FX Digitalization

End-to-End Digitalization of FX Cases

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The Business Problem/Need

- Currently, clients physically send across the documents related to their foreign exchange cases duly signed by their authorized signatories to the Authorized Dealers (ADs). The ADs review the case in light of SBP regulations and correspond with the client to address discrepancies, missing documents and case related queries.
- Once the queries are resolved and documents required are received from the client, case is prepared by the respective AD. The documents are submitted to SBP FEOD via hardcopy as well as via Online Portal in accordance with checklist/mandatory documents requirement of Online Portal.

Document History:

Date	Version	Role	Name	Organization	Function	Comments
8th March 2021	2.20	Author	Khan, Muhammad	Zealous Technologies	Business Analyst	Created document v 2.20. Modified diagram/flow and reports

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Introduction

- Through the portal clients will be able to submit the relevant supporting as well as mandatory documentation as per SBP checklist. CitiBank wants to have a web-based solution/digital portal which will be called, FX Digitilization, where bank's clients will be able to submit FX related cases. The same portal will be integrated with SBP Online Portal for further submission to SBP, if required.

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Objective & Scope

- To develop a digital portal through which the bank's clients will be able to submit FX related cases. The same portal will be integrated with SBP Online Portal for further submission to SBP/SBP BSC, if required.
- User management (Client and bank officials)
- Online case receipt along with scanned supporting documents
- Validation & submission of referral and associate documents
- Queries management
- Approval/Rejection acknowledgement and its notifications

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Description of Current System

- Currently, clients physically send across the documents related to their foreign exchange cases duly signed by their authorized signatories to the Authorized Dealers (ADs). The ADs review the case in light of SBP regulations and correspond with the client to address discrepancies, missing documents and case related queries.
- Once the queries are resolved and documents required are received from the client, case is prepared by the respective AD. The documents are submitted to SBP FEOD via hardcopy as well as via Online Portal in accordance with checklist/mandatory documents requirement of Online Portal.

Description of Future State

- SBP/SBP BSC has encouraged all banks to develop an online portal for their clients whereby clients will be able to submit their cases online. The same portal will be integrated with SBP Online Portal for further submission to SBP, if required.
- Through the portal clients will be able to submit the relevant supporting as well as mandatory documentation as per SBP checklist. Banks will review the cases online for onwards submission to SBP/SBP BSC.

Process High level Workflow

1. Client should be able to initiate approval request using Bank Portal/Bank app along with all scanned documents as attachment
2. Email alert will be sent to the customer about submission of case of respective bank.
3. Request should reach Bank Portal/Bank App, where the bank's official will review the case and related documents submitted by the client
4. After review of the case and related documents, it should flow from Bank Portal/Bank App to SBP online portal
5. After moving to SBP Online Portal, the bank official will attach a scanned copy of duly signed covering letter with the case
6. The case, once approved/rejected/referred back by SBP, should reach to the Bank Portal/bank App
7. Bank can share approval/rejection/referral details with client through Bank Portal/bank App
8. Client should receive approval/rejection/referral details on Bank Portal

Expected Benefits

- Enhanced client experience
- Reduction in client queries
- Reduction in overall TAT
- Improved accuracy and reduction in discrepancies
- Regulatory compliance

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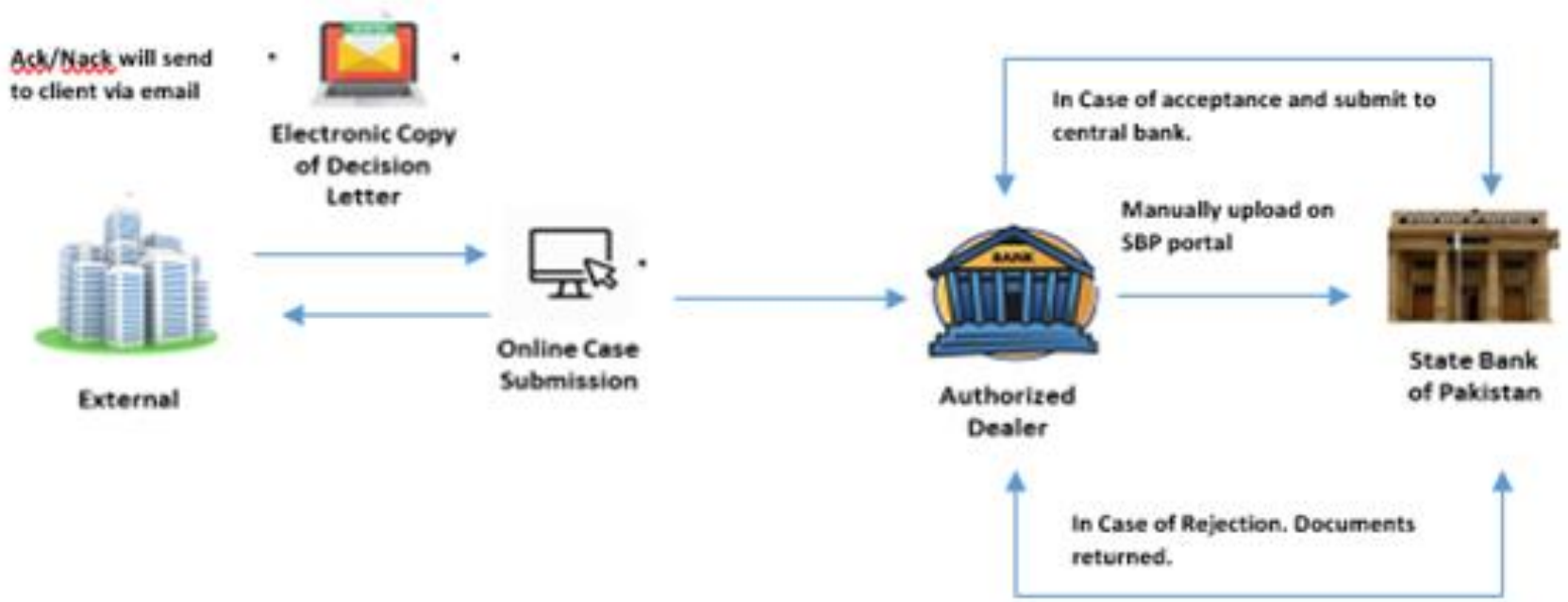
Process High level Workflow

- The future process flow will vary from bank to bank owing to different organizational structure, SOPs and control mechanism put in place by each bank. However, a generalized workflow is given below for the reference of all.

- Overall flow of the transaction will remain the same. However, bank's client will be able to review the mandatory documentary requirements of the various type of cases on the portal and portal will not allow clients to proceed with submission without uploading the mandatory documents. This will significantly improve bank's client experience and reduce the number of queries and responses going back and forth between bank and client

Process High level Workflow



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Business Processes

- The request for this part of the project encompasses the following features:
- A web based portal is required to be established which will allow our clients to submit remittance approval cases.

- **Client Login**
  - Clients will be required to create a new login ID and register for the first time using their approved email address.
  - The email address entered by the client has to be pre-fed into the portal's database by the bank.
  - Any email address not available in the database has to be rejected by the portal and the user should not be allowed to register their login ID.
  - Once an ID is registered, a system generated email confirmation should be sent to the email address.
  - Password will be randomly generated upon each login attempt and sent across to the registered email address. Expiry time for the random password should be 3 minutes after which the user will have to re-generate a new password in order to login.

Admin

- Bank’s employees will be provided access to the portal and will be able to login through a user ID and password. Access given to bank employees will be via GIDA.
- Any changes in ID or respective user will be through GIDA. Which will have all rights to add or remove existing users along with Set up of account / Maintenance / Deletion or Addition
- Maker and checker roles will be assigned to each user.
- Users will be allowed to create a client profile using base code of the client as the unique identifier. (**Falls under GIDA as per above mention process**)

Admin

- Client profile will allow up to 25 email addresses of the client to be fed and registered against a base code. A client registering for the first time will feed their email address on the portal. The portal will allow the client to proceed if the email address is active in the portal's database. Check should be in place to alert the maker checker if the email address is already registered to another base code but should not prevent the users from creating it.
  - Client / User should Also have option to select desired TAB with respect to Unit wise (e.g. If they option to choose PnR Unit so all the cases that fall under the respective department should be visible to client.
    - Further, once respective Citi Department is selected then cases are subcategorized **SBP Departments wise i.e. FEOD / EPD and so on, subject to nature of transaction and documents required**
    - Similarly the above mention process to be made available for client

Admin

- Users will be allowed to be linked to each Product stream. A single user cannot be assigned to more than one Product stream.
- Users will be allowed to create case Templates on the portal linked to each Product stream. Each Template will have a unique title which will be in line with SBP defined Templates.
- Portal should allow up to 500 templates to be created.
- Users will be allowed to create fields under each template. The fields will have unique titles under each template and clients will be allowed to feed in data against each field.

Admin

- Field characters length to be defined by the user.
- User will be allowed to select field as mandatory or optional.
- Users will be allowed to create a document upload list under each template. Client will be allowed to upload up to 10 attachments against each template with a maximum upload size of 200MB.
- Apart from mandatory documents, SBP allows up to 5 additional documents that can be uploaded and each file cannot exceed 5mb or else we won't be able to upload it. Similar approach to taken else it will contradict from SBP.
- The process of creating or amending an existing template will be through a maker and checker process.

Front-end

- Each Product steam should have six Queues. These include All Cases, In-scrutiny Cases, SBP submitted Cases Approved Cases, Discrepant Cases and Rejected Cases.
- A client will be allowed to access a template against each Product steam and submit a case.
- A unique Case Reference Number will be assigned to each case by the portal which will be visible to the client and the user. The format of the reference number should be aligned with the requirement of SBP.
- Upon submission of a case, a system generated email will be sent to all registered email addresses under a client's base code. Same notification be applicable when case is Discrepant / Approved / Decline / Under Processing / or any other status of case
- Clients and users will be allowed to query a case using this reference number.

Front-end

- The case will land in the In-Scrutiny Cases Queue by default.
- User will have the option through a maker checker to change the status of a case and move it into a different Queue. User will also be required to provide comments at the time of change of Queue. Comments can be up to 1000 characters.
- For each change in Queue of a case, a system generated email will be sent to all registered email addresses under a client's base code i.e. Discrepant / Approved / Declined / Under Processing.

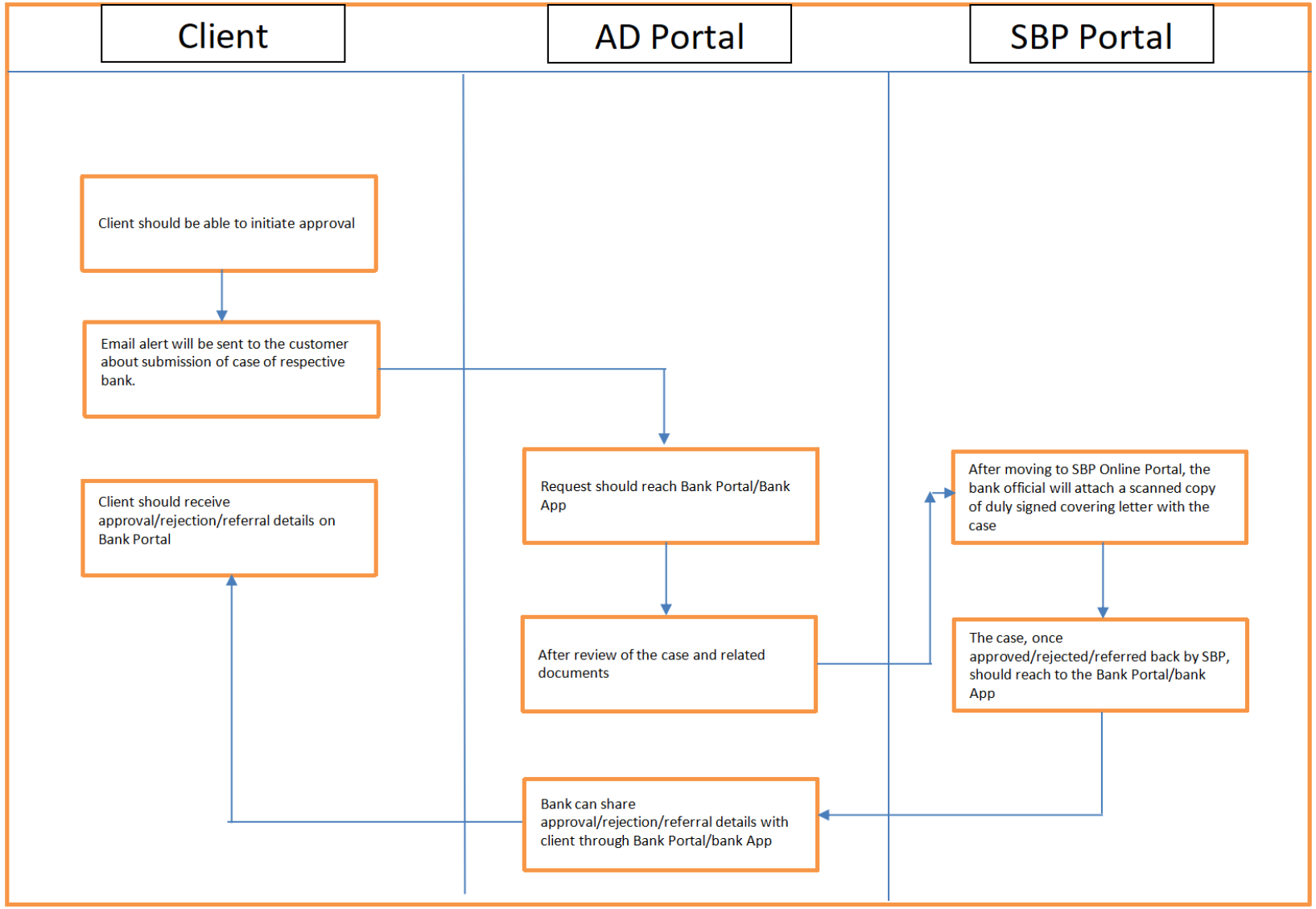
Front-end

- Similar queue should be available internally within Citi with enhanced options to track case at each level from Maker to Final Concurrence (Respect Unit Heads / Regulatory Head / Compliance Head) once client request is received at Citi bucket
  - Maker scrutinize the documents provided by client (in ideal scenario if all docs are in order same will be moved to Checker queue
  - Checker will review the same and move the case to next queue to Unit Head
  - Similarly it will be pass on to Regulatory / Compliance Head respectively for the final concurrence before submission
  - At each stage of Queue there should be an option for notification to respective authority who will be reviewing the case along with comment box support by time/ date
  - After final feedback from all stake holder a notification to be received at all levels when request is ready for submission

Business Processes

- Emails sent across by the portal should be through Citi's exchange servers.
- Clients login ID will be mapped to a base code and the logged in client can only see cases related to their company i.e. uploaded against their base code.
- Client login ID to be blocked after three unsuccessful attempts. User (maker/checker) will be allowed to unblock a client ID.
- Reactivation can also be done through Master ID
- A replicate to SBP Portal set to be followed
- **ID Administration / Management** shall be dealt by **GIDA (Creation / Modification and any other activity related to it)**. However reactivation of block ID can be done through Master ID if required.
  - Two way authentication should be in place

Process Distribution



- **Client:**
  - Client should be able to initiate Application with the submission of required documents
  - Client should receive approval/rejection/referral details on Bank Portal
- **AD:**
  - After receiving request bank will review the application and attached documents
  - After review of the case and related documents AD can send the request to SBP.
  - Bank can share approval/rejection/referral details with client through Bank Portal/bank App
- **SBP Portal:**
  - The case, once approved/rejected/referred back by SBP, should reach to the Bank Portal/bank App

Business Area specifics

- Cases pertain to approvals for remittances, policy related approvals

Operations	FE Overdue Monitoring and Enforcement	Government Schemes	F.E. ALLOCATION
Commercial Remittances	Export Overdue Cases	SUGAR	GOVT REMITTANCES
Private Remittances		UREA	
Bank Guarantees/SBLC		WHEAT	
Trade Related Cases		TEXTILE	
Designation & Acknowledgement		NON-TEXTILE	
Exchange Entitlement Certificate			

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Trade Related Cases

- Permission for Utilization of Time Barred Advance Payment
- Permission for Refund of Advance Payment
- Permission to Return Rejected/Frustrated Cargo
- Open Account Imports

Designation & Acknowledgement

- IT Related Designation
- Royalty & Technical Assistance Agreements
- Service Level Agreements signed with the parent company/ related parties abroad

Exchange Entitlement Certificate

- Loan Related Cases
- Equity Related Cases

FE Overdue Monitoring & Enforcement

- Export Overdue Cases
- Modification in EORS
- Closure of E-Form from EORS or WeBOC
- Extension in Realization Period of E Forms
- Adjustment of Overdue Cases against Advance Payment
- Re-Import of Exported Goods

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Government Schemes

SUGAR	UREA	WHEAT	TEXTILE	NON-TEXTILE
Freight Support Against Export of Sugar	Quota Approval against Export of Urea	Subsidy on Export of Wheat	DUTY DRAWBACK OF TAXES 16-17	Drawback of Levies and Local Taxes Order 2017
Quota Approval against Export of Sugar	Ammendments in Already Approved Quota against Export of Urea		DUTY DRAWBACK OF TAXES 17-18	Local Taxes and Levies Drawback 17-18
Ammendments in Already Approved Quota against Export of Sugar				

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F.E. ALLOCATION

GOVT REMITTANCES

- FE Allocation Import
- FE Allocation Remittance of PSEs
- FE ALLOCATION Remittance of Classified Organizations
- FE ALLOCATION FE PERMITS
- FE ALLOCATION LOAN REPAYMENT
- FE ALLOCATION Remittance of Armed Forces
- FE ALLOCATION Fresh Imports

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Case Submission Form

Department (Select One):	Foreign Exchange and Operations Department (FEOD)
Case Category (Select One):	Government Schemes
Case Type (Select One):	Private Remittances
Case Title (Select One):	Other Private Remittance of Chapter 16
Form Fields:	
All Required Fields:	As Per Taxonomy Sheet
All Required Documents:	As Per Taxonomy Sheet

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Case Title Required Documents Type & Importance

Required Documents list will be provided by SBP or regulatory compliance of AD and requirements might be different according to the case type.

Example:

Case Title	Required Documents	Type & Importance	
Remittances relating to Professional/Consultancy/Advisory Services fee	Input Documents:		
	- Applicant Request	PDF	Mandatory
	- Agreement.	PDF	Mandatory
	- Addendum (if any)	PDF	Optional
	- Invoice/Debit Note	PDF	Mandatory
	- Form “M”	PDF	Mandatory
	- Proof of Services Delivered.	PDF	Optional
	- Advance Payment Undertaking.	PDF	Optional
	- Finance Division’s letter: FE allocation or NOC	PDF	Optional
	- Previous SBP Approval.	PDF	Optional
	- Certificate of Incorporation	PDF	Optional
	- Pattern of Share Holding	PDF	Optional
	- Tax Exemption Certificate	PDF	Optional
	- Travelling Documents	PDF	Optional
	- Any Other Documents	ANY	Optional
	Output Documents:		
	- FEOD-SBP(BSC) Approval Letter		

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Commercial Remittances Data Fields

1. Presumably Fields and data Parameters could be varied from case to case, further details and definition of the data parameters will also be provided.

Example:

- Field Name
- Applicant's Name
- NTN
- Address
- Brief Profile
- Email ID
- Ownership Structure
- Beneficiary Name
- Address
- Country
- Brief Profile
- Email ID
- Ownership Structure
- Relationship B/W Applicant and Beneficiary
- Currency
- Requested Amount
- Form M No.
- Purchase Order No & Date (if any)
- Amount of PO
- Invoice No & Date
- Amount of Invoice
- Purpose of Agreement
- Validity Period of Agreement
- Details of Addendum (If any)
- Nature and Scope of Services
- Reference of Clause of Agreement
- Total Contract Amount
- Reference of Clause
- Payment Terms
- Total Amount Remitted till date (if any)
- SBP Approval No & Date
- Payment Plan for Remaining
- Services available Locally
- Justification for hiring Foreign Service provider.
- Applicable Tax Rate
- Tax will be borne by
- Reference of FE Instruction
- Recommendation of AD
- Waiver/Special Permission.

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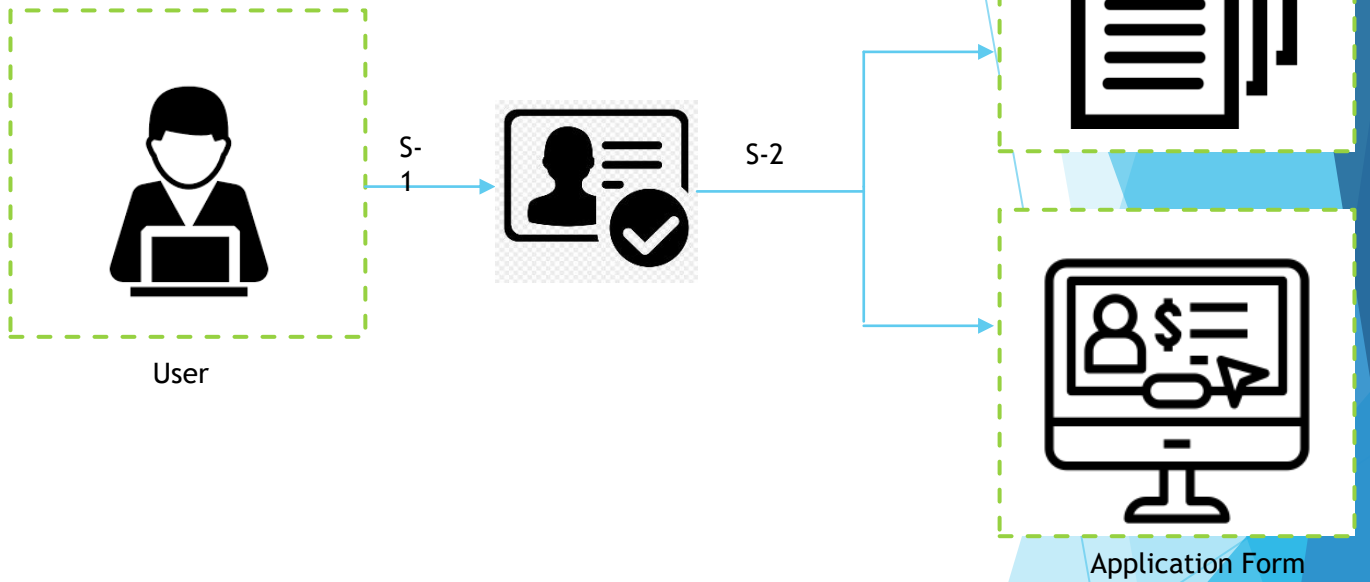
Step 1

- Online case Submission & Scrutiny of the documents

- S-1: User can login into the application
- S-2: Application submission and required documents upload.



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Step 2

- SBP Electronic approvals within the bank hierarchy
- Scrutiny of the submitted documents
- Send application to SBP portal
- Maintain the Application in AD(Authorized Dealer) portal queue
- All the processed and in-progress application will be showing in the home page of AD(Active Directory) user

Step 3

- Receiving electronic copy of the decision from SBP
- Sharing decision and electronic copy of the decision with client.

User Requirements

- Bank – Administrator
- User Profile (Setup)
- Bank – Maker
- Bank – Authoriser
- Bank – View
- Client – Maker
- Client – Authoriser
- Client – View

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Data Domain - Content and Purpose

- Complete case detail and purpose of payment
- Complete documents based on the checklist and attached by client based on purpose of payment
- Client and their counter party information
- Product and supporting data / documents which would be submit to SBP/SBP BSC
- Access Management in term off Admin activity to add / delete / amend users
- User profile (Maker / Checker) would be required for User setup and customer setup prospective
- Maker profile to perform maker activity based on profile rights
- Checker profile to perform checker activity based on profile

Authentication and Single Sign On

- Bank ID must be used for authentication, where technically possible. In other cases, there must be a way to identify the Bank ID of the individual who owns the account (user id) used for authentication throughout the lifecycle of the underlying process or transaction.

Access Request

- A formal request form with an approval workflow must be established to request access to the system. It must identify the Bank ID of the individual who needs access to the system. This form must include the permissions (roles / entitlements) required to access

Requirements TBD-Recovery Expectations

Recovery time (Site Failure]	TBD / NA
Recovery time (Application/Component Failure)	TBD / NA
Data Currency (Best Case)	TBD / NA
Data Currency (Worst Case)	TBD / NA

Backup and Retention

Backup

- Expected restoration time

Data Retention and Access

- Daily backup retention period
- Weekly backup retention period
- Monthly backup retention period
- Yearly backup retention period

Access Rights Requirements

- Administrative user will be responsible to add / delete / amend users
- User profile (Maker / Checker) would be required for User setup and customer setup prospective
- Maker profile to perform maker activity based on profile rights
- Checker profile to perform checker activity based on profile
- View Profile to only view the information (no access to add/edit/change/delete/extract)

Transaction Controls Requirements

- As per each Citibank internal control mechanism.

Audit Trail Requirements

- Alert / Notification message needs to be reported through email and same needs to be update in system.
- Complete audit trail should be maintained for all activities along with time stamp of relevant actions.

Performance and Non Functional Requirements

FX digitalization web portal will make sure the following performance related requirement as per the bank standard process and norms.

- Volumes
- Potential Growth
- Performance
- Exception Handling
- Usability
- System Availability
- Help and Training
- Information Security Requirements
- General information Security
- Authorization and Access Control
- Audit Logging and Alerts
- Security Administration

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Regulatory, Audit and Data Retention Requirements

Regulatory / Legal Requirements

It is the responsibility of each individual bank to consult with their Legal Department regarding compliance of their portal/system with all applicable laws, rules & regulations.

KYC and AML Requirements

- As per SBP guidelines

Data Standards Adoption (Mandatory non functional requirement)

- As per SBP guidelines

Data and Document Retention Requirements

- As per SBP guidelines

Data Privacy Requirements

- As per SBP guidelines

Reports

- Users will be allowed to generate a system report of All cases.
- Parameters to generate a report can be against a case reference number, base code, time period, queue status and product stream.
- Retention period of data to be in line with central bank regulations.
- Report to be visible on the system and downloadable in PDF and XLS.
- Report to include case history i.e. time stamp of the case moving under each queue, field data and static client data.
- Approved / Decline / Under Processing or Scrutiny / Case Ref Number / Client Wise / Unit Wise / Year Wise.

Application Specification

- Microsoft technologies stack based solution
- Easy management feature
- Monitoring and controlling features
- Advanced Reporting dashboard

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Value Proposed

- Providing top quality Integrated transaction posting / data sharing platform
- Accessibility to a last-minute data before sharing / submitting to SBP.
- Use technology and business practices of banking standards to control and monitor user actions
- Offer customized dashboard and reports.

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Application Operating Models

- Complete work flow system requires to be designed from submission of cases by clients to approval from SBP/SBPBSC and interim management thereof
- Search
- Reporting
- Monitoring Options

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Project Timeline

- To complete the work outlined in the project scope, we'll need approximately 45 working days from beginning to end, depending on when we receive feedback at each milestone. Upon signing the proposal and / or agreement we are prepared to start work immediately.
- System will be presented and will be available for SIT / UAT after 5 working days, subjected to availability of required information, infrastructure and technical support from bank.

Details	Working Days
Requirement Gathering, Designing, Internal testing, Coding CMS Backend Platform	50
Total	60

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Project Delivery Plan

- Project Elicitation
- FSD preparation against BRD
- Project plan
- Share wireframes of the UI and work flow
- Development
- Dev Testing
- BA Testing
- Demo
- Deployment UAT
- Bug Fix
- Production Deployment
- Support

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Development Methodology

Agile:

- Proposed solution will be developed using Agile manifesto.
- Iterative or agile life cycles are composed of several **iterations** or **incremental** steps towards the completion of a project. Iterative approaches are frequently used in **software development** projects to promote velocity and adaptability since the benefit of iteration is that we can adjust as we go along rather than following a linear path. One of the aims of an agile or iterative approach is to release benefits throughout the process rather than only at the end. At the core, agile projects should exhibit central values and behaviors of trust, flexibility, empowerment and collaboration.

Considering the Agile Manifesto outlines 4 Core Values

- 1. Individuals and interactions over processes and tools
- 2. Working software over comprehensive documentation
- 3. Customer collaboration over contract negotiation
- 4. Responding to change over following a plan

Key components of Agile project.

User stories

- Put simply, a user story is a high-level definition of a work request. It contains just enough information so the team can produce a reasonable estimate of the effort required to accomplish the request. This short, simple description is written from the user's perspective and focuses on outlining what your client wants (their goals) and why.

Sprints

- Sprints are a short iteration, usually between one to three weeks to complete, where teams work on tasks determined in the sprint planning meeting. As we move forward, the idea is to continuously repeat these sprints until your product is feature ready. Once the sprint is over, we review the product see what is and isn't working, make adjustments, and begin another sprint to improve the product or service.

Agile board

- An Agile board helps your team track the progress of the project. This can be a whiteboard with sticky notes, or a function within project management software.
- Backlog
- As project requests are added through your intake system, they become outstanding stories in the backlog. During Agile planning sessions, our team will estimate story points to each task. During sprint planning, stories in the backlog are moved into the sprint to be completed during the iteration. Managing the backlog is a vital role for project managers in an Agile environment.

Documentation & Responsibilities

Phase	Documents	Responsibility
Project Initiation	Project Charter Project Plan	IX
Operational Analysis Solution Design	Functional Design User Responsibility Matrix	IX
Training	Train the Trainer – Super Users User Manual (UPKs) – End users	IX
UAT	Test Scripts	IX
Go-Live	System Setup	IX

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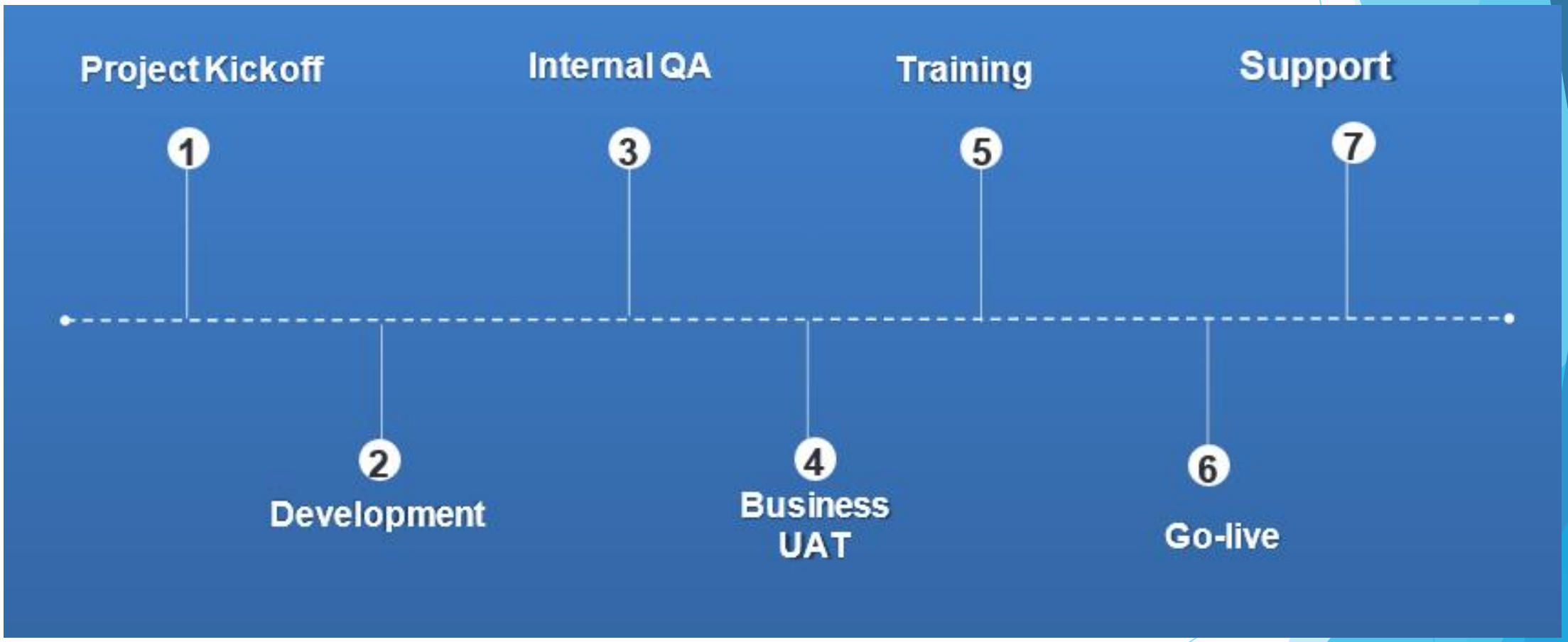
Project Delivery Process

- We will use Waterfall methodology to deliver this project.



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Delivery Team

Project Management

- Project Manager

UI / UX

- Front-End Developers

Development

- Sr. Software Engineers
- Jr. Software Engineers
- Jr. Software Engineers
- DevOps Architect
- QA

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General Assumptions

- The standard business flows and product features will serve as the base for the implementation
- The implementation is based on-perm
- The project would be executed in an on-site / off-site model
- A comprehensive list of assumptions and final timeline & estimates will be provided after a due scoping exercise
- UAT & Production servers should be provided by the bank
- Any new requirement after the scope if locked will be considered as change request
- Citibank local CTI responsible for the infrastructure management

Hardware Specification

Operating Systems

- Windows Server 2012 SP1 (Full Server or Server Core)
- Windows Server 2012 R2 (Full Server or Server Core)
- Windows Server 2016 (Full Server, Server Core, or Nano Server)

Hardware Environment

- Processor:
- RAM : 32 GB (minimum), 64 GB (recommended)
- Hard disk: up to 600 GB of available space may be required.

Software Requirement

- IIS Module
- MS SQL 2012 / 2016

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Specials

- Communication through Active Directory
- Maker Checker at every level
- Email mechanism
- User Portfolio Management
- 10/12 reports minimum (as per requirement)

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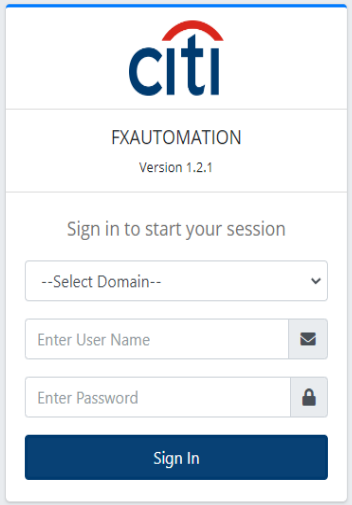
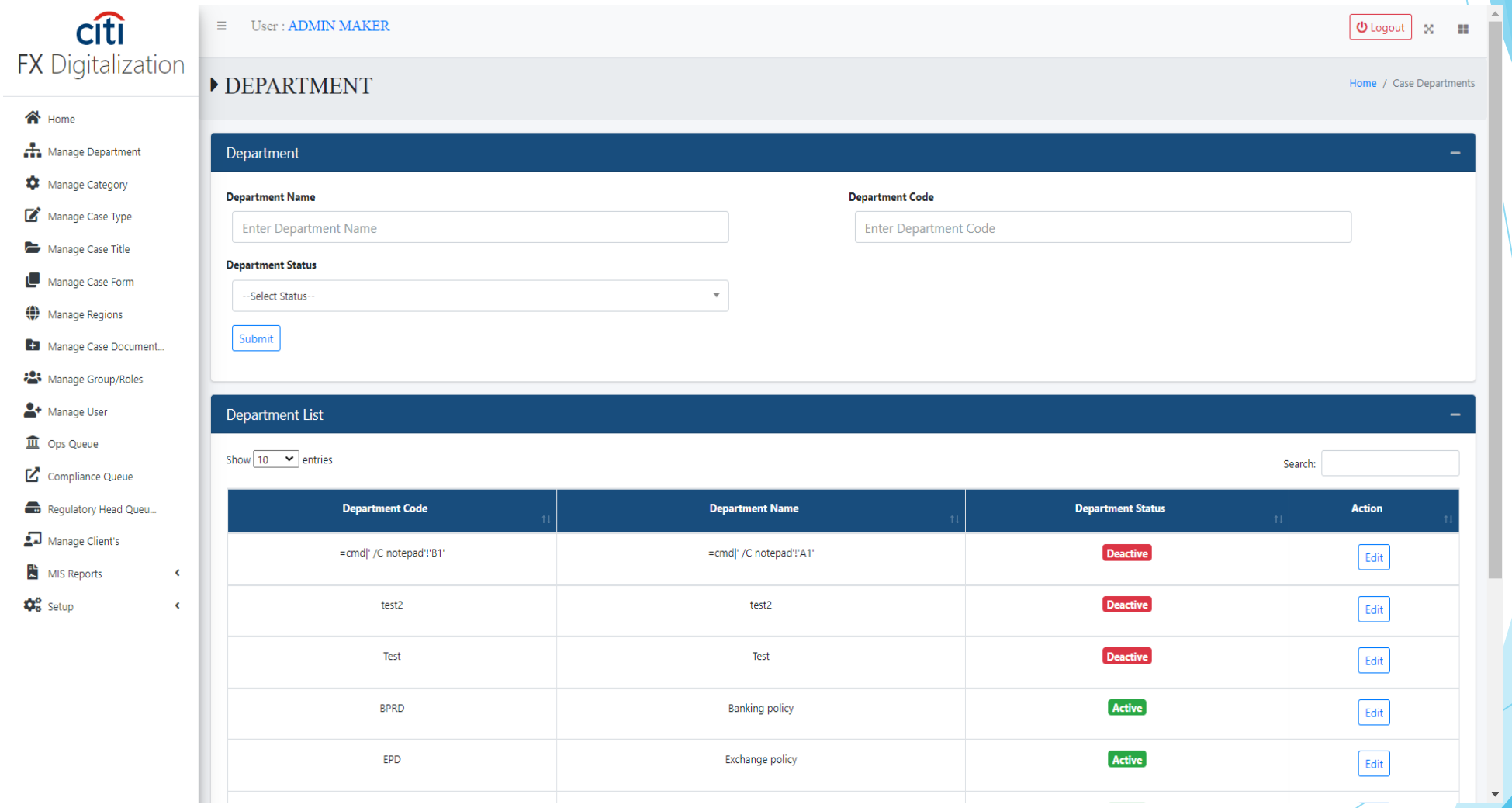
Application Flow

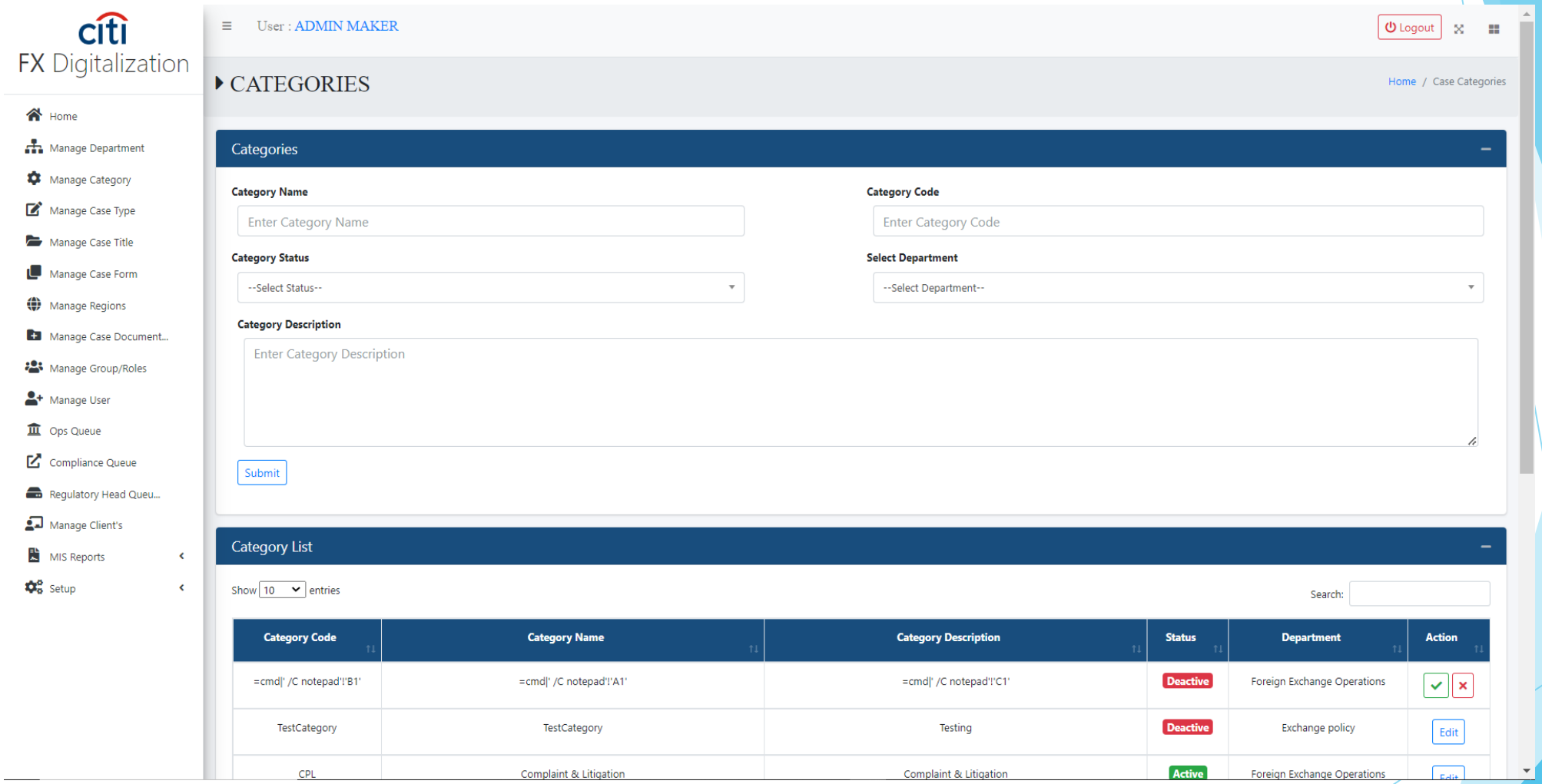
FX-Web Portal



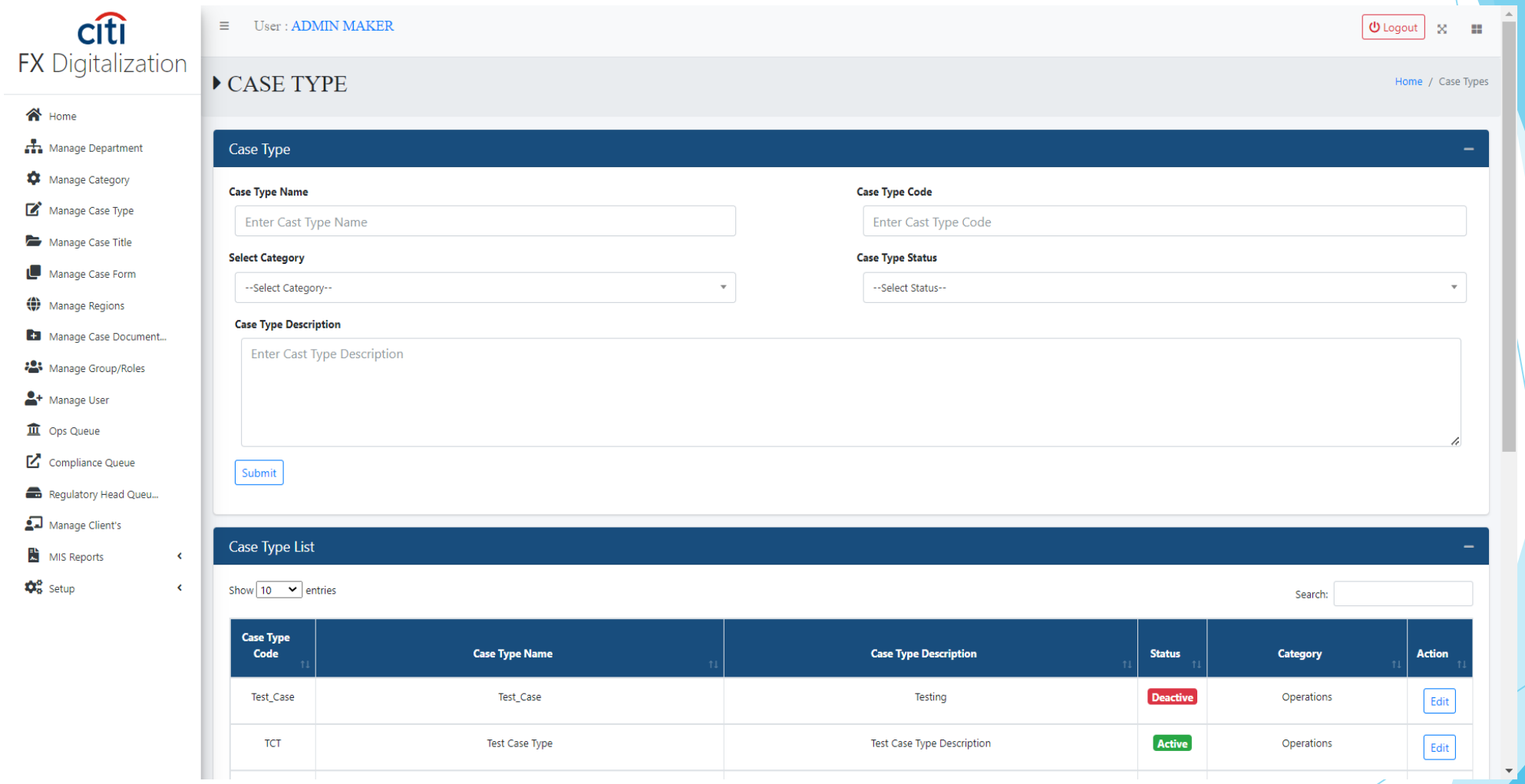
Manage Department form



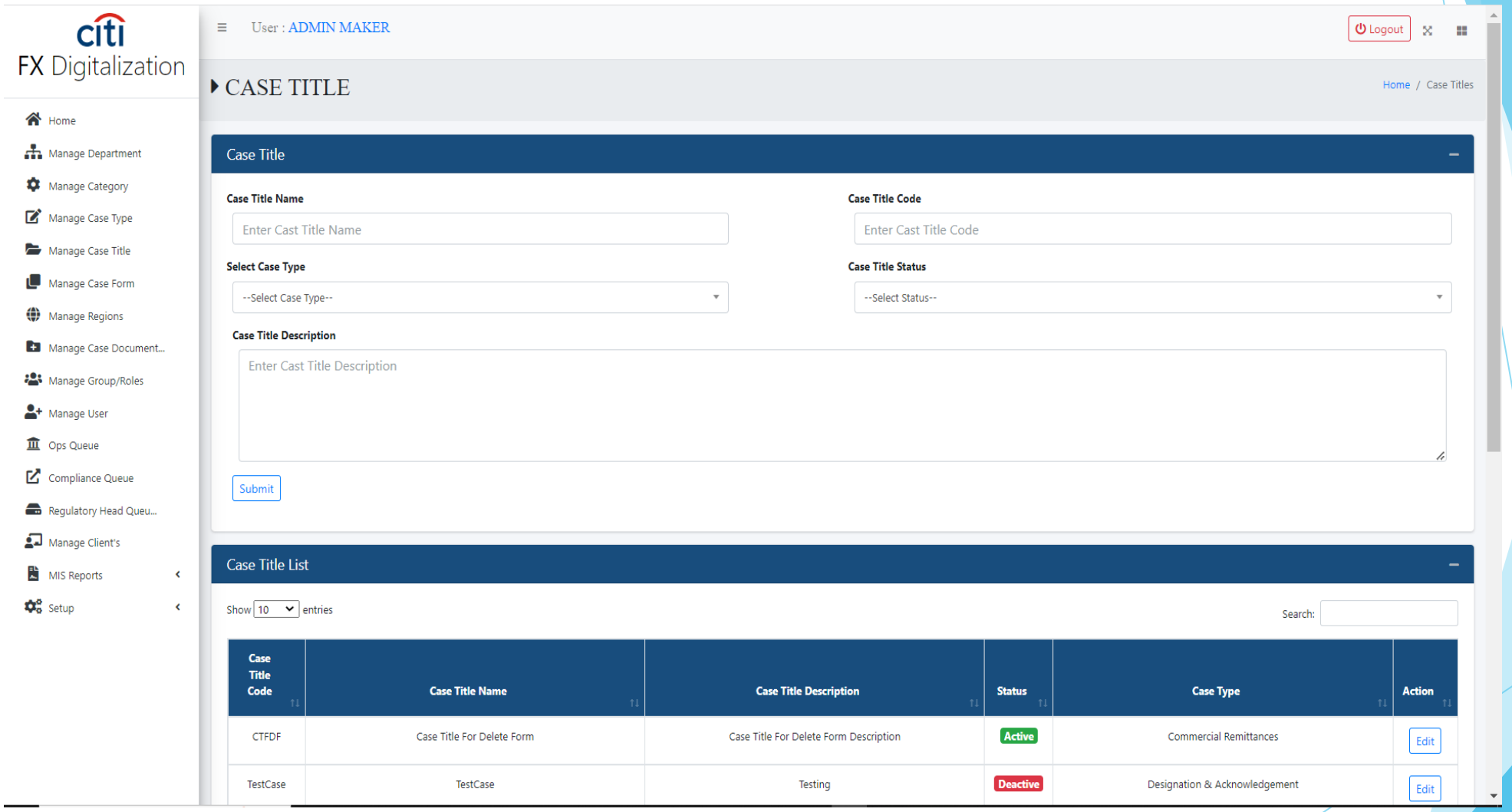
Manage Categories form



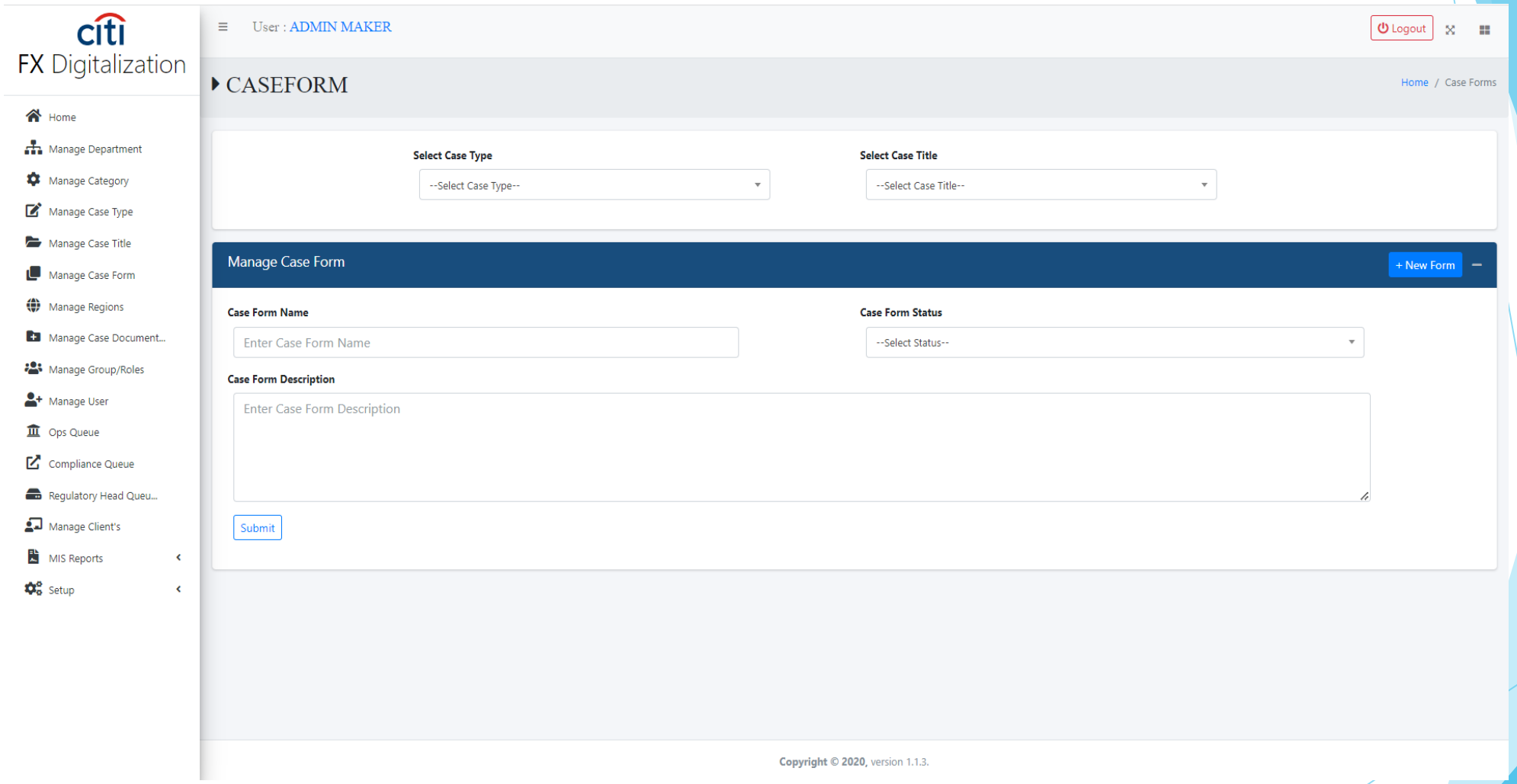
Manage Case Type form



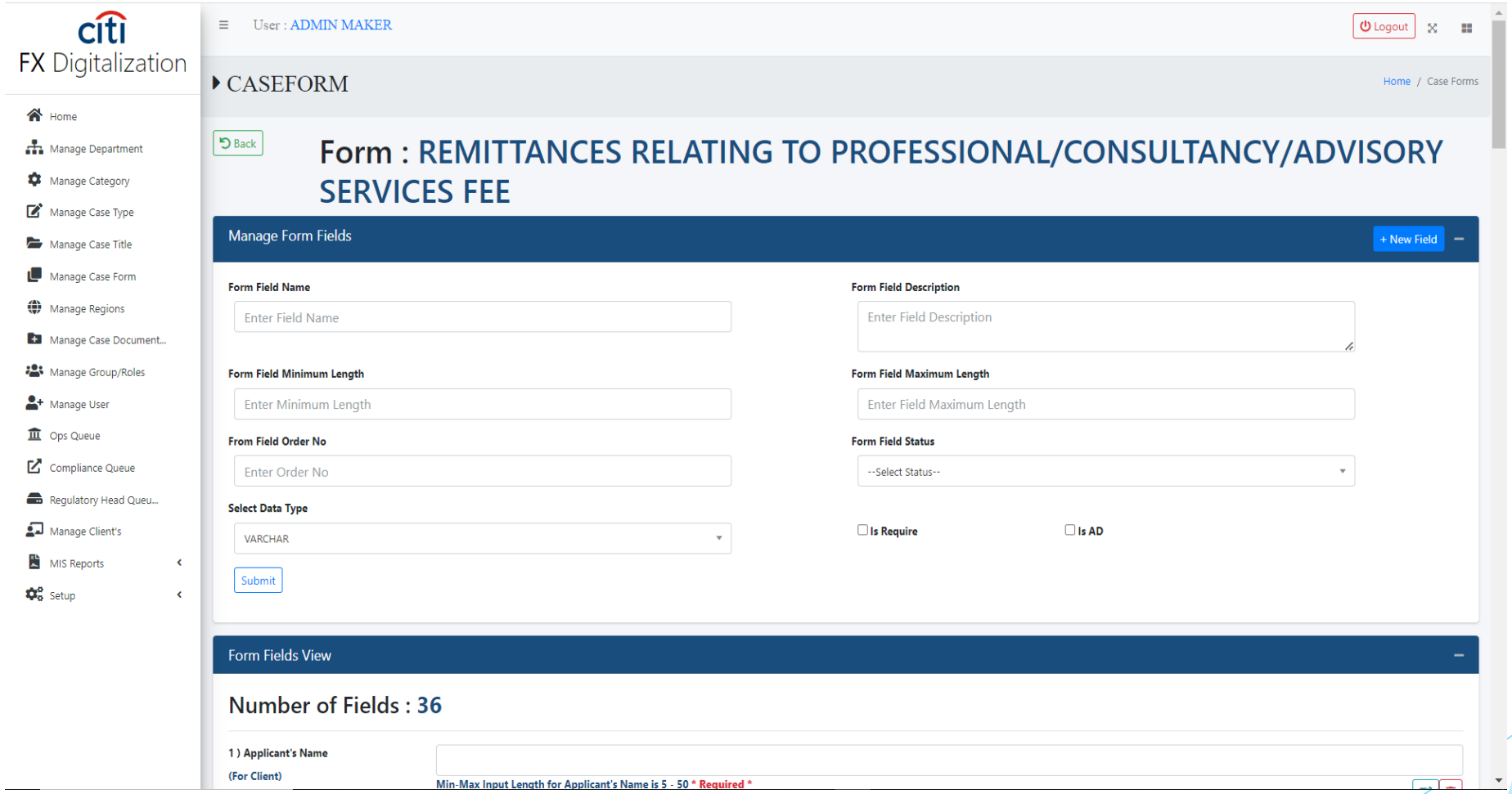
Manage Case Title form



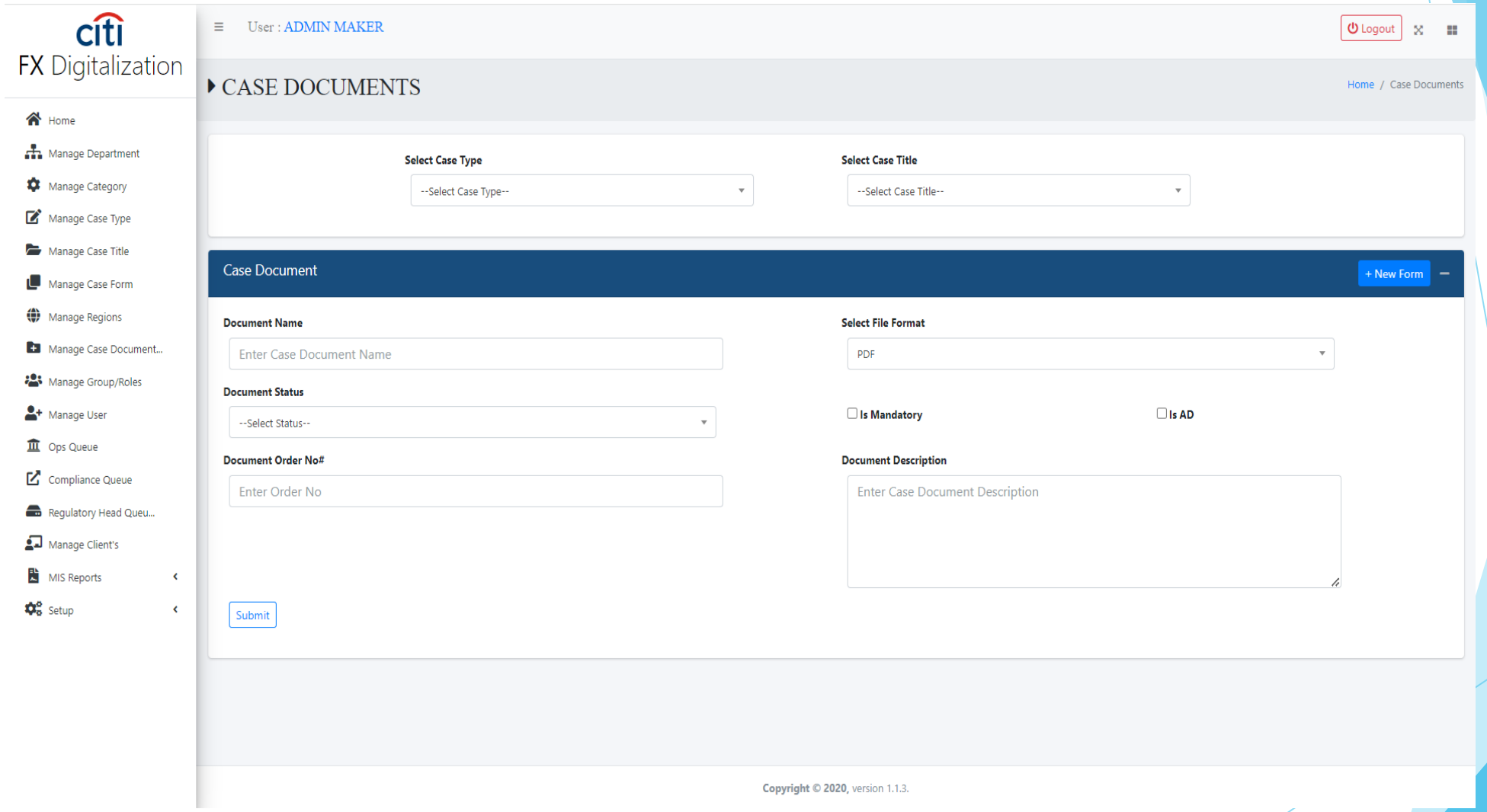
Case Form master information form.



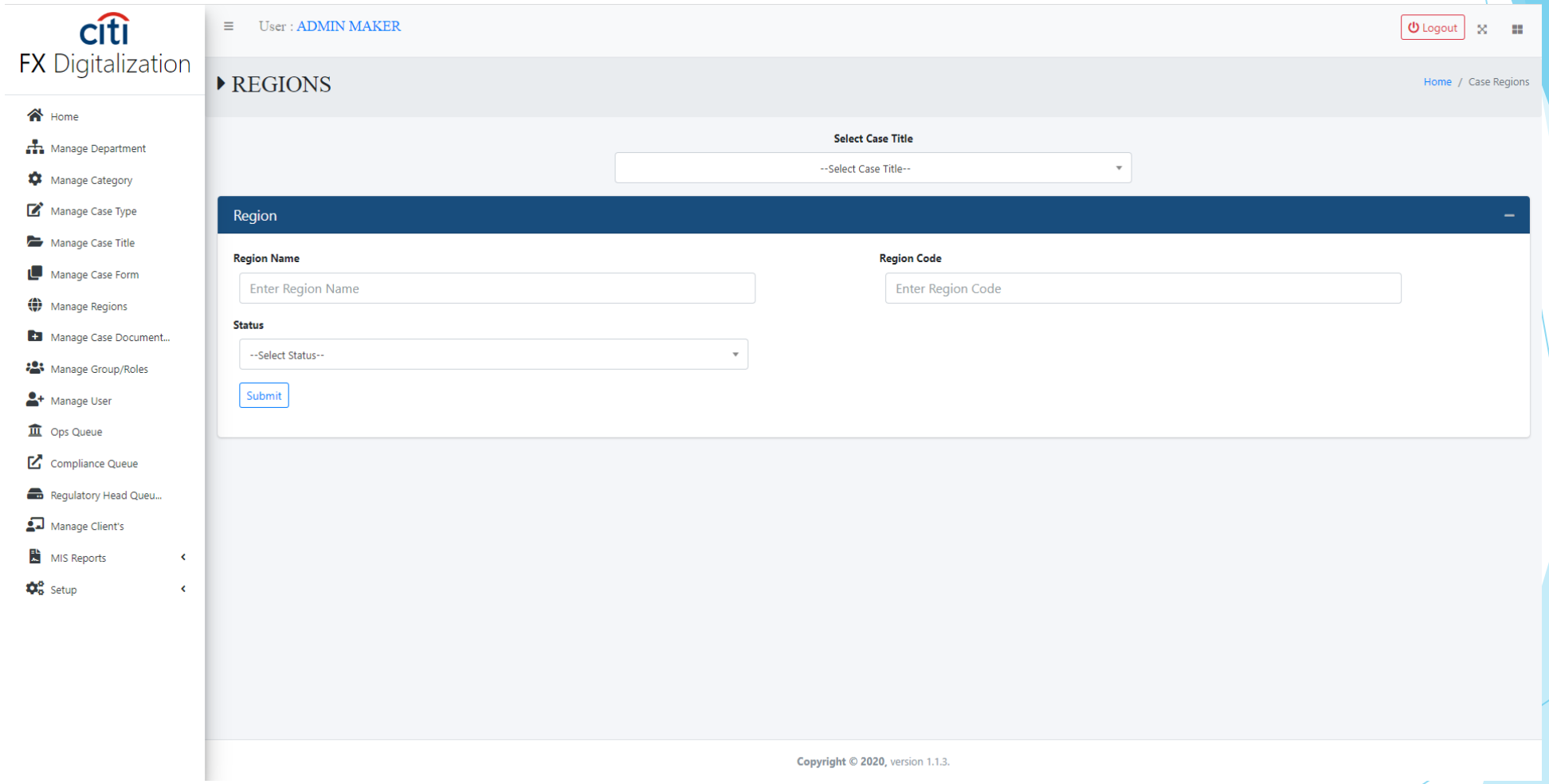
Case Form fields form.



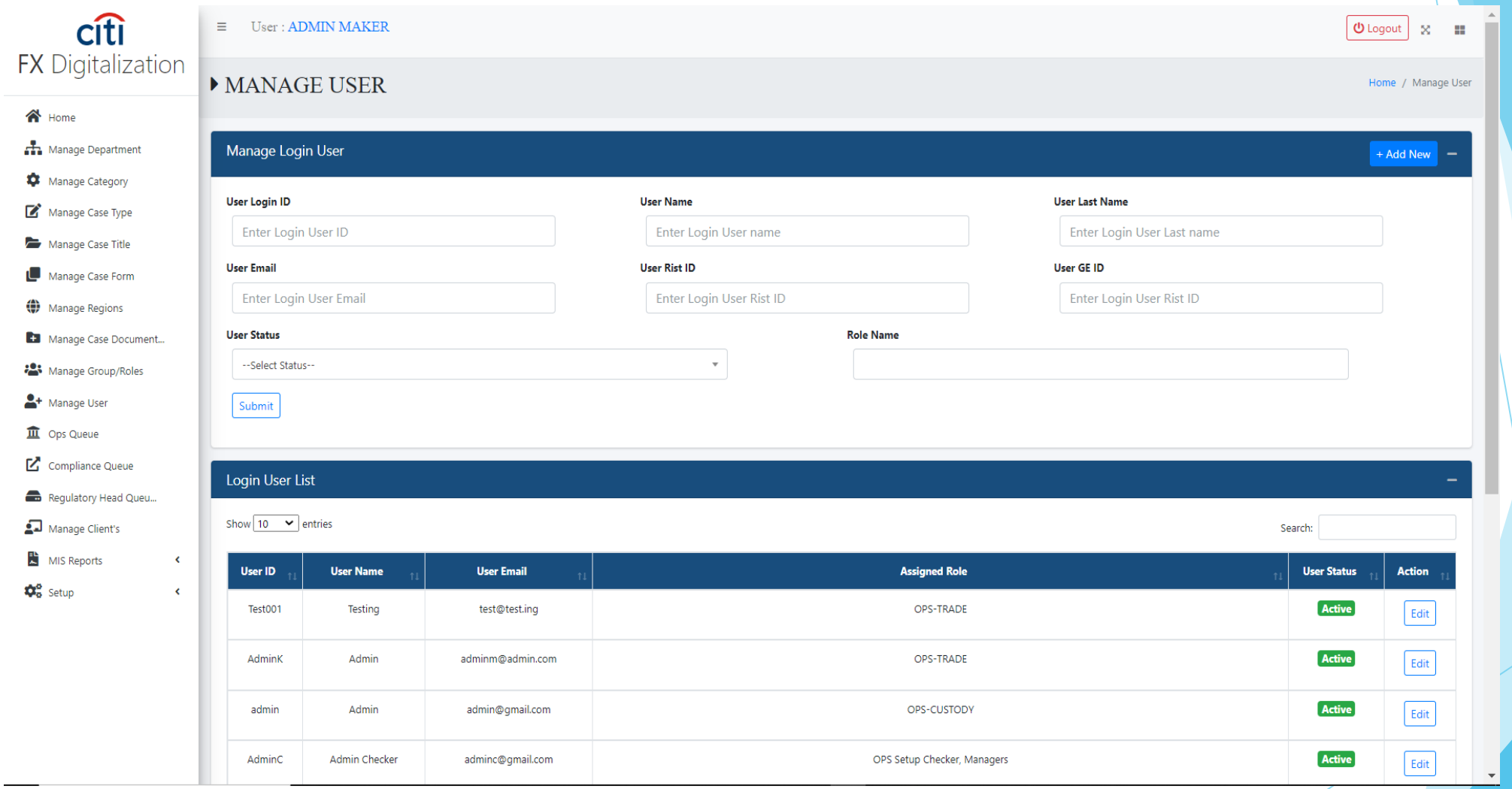
Case Form document form.



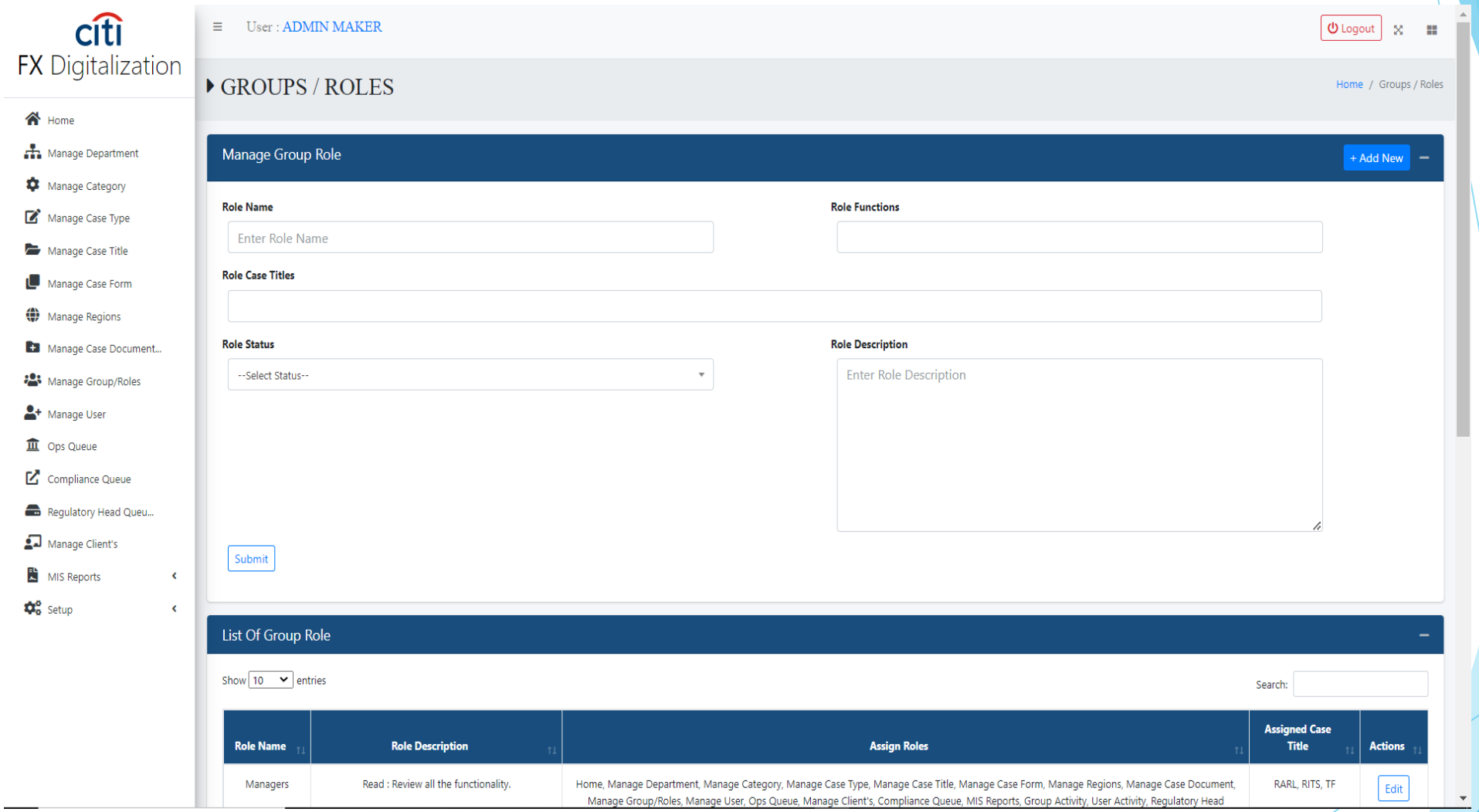
Regions form.



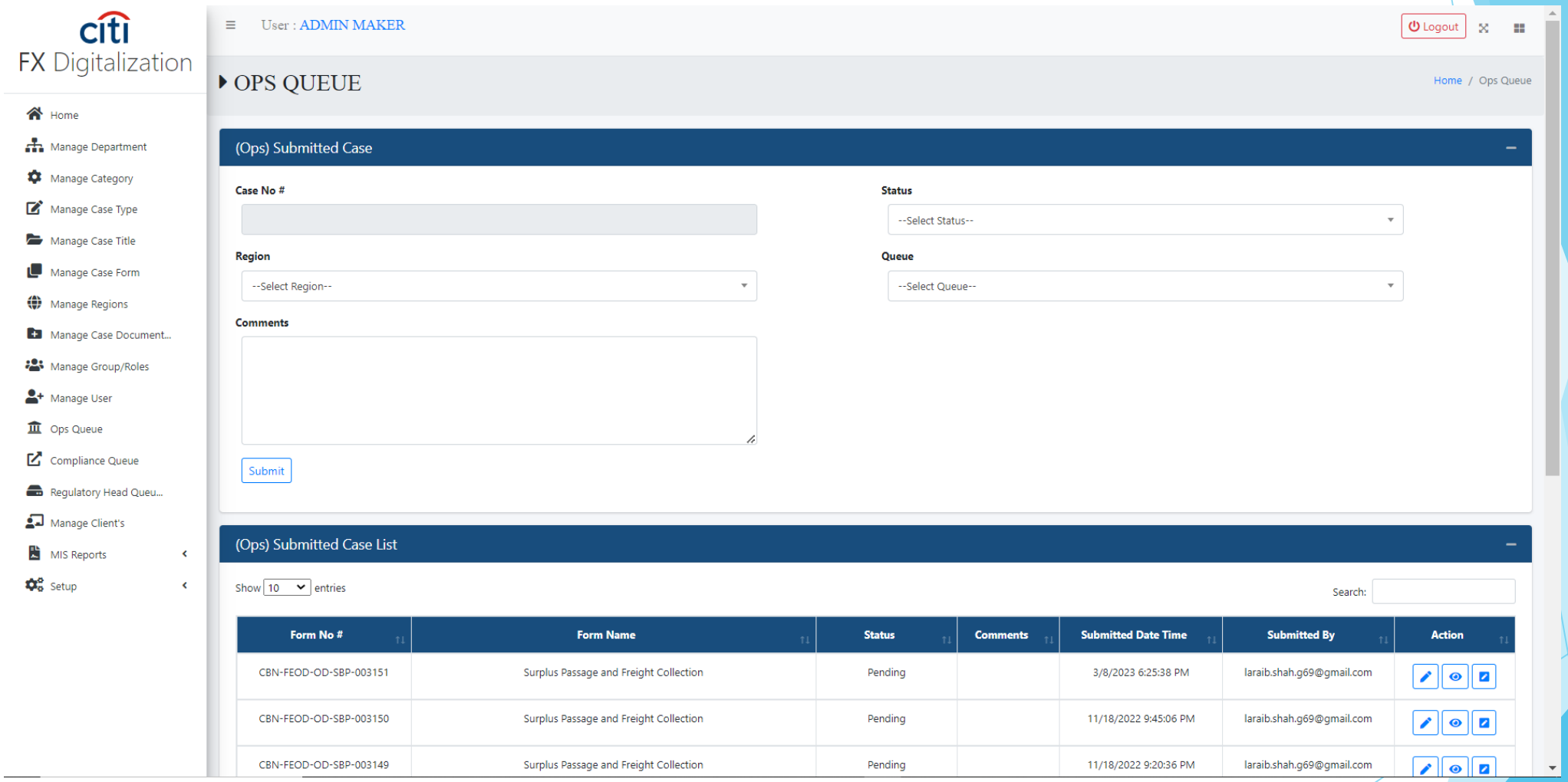
User management form.



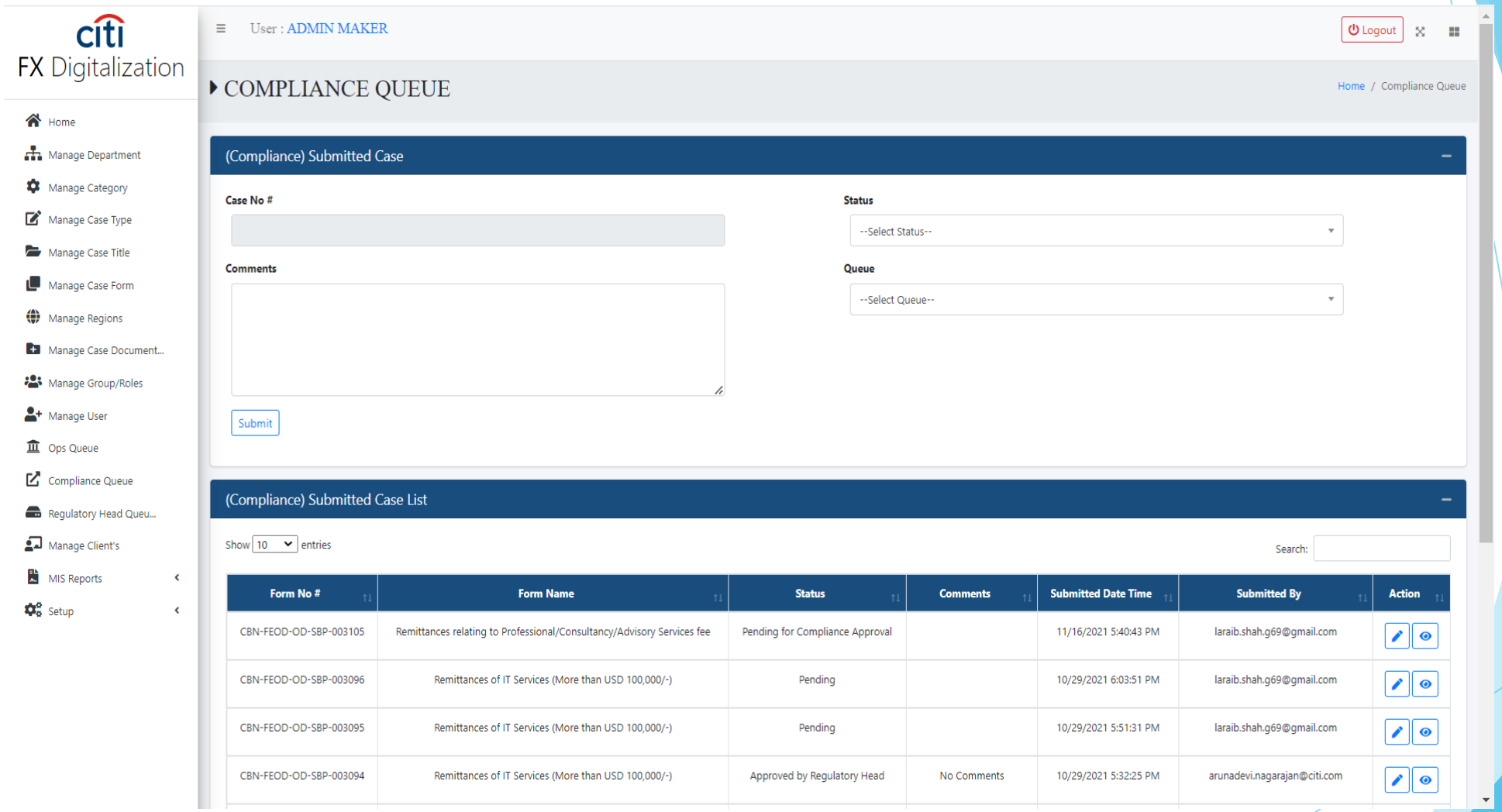
Role management form.



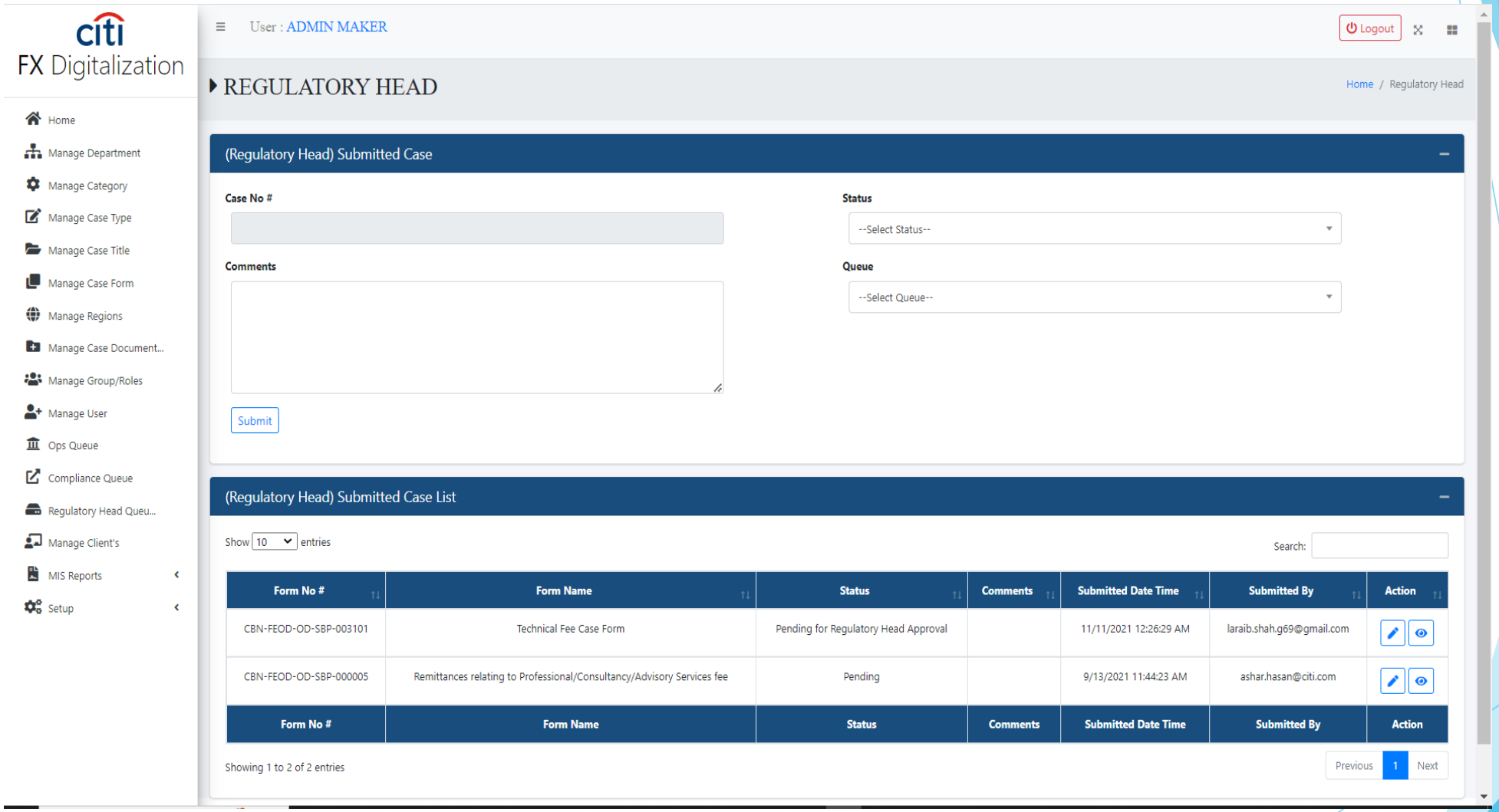
Ops Queue cases listed in this form.



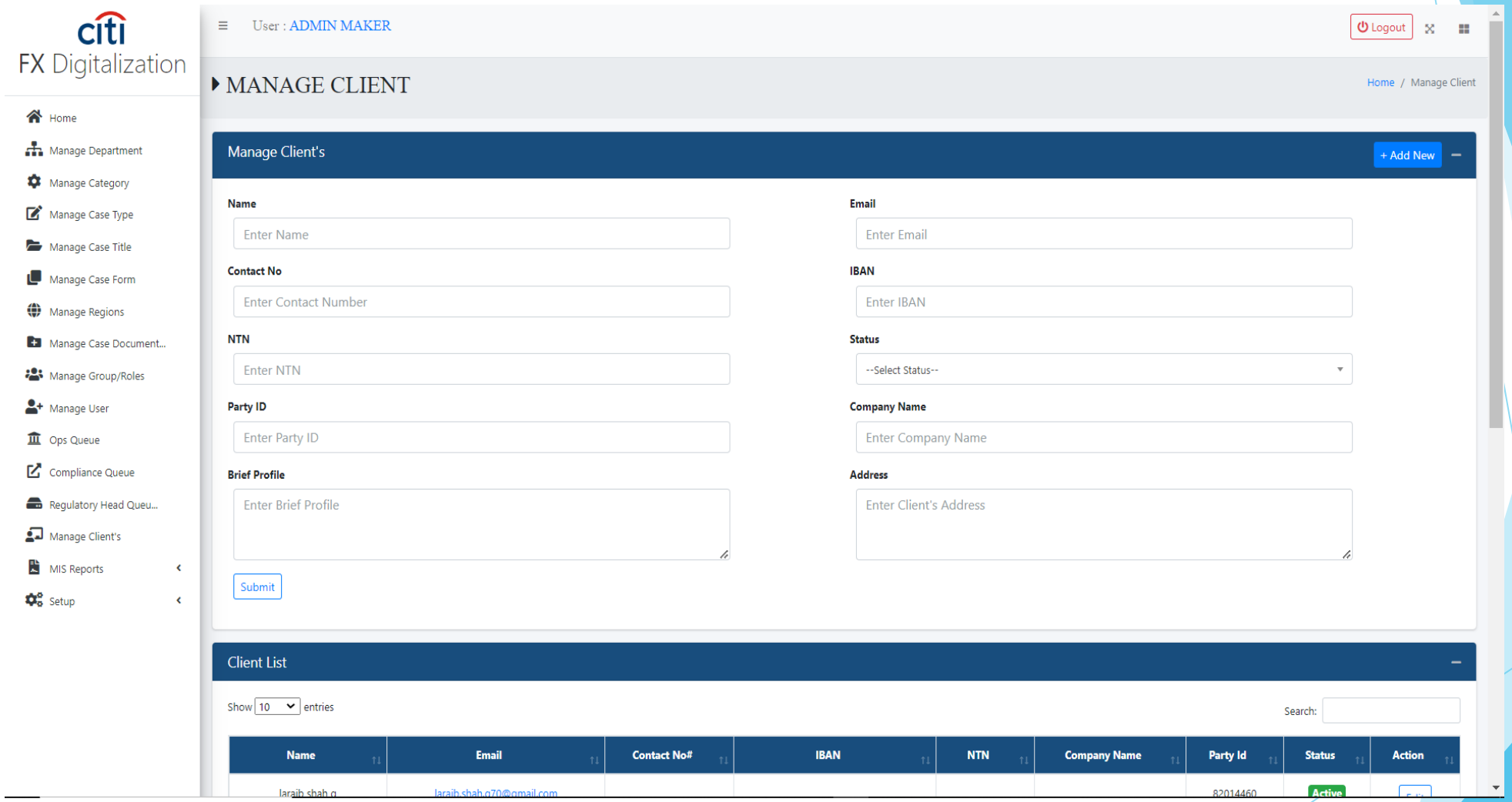
Compliance Queue cases listed in this form.



Regulatory Queue cases listed in this form.

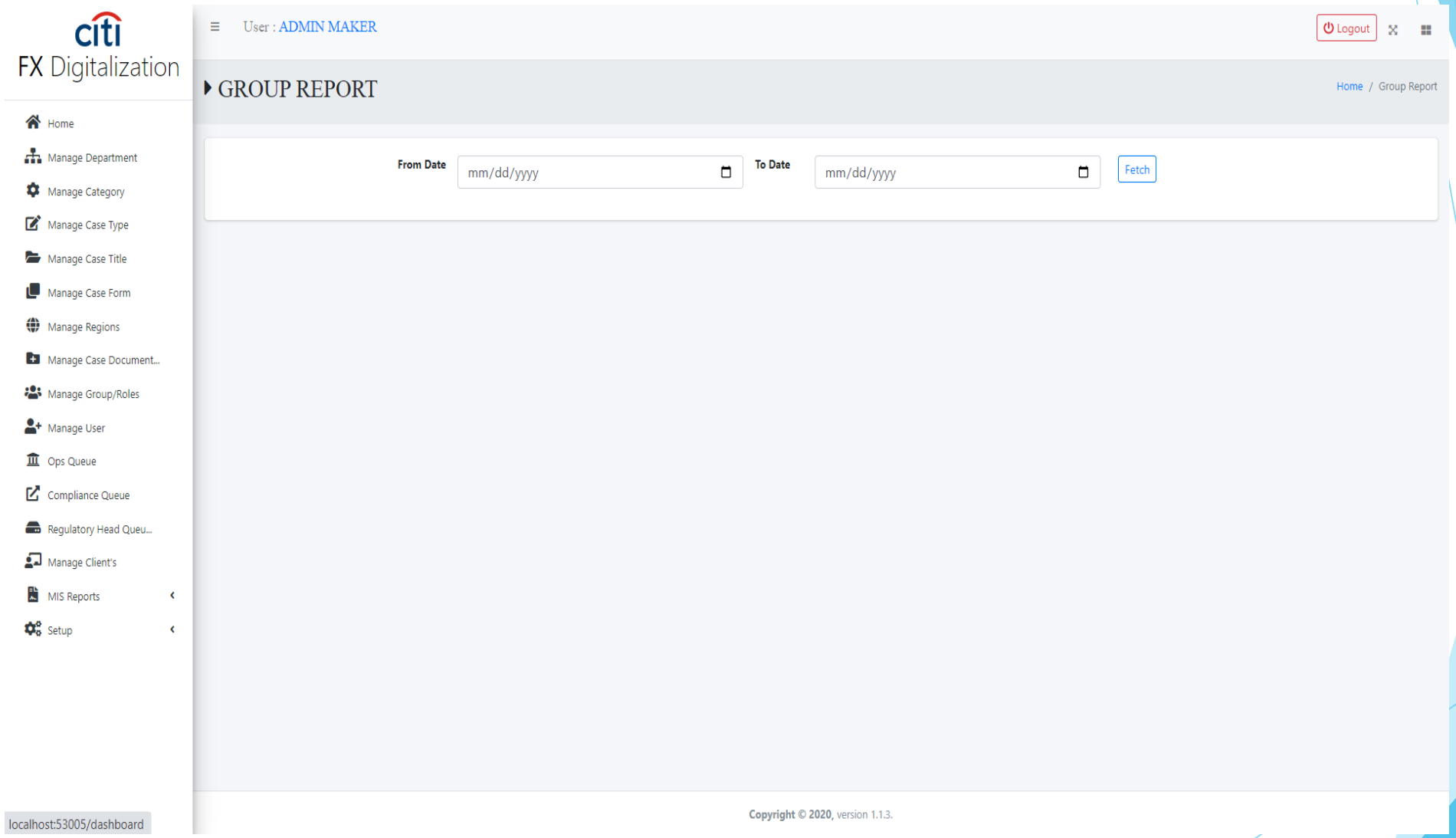


Clients management form

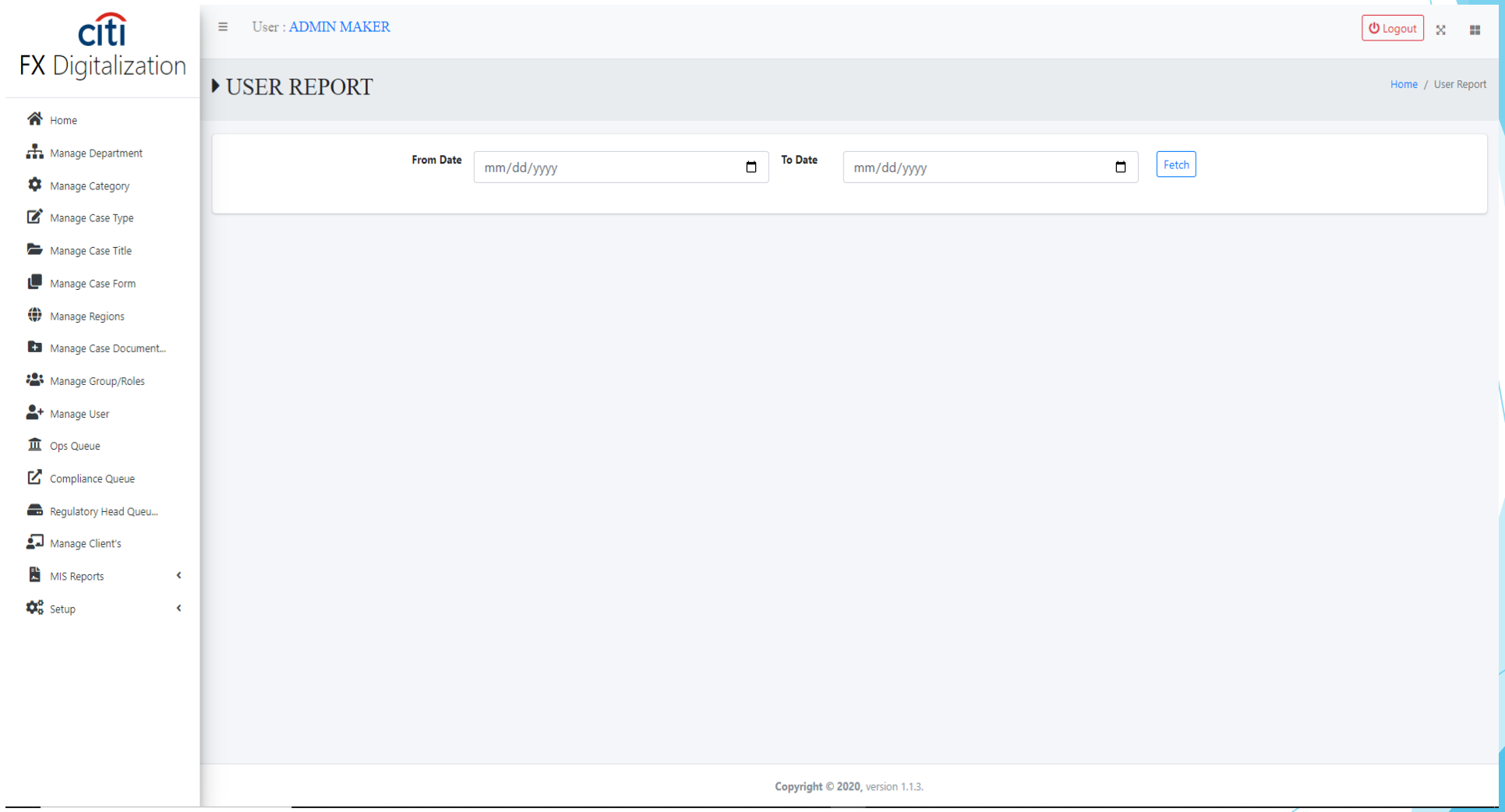


Reports

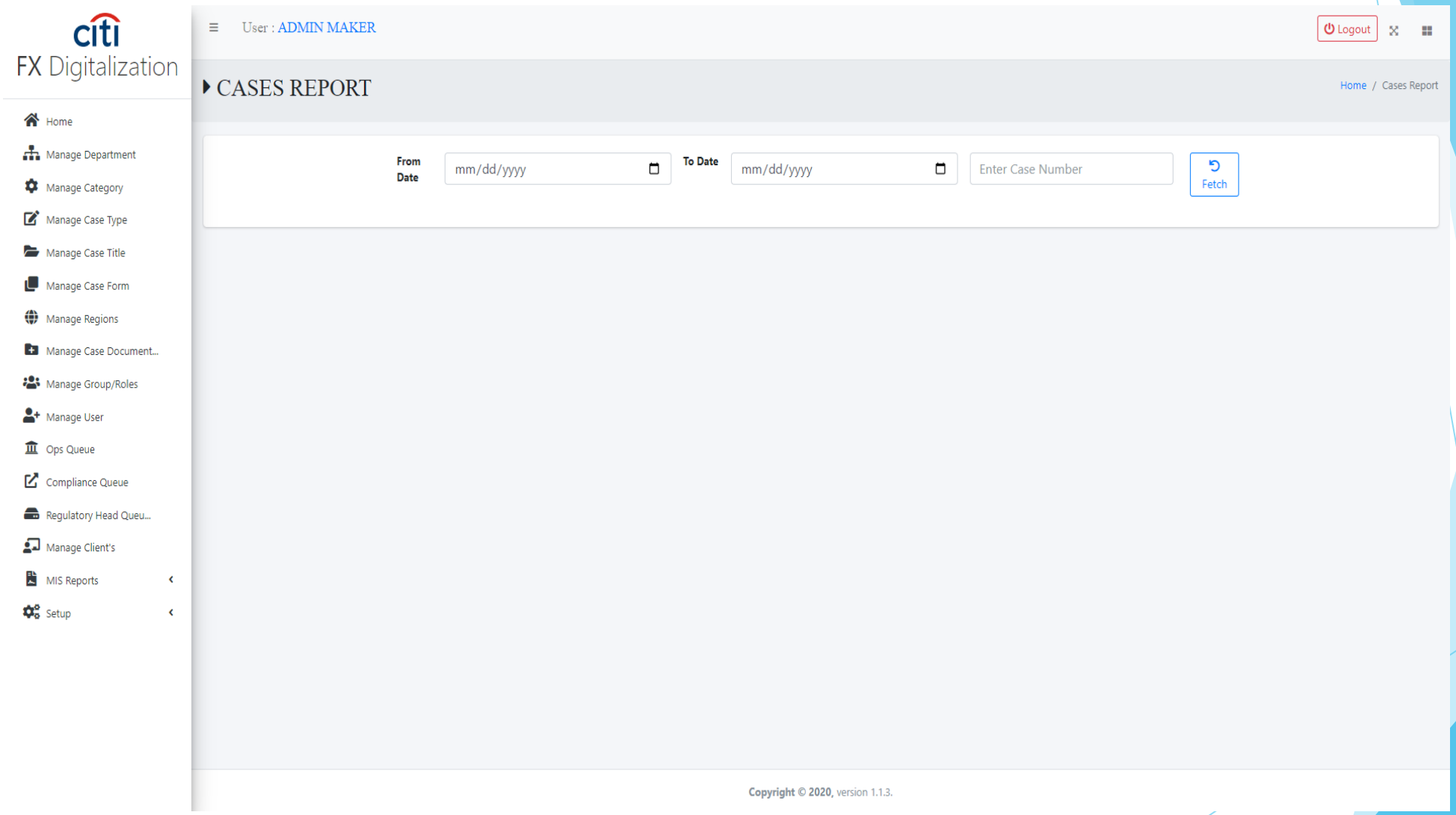
Group activity log report.



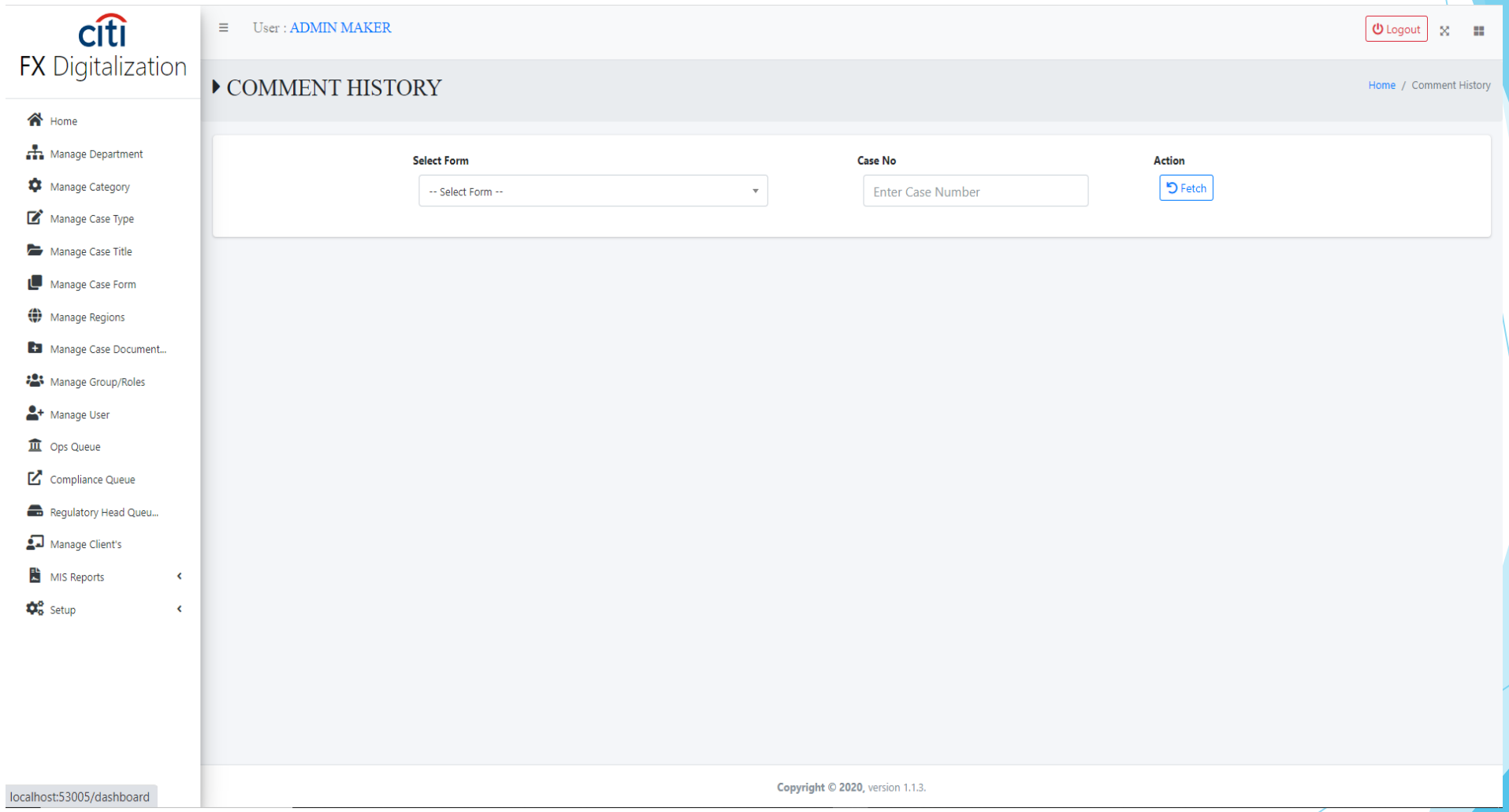
User activity log report.



Case activity log report.

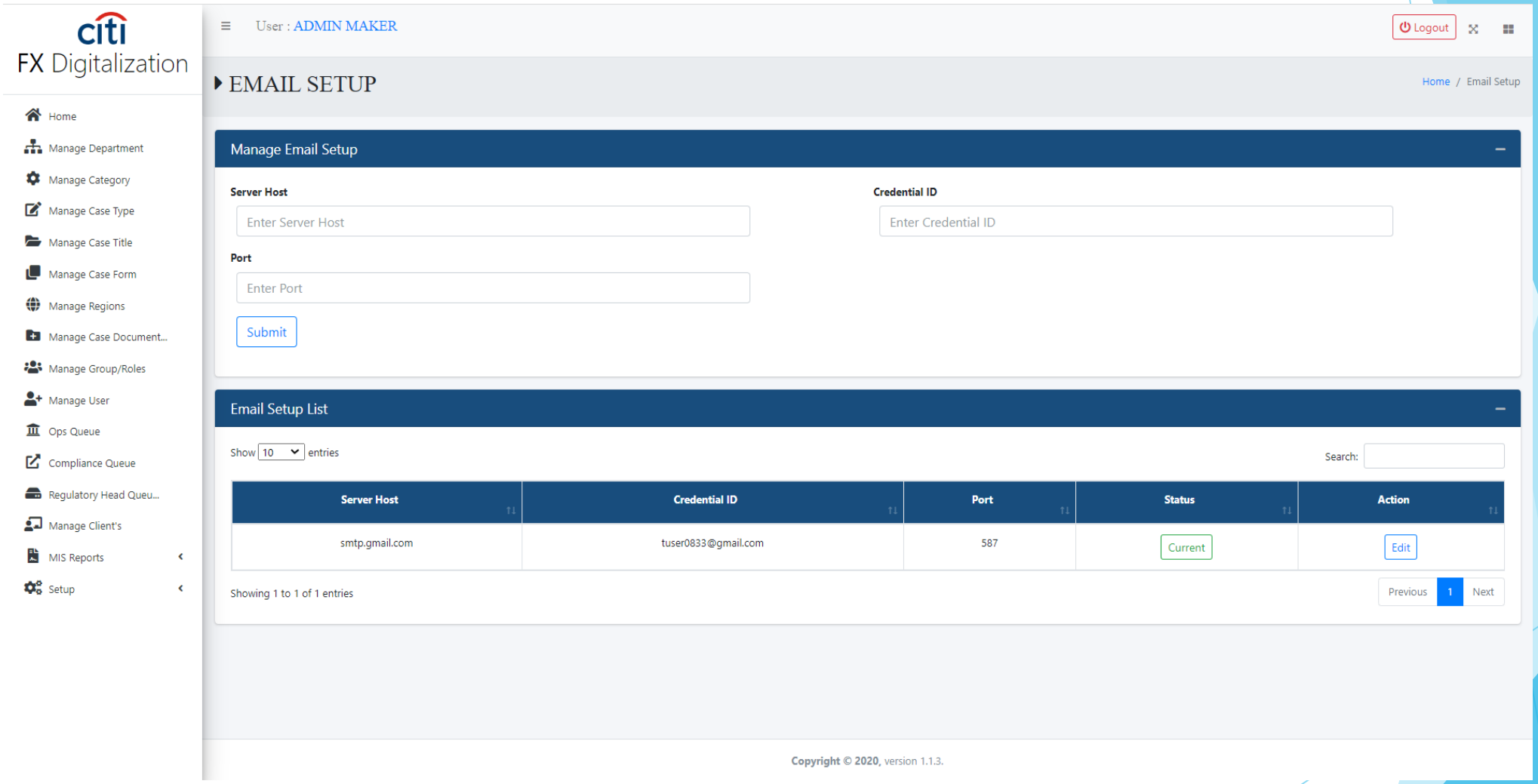


Comments against document report.

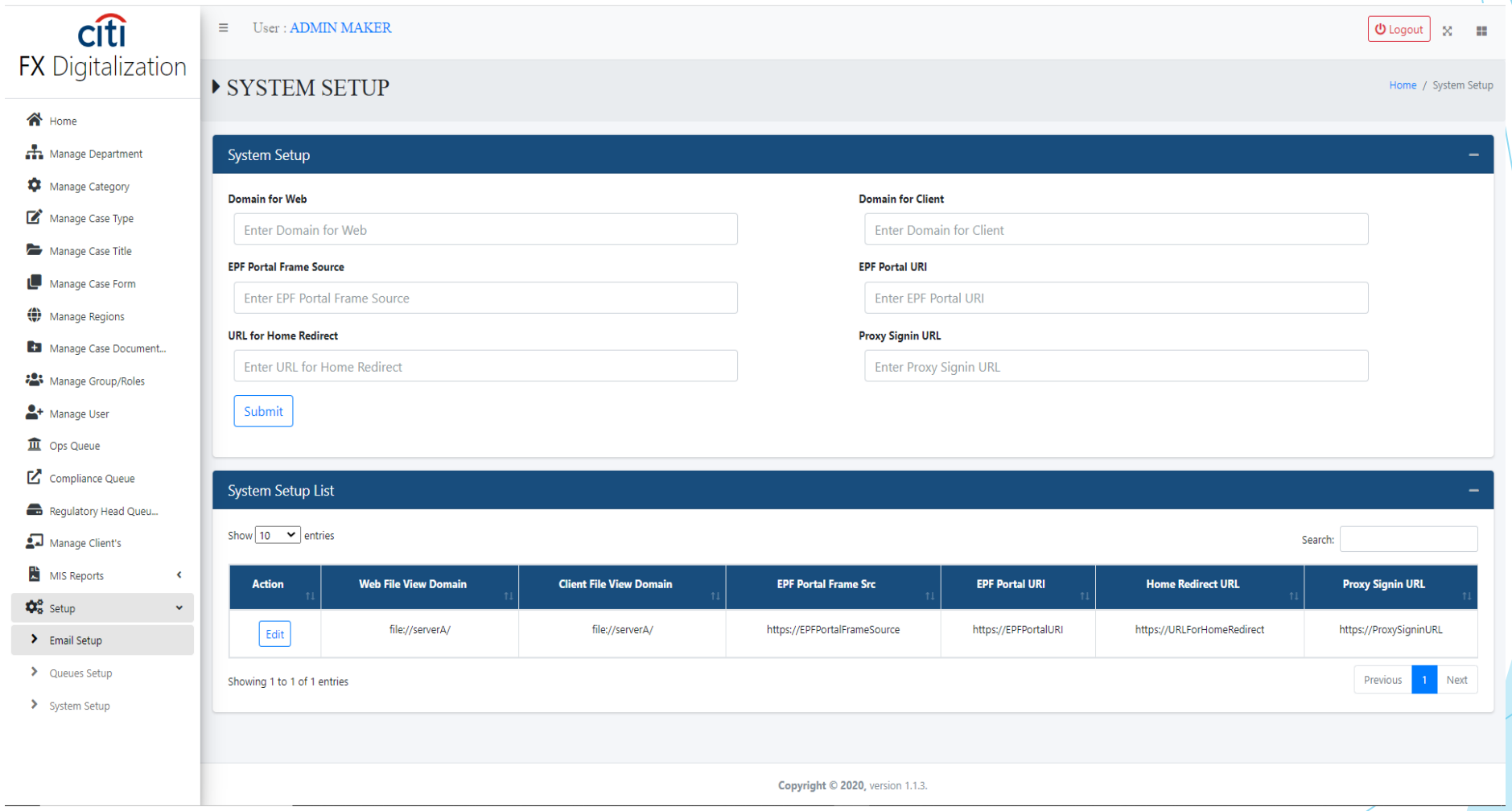


Setup Forms

Email setup form.

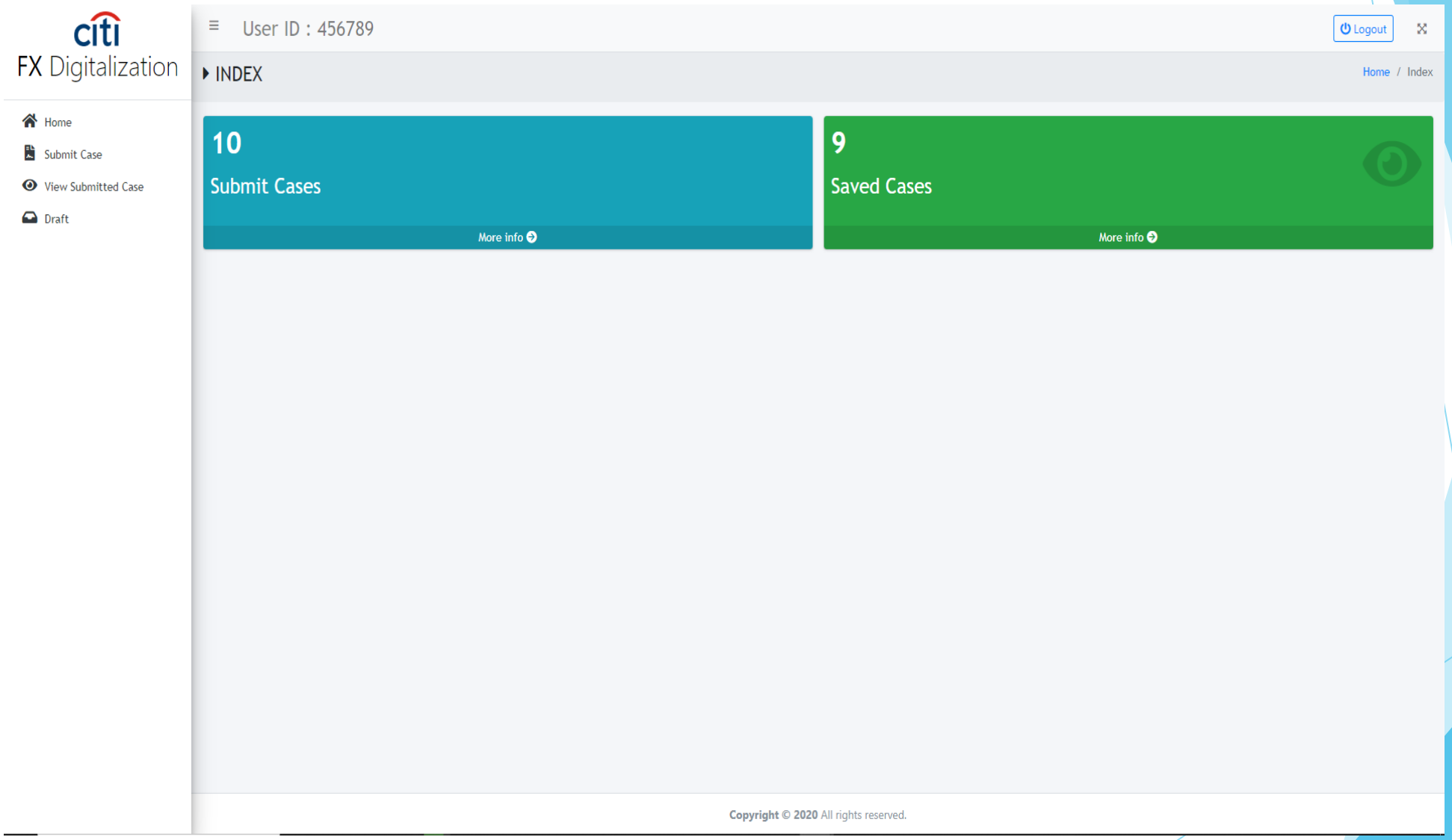


System setup form.



Client Portal

Home screen.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FX Digitalization
User ID : 456789
Logout
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Home / Index
Home
Submit Case
View Submitted Case
Draft
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Submit Cases
More info
9
Saved Cases
More info
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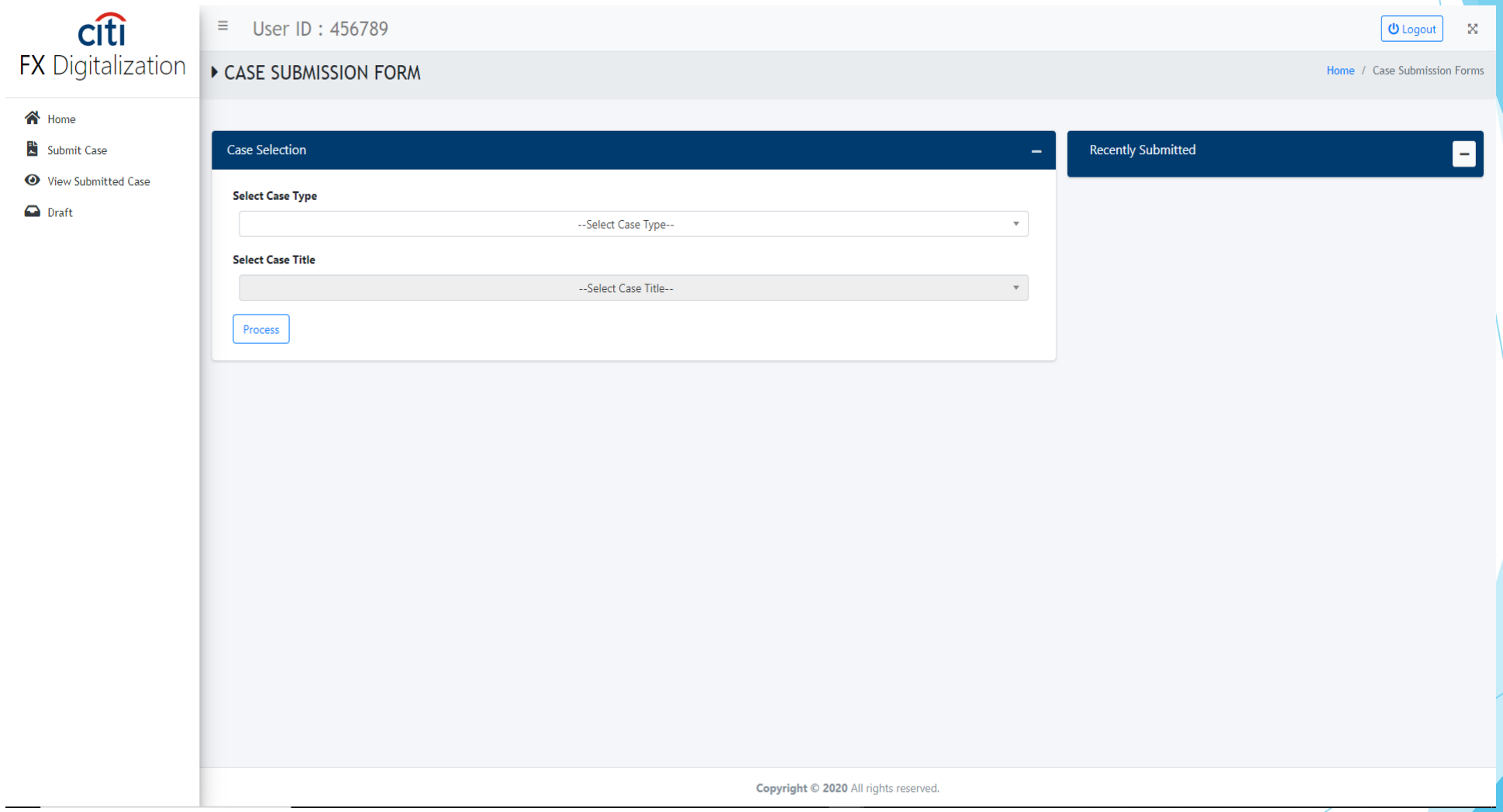
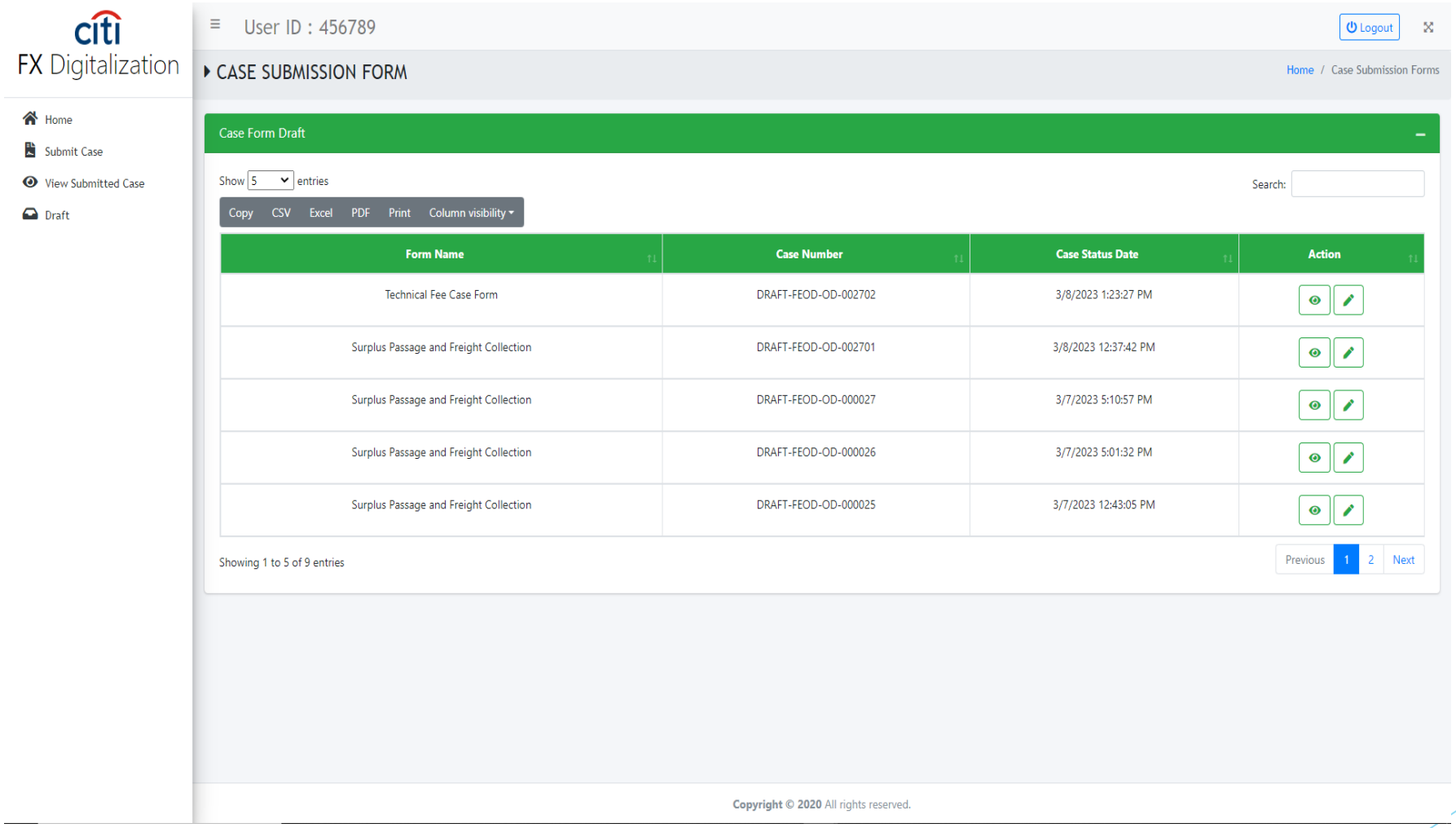
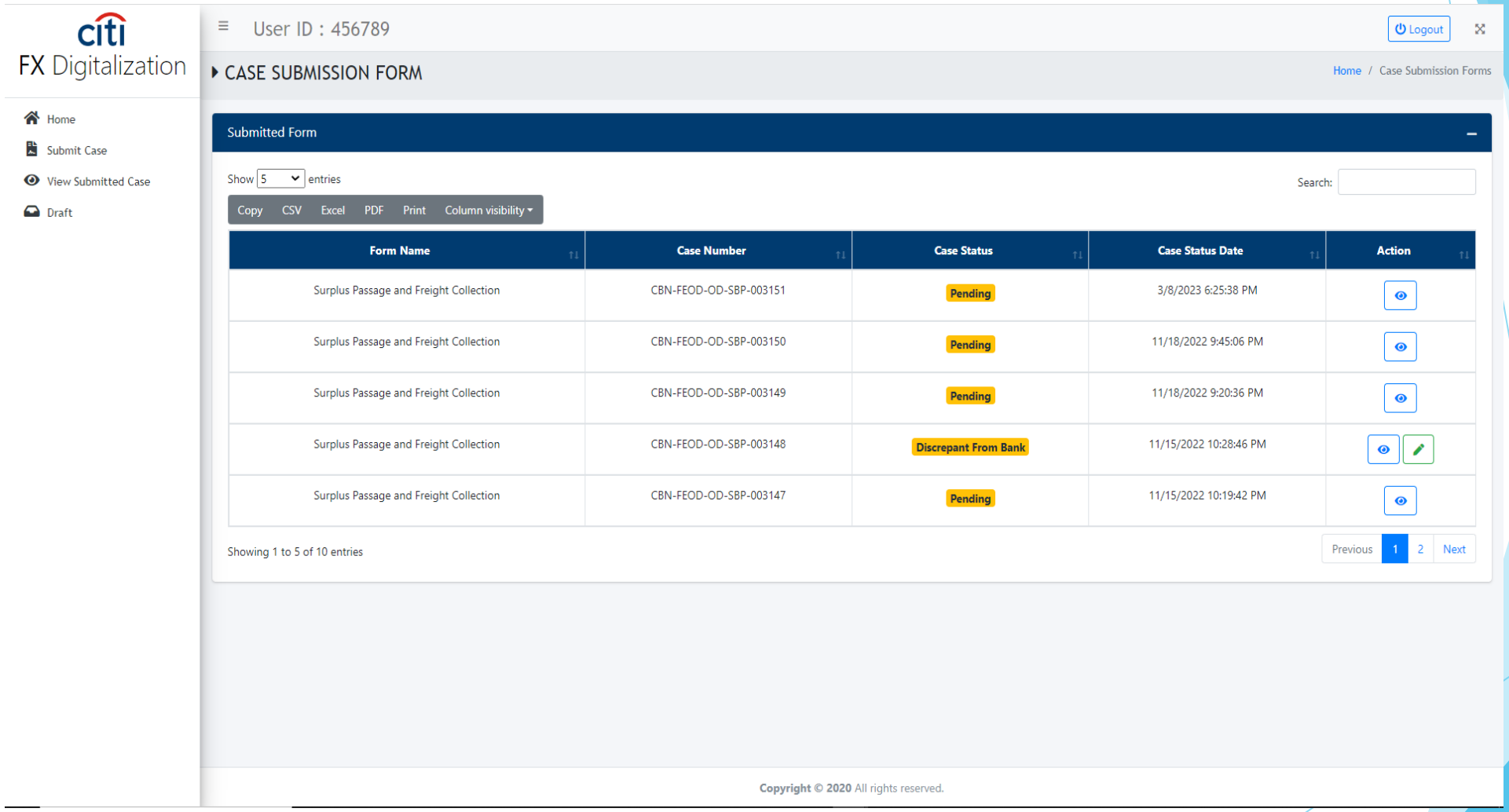
Case submit/draft form.



Draft case view/edit form.



Submitted case view/edit form.