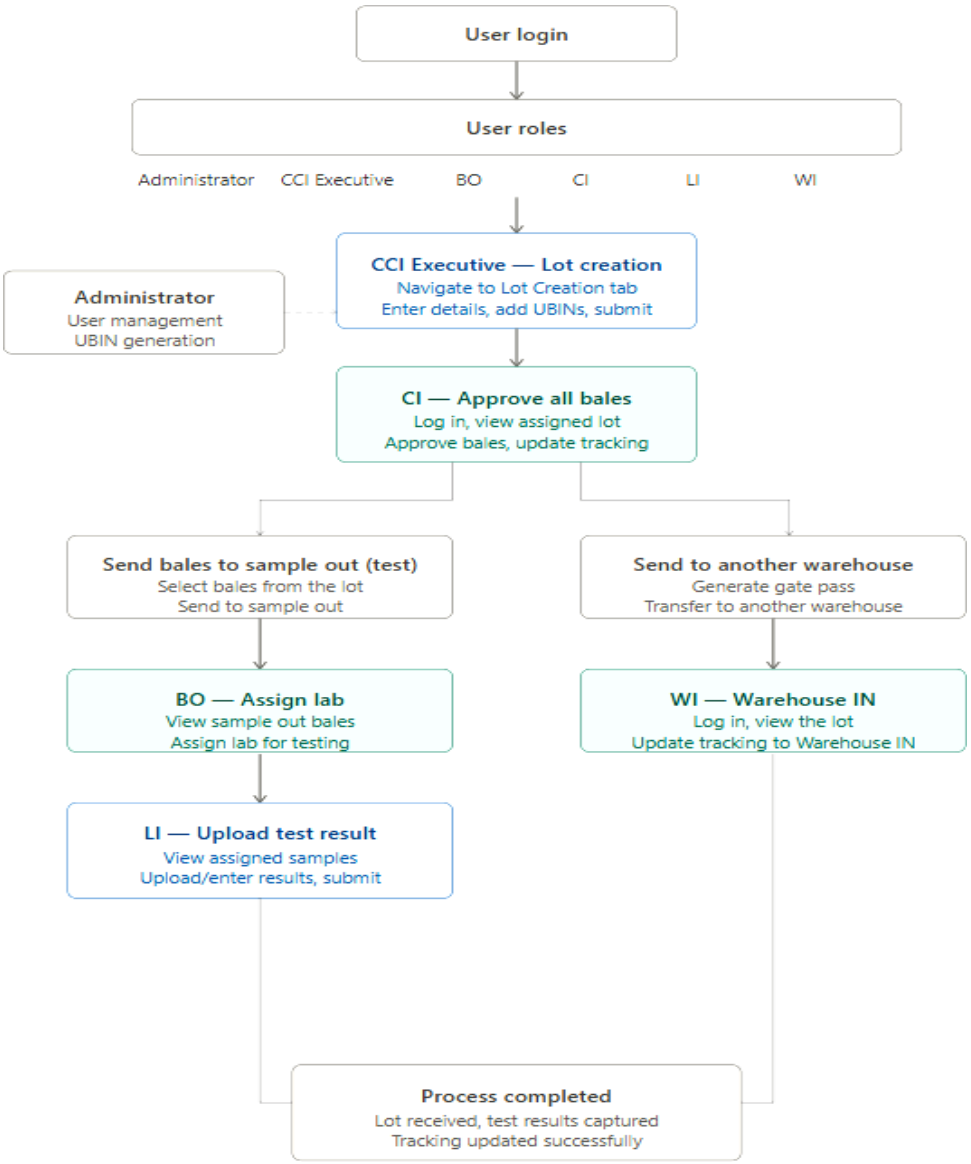
24. UC-CCI-24

Gatepass Generation





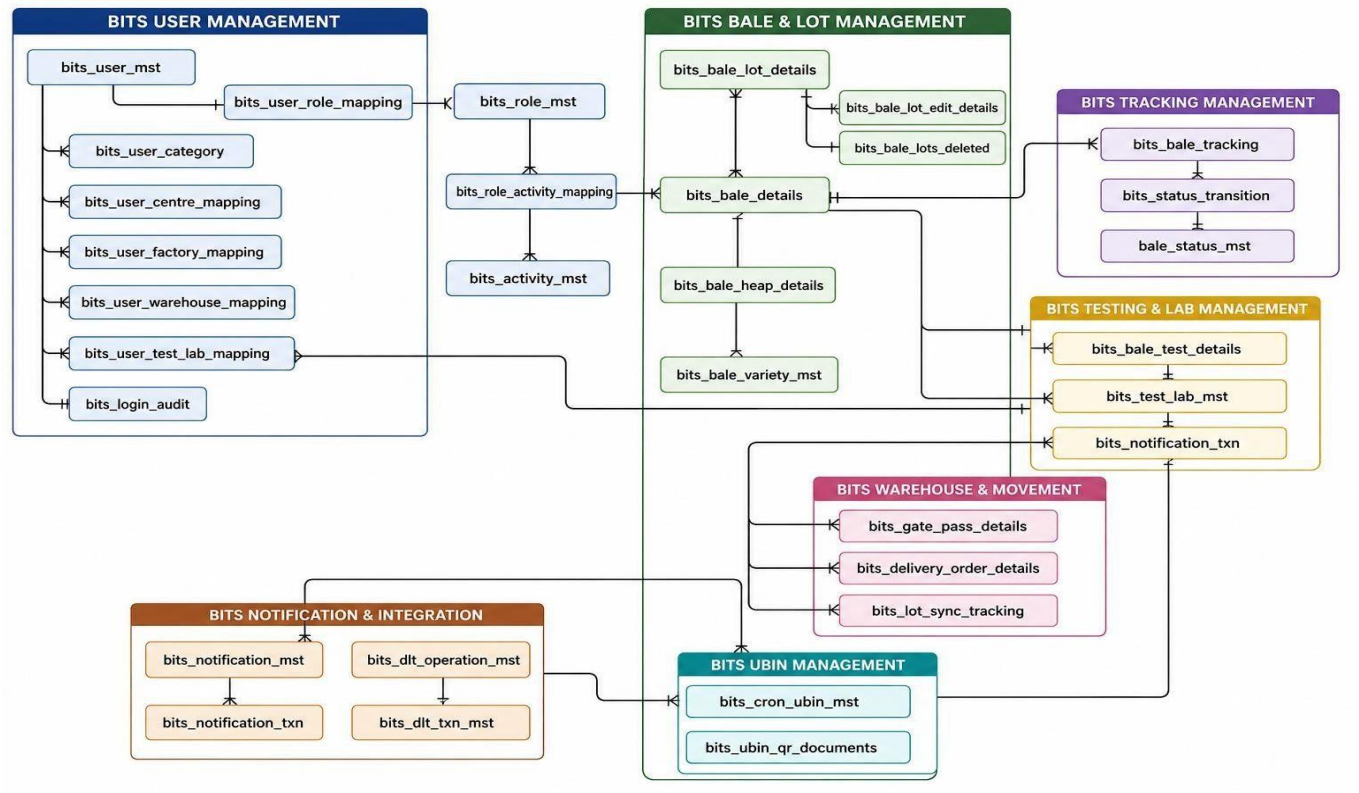
Application Normal Flow Diagram:



Database Schema:

Overview:

The application uses a relational database (PostgreSQL) to store user data.



Deployment Procedure:

A) Backend Deployment

The backend application is developed using Java Spring Boot, any qualified Java Spring Boot developer with relevant deployment experience can perform the deployment activities described in this section.

Environment Configuration

Prior to generating the production build, update environment-specific configurations.

Security Configuration

File: \src\main\java\in\gov\bits\ config\SecurityConfig.java Actions:

- Configure production request matching rules.
- Replace staging-specific security configurations with production configurations.

```
SecurityConfig.java
1  package in.gov.bits.config;
2
3  import java.util.Arrays;
24
25
26
27 @Configuration
28 @EnableMethodSecurity
29 public class SecurityConfig {
30
31     @Autowired
32     private JwtAuthenticationFilter filter;
33
34     @Bean
35     public SecurityFilterChain securityFilterChain(HttpSecurity http) throws Exception {
36
37         http.csrf(csrf -> csrf.disable()).cors().and().authorizeHttpRequests()
38
39         // for STAGING
40         // .requestMatchers( "/bits","/getLoggedInUser","/authenticate/*", "/logout/*","/login","/authenticateLogin","/bits/usermobile/bitsUserByMobileNo/{userNameBits}/{mobile}","/erp/**").permitAll()
41
42
43         // for PRODUCTION
44         .requestMatchers("/bits","/getLoggedInUser", "/authenticate/*","/logout/*","/authenticateLogin","/cci-bits/authenticateLogin","/bits/usermobile/bitsUserByMobileNo/{userNameBits}/{mobile}")
45         .permitAll()
46
```

Authentication Configuration

File: \src\main\java\in\gov\bits\util\ EpramaanOIDCConnector.java Actions:

- Configure production authentication parameters.
- Replace staging AES encryption key with the approved production AES key.

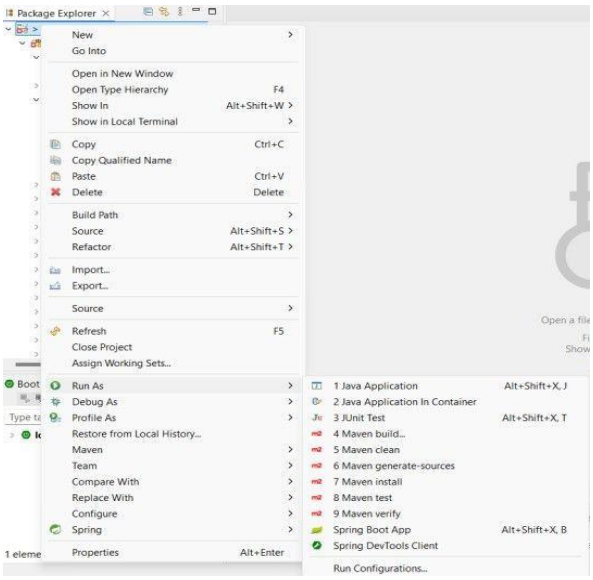
```
EpramaanOIDCConnector.java
1  package in.gov.bits.util;
2  import java.net.URI;
29
30
31 @Component
32 public class EpramaanOIDCConnector {
33
34     public static Logger logger = LoggerFactory.getLogger(EpramaanOIDCConnector.class);
35
36 //  public String aesKey = "c812d832-3e94-4c23-acbd-82266bb00f31"; //staging
37     public String aesKey = "7a6b484b-20e1-4bbf-93fe-d6fa04667c68"; //prod
38
```

Build Generation

Generate the production deployable package using Maven.

Actions:

- Perform a Maven Clean operation followed by a Maven Build to compile the application and generate the Production WAR file.



Post-Build Configuration

Unicode Library Configuration

Location: cci-bits.war/WEB-INF/lib

Action:

- Copy the required Unicode support library (`unicode.jar`) into the library folder.

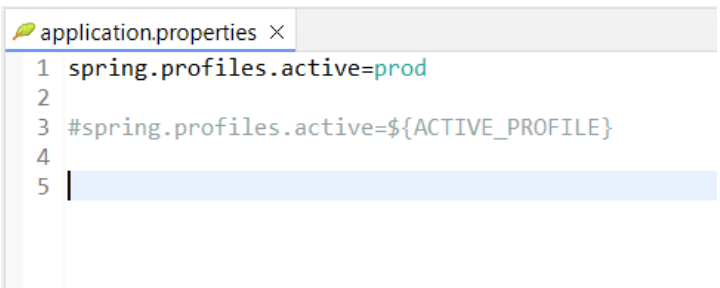
Application Profile Configuration

File:

cci-bits.war/WEB-INF/classes/application.properties Update:

spring.profiles.active=prod

Ensure that all staging profile references are replaced with the production profile.



B) Frontend Deployment

The frontend application is developed using Angular, any qualified Angular developer with relevant deployment experience can perform the deployment activities described in this section.

Environment Configuration

Update application environment files:

- \src\environments\environment.ts
- \src\environments\environment.prod.ts

Production Backend Endpoint: https://bits.cotcorp.org.in/cci-bits

Ensure all service URLs point to the production backend environment.

Authentication Configuration

Configure the frontend application to use Production ePramaan authentication. Actions:

- Disable local authentication mechanisms.
- Enable ePramaan-based authentication flow.
- Verify authentication redirection URLs.

Navigation Configuration

Update authentication endpoint references within:

- src\app\layout\navbar.component.ts
- src\app\layout\workspace-navbar.component.ts

Ensure all authentication requests are redirected to Production ePramaan services.



Build Generation

Generate the production frontend build. Command: ng build

Location to run this above command is:

1. Open a terminal/command prompt
2. Navigate to your Angular project folder



Output:

- Angular production build artifacts generated in the dist folder.

C) Application Shutdown Procedure

Before initiating the application deployment, connectivity to the production environment network must be established. Access to the production networkis provided through the Accops HySecure Client. The required access credentials, configuration details, and connection instructions will be provided by the RailTel team. Prior to deployment, stop all running application services.

Backend Shutdown

Location: /opt/tomcat/apache-tomcat-10.1.11/bin Command: ./shutdown.sh

Expected Result:

- Apache Tomcat service stops successfully.

Frontend Shutdown

Command: systemctl stop nginx.service

Expected Result:

Nginx service stops successfully.

D) Deployment of Release

Artifacts Backend Deployment

Tool Used: WinSCP

Deployment Path: /opt/tomcat/apache-tomcat-10.1.11/webapps Steps:

1. Remove existing deployed application files.
2. Upload the newly generated WAR file.
3. Verify successful file transfer.
4. Confirm WAR extraction after Tomcat startup.

Frontend Deployment

Tool Used: WinSCP

Deployment Path:

/usr/share/nginx/html/

Steps:

1. Remove existing frontend files.
2. Upload all generated production build files from the Angular dist folder.
3. Verify successful file transfer.

E) Application Startup

Procedure Frontend Startup

Command: systemctl start nginx.service Expected Result:

- Nginx service starts successfully.

Backend Startup

Location: /opt/tomcat/apache-tomcat-10.1.11/bin

Command: ./startup.sh Expected Result:

- Apache Tomcat service starts successfully.

F) Deployment

Verification Frontend

Verification

Command: systemctl status nginx.service Validation Criteria:

- Service Status = Active (Running)

Backend Verification

Command: **ps -ef | grep tomcat**

Validation Criteria: Tomcat process is running successfully.

Detail of SSL Certificate and Backup mechanism:

SSL Certificate	Valid till Thursday, 20 August 2026 at 16:51:54 Issued by eMudra.
Backup	Daily backup reports shared by the RailTel Cohesity Solution team.

Deployment Architecture and Server Configuration:

This section defines the deployment architecture, infrastructure requirements, and server configuration.

Application			bits.cotcorp.org.in		SSL Valid Till:		20 August 2026		eMudra
Sr.NO	Hostname	Role / Services	Private IP	Public IP	Mount Point	Storage	CPU	RAM	Application URL
1	cci-web-1	Application Server Nginx : Tomcat	10.31.137.46	103.127.140.121	/mnt/web-1	200 GiB	8 vCPU	16 GiB	bits.cotcorp.org.in
					/root	74 GiB			
2	cci-web-2	Application Server Nginx : Tomcat	10.31.137.44	103.127.140.121	/root	74 GiB	8 vCPU	16 GiB	bits.cotcorp.org.in
					/mnt/Logs	200 GiB			
					/mnt/web-2	200 GiB			
3	cci-bits-db1	Database Server PostgreSQL	10.31.137.43	103.127.140.121	/mnt/database	500 GiB	32 vCPU	64 GiB	bits.cotcorp.org.in
					/cci_db	1.3 TiB			
					/root	76 GiB			
4	cci-bits-db2	Database Server PostgreSQL	10.31.137.42	103.127.140.121	/root	76 GiB	32 vCPU	64 GiB	bits.cotcorp.org.in
					/mnt/datawork	500 GiB			
					/var/lib/postgres	500 GiB			
					/var/lib/postgresql	500 GiB			
					/mnt/database	500 GiB			
					/cci_db	1 TiB			
5	cci-blockchain-2	Blockchain Server	10.31.137.40	103.127.140.121	/root	500 GiB	16 vCPU	64 GiB	bits.cotcorp.org.in
					/mnt/database_backup_158	500 GiB			
6	cci-blockchain-1-u22new	Blockchain Server Ubuntu 22	10.31.137.41	103.127.140.121	/root	3 TiB	16 vCPU	64 GiB	bits.cotcorp.org.in
					/mnt/blockchain	500 GiB			
7	cci-blockchain-new	Blockchain Server	10.31.137.45	103.127.140.121	/root	250 GiB	16 vCPU	64 GiB	bits.cotcorp.org.in
					/dev/vdc	984 GiB			
8	cci-blockchain-1	Blockchain Server	10.31.137.47	103.127.140.121	/root	1.3 TiB	16 vCPU	64 GiB	bits.cotcorp.org.in

Details of integrations/APIs with external/Internal applications:

This section documents all external and internal system integrations required for the CCI to function. It covers: - External third-party APIs and services - Internal system integrations.

External Authentication Integration:

The CCI integrates with **ePramaan/MeriPehchaan the national digital identity and authentication platform. This integration enables: -**

a) Single Sign-On (SSO) for all users and Centralized authentication management
b) Secure logout (Single Logout - SLO)
c) Compliance with government authentication standards
ePramaan API Gateway: https://epramaan.meripehchaan.gov.in/openid/jwt/processOIDCSLORequest.do

Blockchain Integration:

The BITS incorporates Blockchain Technology as an additional layer of security, transparency, and trust. This integration ensures that all critical transactions are recorded in an Immutable, tamper-proof, and decentralized manner. Unlike traditional databases where data can be modified or deleted by authorized users, blockchain provides a permanent, verifiable, and auditable record of every transaction. Once data is written to the blockchain, it cannot be altered retroactively without the consensus of the network participants.

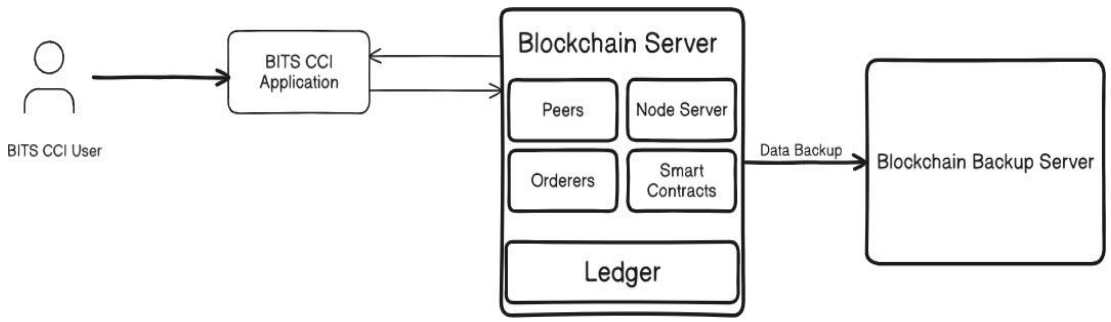
System Components:

- Hyperledger Fabric v2.2 and Hyperledger Explorer
- CouchDB
- Portainer
- docker v26.1.4 and docker-compose v2.29.1
- Go v1.22.2
- Node v20.14.0
- Npm v10.7.0

Application Info:

- Node server running as a daemon process.
- Only root user privileges for the application.
- Codebase and Ledger data available at mounted disk.
- Application generated logs have a 30 days rotation policy.

Blockchain System Architecture:



Blockchain API Gateway: http://10.31.137.45:8000/api/dlt/

Bhuvan Map Service Integration:

The BITS System integrates with Bhuvan - India's national geospatial platform developed by the National Remote Sensing Centre (NRSC) under the Indian Space Research Organisation (ISRO). This integration provides high-resolution satellite imagery, topographic maps, and geospatial visualization capabilities. Bhuvan serves as the Indian counterpart to Google Earth, offering indigenous satellite imagery and mapping services specifically optimized for the Indian subcontinent. The integration uses Web Map Service (WMS), an international standard from the Open Geospatial Consortium (OGC).

Bhuvan Map API Gateway: https://bhuvan-vec1.nrsc.gov.in/bhuvan/gwc/service/wms/

CCI ERP Integration:

BITS was integrated with the Oracle ERP database of Cotton Corporation of India (CCI) to enable seamless exchange of master and transactional data between the two systems. APIs were developed to fetch master data of CCI outlets from the ERP database during the outlet addition process in BITS. The system was configured to allow only those outlets that were available and validated in the ERP system to be added and stored in the BITS database, ensuring data consistency and integrity across applications.

Additionally, functionality was implemented to share lot details and status updates from BITS directly to the ERP database through secure integration interfaces. This enabled real-time synchronization of lot-related information between BITS and ERP, reducing manual data entry, improving operational efficiency, and ensuring that both systems maintained consistent and up-to-date records.

Oracle ERP Database IP: 10.31.137.5 (port 1522)

Part- D
(Financial Bid)

TENDER IN TWO BID SYSTEM FOR ANNUAL SUPPORT, MAINTENANCE AND ENHANCEMENT SUPPORT FOR BITS.

Sl. No.	Description	Per Annum Charges (inclusive of taxes) (in Rs.)
1	AMC of BITS Support & Maintenance with onsite support for the scope of work detailed in bid with following onsite/offsite support:	The bidder is required to quote per annum charges on GEM Portal for evaluation

Optional Cost during Project Period:

Particular	Total Cost (inclusive of taxes) in Rs.
Per Man-month cost- DBA	
Per Man-month cost – Technical	

Note: The above costing shall be considered only when the Service Provider undertakes major change management which is to be approved by the CCI and which will follow the Change management procedure. The change management cost shall not be considered for Overall Evaluation.

While quoting lumpsum per annum recurring charges, the bidders are requested to carefully go through the Scope of Work, support, enhancement and other requirement.

Signature of the Tenderer

Name of the Tenderer:
Address of the Tenderer:

Part- E

(Other Terms & Condition)

CCI invites the bidder's attention to the following terms and conditions, which underline this tender. To avoid any confusion tenderer may study the existing IT infrastructure / requirement before submitting tender. Bidder has to submit compliance for all the items, terms and conditions mentioned in the bid document.

1. **Pre-Bid Meeting**

   A Pre-Bid Meeting shall be conducted on the date, time, and venue specified in the Tender Schedule. The meeting will provide an opportunity for prospective bidders to seek clarifications regarding the Scope of Work, Technical Requirements, Functional Requirements, Commercial Terms, and the Bid Submission Process. Bidders are encouraged to raise their queries during the meeting or submit them in writing within the prescribed timelines. All clarifications, interpretations, amendments, and decisions issued by Cotton Corporation of India (CCI) during or subsequent to the Pre-Bid Meeting shall be deemed to form an integral part of the Tender Document and shall be binding on all prospective bidders.

2. **Bid Evaluation Methodology**

   The tender shall be processed under a Two-Bid System comprising Technical Evaluation and Financial Evaluation stages.

Stage I – Technical Responsiveness Evaluation

The Technical Bid submitted by each bidder shall be examined solely for the purpose of determining responsiveness to the tender requirements. The evaluation shall be limited to verification of the bidder's eligibility, submission of all prescribed documents, acceptance of the tender terms and conditions, and compliance with the minimum qualification criteria specified in the tender. No marks-based or weighted technical scoring methodology shall be adopted. Bidders whose submissions are found to be technically responsive and compliant with all mandatory requirements shall qualify for the next stage of evaluation.

Stage II – Financial Evaluation

The Financial Bids of only those bidders who are declared technically responsive shall be opened and evaluated. The financial evaluation shall be carried out on the basis of the total evaluated cost quoted by the bidders in accordance with the provisions of the tender. The contract shall be awarded to the bidder quoting the Lowest Evaluated Cost (L1).

3. **EMD Payment through Online Transfer**
   EMD Submission:

   The Earnest Money Deposit (EMD) shall be remitted only through online mode (NEFT/RTGS/IMPS) to the following bank account of The Cotton Corporation of India Ltd.:

   - **Account Name:** The Cotton Corporation of India Limited
   - **Bank Name:** Bank of Baroda
   - **Branch:** CFS Mumbai Branch
   - **Account Number:** 29100500000074
   - **IFSC Code:** BARB0CFSBAL *(5th character is zero "0")*

The bidder shall upload the proof of successful online transaction (UTR/Transaction Reference Number, date and amount) along with the Technical Bid. Any bid submitted without valid proof of EMD payment, wherever applicable, shall be liable for rejection. The EMD amount shall be refunded to the unsuccessful bidders in accordance with the tender conditions, while the EMD of the successful bidder shall be dealt with as per the provisions of the contract. No interest shall be payable on the EMD amount.

4. Signing of Contract/Agreement:

Within 30 days of receipt of work order, the successful bidder shall send its representative to CCI office to sign the contract form, incorporating all agreements between the parties and the Supplier/ Service Provider should have submitted performance Security prior to that.

5. Project timelines:

The Service Provider shall deploy the required manpower detailed in the scope of work and take over the operations from the existing agency within 2 weeks from date of issue of work order and undertake the works as per Scope of Work.

6. Payment Terms:

The per annum charges quoted by the bidder in the tender will remain fixed during the contract period and no escalation in the same will be considered.

The payment will be made in equal quarterly installments after rendering the services and on submission of invoices.

7. Contract Period:

The contract period will be Five years from the date of effective date of start of contract which may be further extended for a period of two years on the same terms and conditions, if the performance of the vendor is satisfactory.

8. Effective date of start of contract

The effective date of start of contract will be reckoned from the date of deployment of manpower whichever is later. The bidder has to study complete BITS system and get knowledge transfer from existing vendor before start of contract.

9. Uptime:

Vendor should ensure an uptime of minimum 99.80% for the entire system failing which a penalty would be imposed as detailed in 'Service Level Agreement' given below.

10. Service Level Agreement Application/Database:

During the contract period the vendor should provide round the clock support i.e. 24*7 (including Saturday, Sunday and all Holidays) for the entire application in order to maintain the required uptime and services. All the calls will be communicated to onsite/offisite consultants through telephone/email/ticket.

The Service Provider should ensure 100% data recovery in the event of system crash due to any reason at any point during the project period.

Particular	Uptime	Penalty
Application	99.80%	If the down time exceeds 0.2% in a year there would be a penalty LD @ Rs. 3,000.00 for every hour or part thereof of down time exceeding 0.2%.
		In case any problem is not resolved within the specified time of three hours, there would a penalty @ Rs. 1,000.00 for every hour or part thereof of the time beyond three hours.

For various critical/medium/low incidents including bug fixation/new development/new report/data extraction, the resolution/development time shall be mutually agreed by the CCI and the service provider. For non-compliance of the desired service level or delay in completion of service, CCI shall have the discretion to impose LD of Rs. 200/- per hour for each incident reported exceeding the time defined for resolution/development subject to a maximum of 10% of the total contract value for each complete year during the contract period.

Downtime required for hardware, network, maintenance, new initiatives undertaken by service provider or for performance enhancement measures shall not be considered while calculating application availability.

11. Interruption in Service

In case of interruption in services of any resource of the bidder, penalty will be imposed if the nominated or the alternate resource is not made available at CCI. The penalty would be as follows:

Upto 7 days – Rs. 5,000/- per day.

Beyond 7 days – Rs. 10,000/- per day.

12. Delay in Suppliers' performance:

Any delay by the Supplier in the performance of its delivery obligations shall render the Supplier liable for the following:

Forfeiture of its performance security, imposition of liquidated damages and termination of the Contract including purchase of undelivered services from alternative sources at the risk and cost of the supplier.

13. EMD is defined on GeM portal which is to be submitted before date of bid closing. No interest shall be paid on EMD. Unsuccessful bidder's EMD will be returned after the finalization of tender without any interest. The successful bidder's EMD will be returned upon the bidder's signing the contract and furnishing the performance security.

14. Interest Free Performance Bank Guarantee:

The Bidder shall furnish an Interest Free Performance Guarantee from any Scheduled Bank in India within 20 days from the date of issue of Work Order by CCI, for an amount equivalent to 3% of the total cost (i.e. total contract value for a period of Five years), valid for a period of 63 months from the date of work order. On satisfactory

performance and completion of the order in all respects to this effect by an authorized CCI official and the Performance Guarantee will be returned to the Bidder. This will be extended accordingly in case there is a delay in completion or extension of contract.

In addition to above, the Interest Free performance Bank Guarantee can also be submitted in the form of Bankers Cheque / Demand Draft / RTGS.

15. Force Majeure:

In the event of any unforeseen event directly interfering with the supply of stores arising during the currency of the contract such as war, hostilities, acts of the public enemy, civil commotion, sabotage, fires, floods, explosions, epidemics, quarantine restriction, or acts of God, the supplier shall, within a week from the commencement thereof, notify the same in writing to the purchaser with reasonable evidence thereof. If the Force Majeure condition(s) mentioned above be in force for a period of 90 days or more at any time, the purchaser shall have the option to terminate the contract on expiry of commencement of such Force Majeure by giving 14 days' notice to the supplier in writing. In case of such termination, no damages shall be claimed by either party against the other, save and expect those which had occurred under any other clause of this contract prior to such termination. However, any strike, lockout or disorder solely restricted to the employees of the supplier or his sub-supplier will not be covered as a Force Majeure Event.

16. Integrity Pact:

An Integrity Pact aims to enhance transparency, accountability, and good governance in public contracting and procurement. The Integrity Pact shall be applicable to this contract and shall be required to be signed between **CCI** and ***vendor***.

The Corporation has appointed two Independent External Monitors (IEMs) for adoption and implementation of the Integrity Pact. Any matter relating to the Integrity Pact, if so required, may be brought to the notice of the following IEMs:

- **Dr. Prasenjit Mukherjee**, IEM
  (Email: prasenjitm@hotmail.com)
- **Mr. A. K. Agarwal**, IEM
  (Email: akagarwal253@yahoo.com)

17. Resolution of Disputes:

CCI and the bidder shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract.

In the event of failure to resolve a dispute the disputes shall be referred to the sole arbitration appointed by CCI. There will be no objection if the sole arbitrator appointed by CCI is an employee of CCI provided he has not previously dealt with the case.

18. Applicable Law:

The Contract shall be interpreted in accordance with the laws of the Union of India.

19. Termination:

CCI may, without prejudice to any other remedy for breach of Contract, terminate the Contract in whole or part by sending one month's written notice to bidder:

a. If the bidder fails to deliver and provide the required services within the time period specified in the Contract or any extension thereof granted by the CCI.

b. If the vendor fails to deliver the services as detailed in scope of work or fails to perform any other obligation(s) under the Contract.

20. Proposal Ownership

The proposal and all supporting documentation submitted by the vendors shall become the property of CCI.

21. Sub-Contracting

The bidder shall provide direct support to CCI through his own offices and employees. For this purpose the bidder should submit complete details of his support offices e.g. address, phone no. and name of the engineer who should be necessarily be the employee of the bidder. The uptime is very critical to CCI and the direct expertise of bidder is required. No sub-contracting for support other than bidder (including OEM and existing application vendors) shall be allowed.

22. Exit Management

Upon expiry, completion, or termination of the contract, the selected agency shall ensure an orderly and seamless transition of the system and all associated assets to CCI or any successor agency designated by CCI. The agency shall transfer the complete source code, databases, documentation, APIs, configuration details, deployment scripts, and all other project-related deliverables developed under the contract.

The agency shall also provide comprehensive knowledge transfer, technical assistance, and handholding support to facilitate smooth migration and continuity of operations. The selected agency shall cooperate fully with CCI and the successor agency during the transition period and provide Exit Management support for a minimum period of six (3) months after completion or termination of the contract, without disruption to ongoing services.

23. Confidentiality, Security and Privacy

Successful tenderer must maintain the security criteria as well privacy and confidentiality of the product and the services and execute non-disclosure agreement with Corporation. Any violation in this regard may be treated as unsatisfactory service and CCI reserves the right to terminate the contract.

a. Supplier/ Service Provider shall keep confidential and shall not disclose or make available directly or indirectly to any third party all information and material of whatever nature and in whatever medium which is communicated, or becomes available to, or accessible by in the course of this Agreement ("Confidential Information"). Similarly, CCI should not disclose any information regarding technology, tools and knowledge being used by to anybody outside the scope of the Agreement.

b. Supplier/ Service Provider acknowledges that the Confidential Information is the valuable property of CCI and that any disclosure of it could give rise to

considerable damage to CCI and vice – versa.

c. Supplier/ Service Provider shall not use or access the Confidential Information for any reason except as is necessary to perform this Agreement.

d. Supplier/ Service Provider shall not misuse or share the access privileges which have been given by CCI during the course of this agreement.

e. Supplier/ Service Provider shall not permit any employee to have access to the Confidential Information until such time as that employee, agent shall have entered into a confidentiality agreement with in a form approved by CCI.

f. Supplier/ Service Provider shall immediately notify CCI of any information which comes to its attention regarding any actual breach of confidentiality, disclosure or unauthorized use of Confidential Information. Shall co-operate with CCI in any investigation, prosecution, litigation or other action taken by CCI regarding the subject of any such information.

g. In the event of any actual or alleged breach of confidentiality, disclosure or unauthorized use of Confidential Information by any future, existing or former employee, of Supplier/ Service Provider, shall enforce its rights to injunctive or other relief to the fullest extent possible or, if requested by CCI assign such rights to CCI. Shall assist CCI in every way in enforcing those rights.

h. Upon termination or completion of this Agreement, shall deliver to CCI any Confidential Information in Supplier/ Service Provider's possession which is capable of being delivered. Shall delete, erase, or otherwise destroy any Confidential Information contained in computer memory, magnetic, optical, laser, electronic, or other media in its possession or control which is not capable of delivery to CCI.

i. Supplier/ Service Provider shall maintain the confidentiality of the Confidential Information and protect it from unauthorized access or use. Remote access to CCI Network, however, shall not be provided to until CCI approves in writing the method of access as providing suitable access controls security features to prevent unauthorized access. Such consent may be conditional and may be withdrawn at any time at CCI's discretion.

j. Supplier/ Service Provider shall comply with all CCI security and other procedures and will permit and co-operate with any additional security or other precautions which CCI may wish to implement in respect of the Services or Supplies provided by under this Agreement.

k. Supplier/ Service Provider shall assist in its evaluation, investigation, or implementation of security measures including (but not limited to) providing CCI with any information which might be relevant to CCI's assessment of whether it should approve access to the Confidential Information by an employee of Supplier/ Service Provider.

l. Within the bounds of its obligations under this Contract, shall take reasonable steps to protect CCI property, staff and customers from any loss or damage.

m. These provisions are in addition to (and not in substitution for) all security or confidentiality obligations between the parties.

n. Neither party shall publicize the existence of this Agreement or any of its terms or any other matter related to it (including the business relationship between the parties) without first obtaining the written approval of the other party.