Project Overview

Hi Professor: Diagrams may be blurry. If you zoom in on the document you will be able to see them clearly.

Project Name: CRS System (Caribbean Rate Software)

Authors:

Scrum Master: Shantal Lester

Scrum Master Assistant: Bachir Ndiaye

Developer: Christian Sierra Perez

System Owner: Central Bank of the Caribbean

CRS is an exchange rate monitoring system that wi.ll be a centralized platform accessible to all banks and financial institutions in the country, providing clarity and facilitating price discovery. Our system will be equipped with analytics tools and regular review of documentation to ensure its effectiveness and efficiency in achieving the Central Bank's goals. Our system monitoring system allows requesters to request indicative rates from banks of their choosing and create transactions based on the rates they received. Our system includes detailed information about the requested rate/s and transaction. Each user has a specific reason for using our system. Therefore, each user has different levels of access for security reasons.

Methodology Used: We choose Scrum as our methodology because it allows us to focus on delivering the highest business value in the shortest time.

- ➔ Repeatedly inspect working software (every two weeks - month) using a series of sprints
- ➔ Team self-organized
- ➔ Continue to enhance software every sprint

Project Baseline Plan

I. Project Purpose

The ultimate goal is to provide a system that complies with the latest regulations while simultaneously providing customers with a streamlined experience. The system will allow users to buy and sell currency at multiple rates.

II. Project Justification

New regulations have put forth the need for a new system that lists exchange rate requests for all banking institutions in the country. The system will provide a more secure way for the currency to be exchanged at an effective paste while maintaining high security. Customers will benefit from a more streamlined system.

III. Project Scope

Project Scope: Develop a system that lists exchange rates of currencies and allows banks to buy and sell currencies in real-time.

Objectives:

1. Provide banks with the ability to list their indicative rates and exchange requests with a new system.
2. Improve customer efficiency in buying and selling currencies.
3. Provide the central bank with the ability to monitor all transactions and requests
4. Onboard the different institutions that will be using the new system put in place.

Deliverables:

1. The creation of a system that tracks transactions and currency exchange rates for financial institutions and banks.
2. A secure method for buying and selling currency
3. Easier more intuitive system that enhances customer experience
4. A system with the ability for the central to trace all transactions for the central bank.

Boundaries :

1. The system must be created in a short period of time to catch up with regulations put in place
2. The scope of the project does not include the process of marketing and implementing the system in other financial institution

Assumptions:

1. There is necessary infrastructure in place to support the system being implemented for the central bank
2. It is easy for institutions to be onboarded as users of the new system

IV. Project Feasibility Assessment

After assessing the feasibility of the project, we have concluded that the IT team has deemed it technically feasible to implement the system for the central bank and other institutions to be utilized together. Additionally, they have deemed it possible to meet the requirements of the consumer and the regulations that need to be addressed. When analyzing the economic feasibility, it can be seen that the benefits of integrating the new system into the existing one set by the bank outweigh the costs of implementing it. Additionally, this would prevent any costs arising from not following guidelines put in place. Lastly, the system aligns with the needs and goals of the company therefore this project is organizationally feasible.

V. Cost Associated with the project

We feel that this project would come up to a total cost of approximately a half million dollars ($500,000-700,000) to implement and get the project started. As a team we have chosen this number when reviewing the project scope and what is necessary to create such a system. The majority of the costs would go towards servers and storing the data that would be created for the central bank to monitor transactions which total approximately $11,000 a month for a 10,000-user server. Along with the short timeline and small team, it would take a group of highly trained and experienced individuals who would be compensated $300,000 (100,000 for three software developers). Lastly, using an in-house database along with the software that is being created, it is calculated that it would cost approximately $40,000 to upkeep the database. Additionally, the excess budget could be potentially allocated to any last-second purchases or backup budgeting that may be needed in case issues arise.

VI. Tangible and Intangible Benefits

Tangible benefits:

- Increase in revenue for the central bank as more institutions will participate in the system
- Increase in productivity as more banks will be able to transfer currency
- Increased information on the transaction history of other banks and customers

Intangible benefits:

- Having a system up to regulation will enhance the reputation of the central bank
- Additionally, customer satisfaction will increase by providing a streamlined system

Risk Management

Risks:

1. **Security Risk-** It is most important that when creating a system like CRS, it is essential to ensure the software is built to prevent theft, fraud and unauthorized access.

2. **Operations Risk** - A system handling currency for financial institutions must be reliable. Any downtime or operational issues could lead to loss of revenue.

3. **Low Productivity -** Integrating a new system like CRS across multiple banks can hinder productivity

Stakeholders

A person or group that has an interest in the development of the CRS System and can either affect or be affected by the outcome/business. Those members are Jefferson Bien-Aime, Customers, Banks, Financial Institutions, and the Central Bank.

Project Execution

Requirements Gathering:

- Meeting with stakeholders
- Team meetings

Understanding the roles of the:

- Customers
- Companies
- Providers
- Central Bank

Customer

The customer creates a transaction request with details such as Buy, Sell, Rate, Currency Buy, Currency Sell, Purpose of Payment, Fees, and Debit Account information.

- The request is sent to the approvers for approval.
- Approver approves or rejects the transaction request
- If the transaction request is in Tier 4, a third level of approval is required.
- If the transaction request is approved it will be automatically executed.

Bank Level

- Foreign exchange office and director of foreign exchange at the bank approve or reject the transaction request
- If the transaction request is in Tier 4, it requires the approval of the Head of Foreign Exchange of the Central Bank
- If the transaction request is approved, it can be executed by the bank

Execution:

- Once approved, the transaction is marked as approved and ready to be executed
- The foreign exchange officer at the bank executes the transaction and marks it as executed on the system

Rejection:

- If the transaction request is rejected at the company level, it is automatically canceled and cannot be executed.

- If the transaction request is rejected at the bank level, the approver must provide the reasonable and necessary steps to continue the transaction, which may require additional information from the customer.

Constraints:

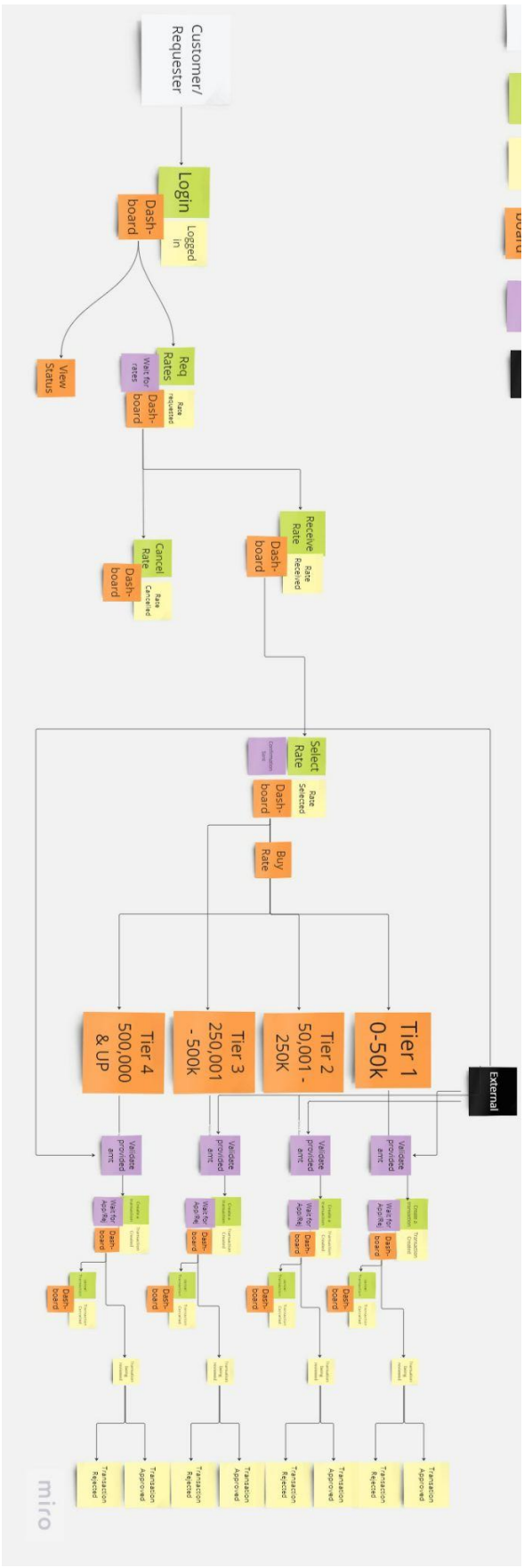
- Transaction requests not approved by the company by 4:59 pm local time are automatically rejected
- Cut-off time for all transaction approvals on the company side is 5 pm EST

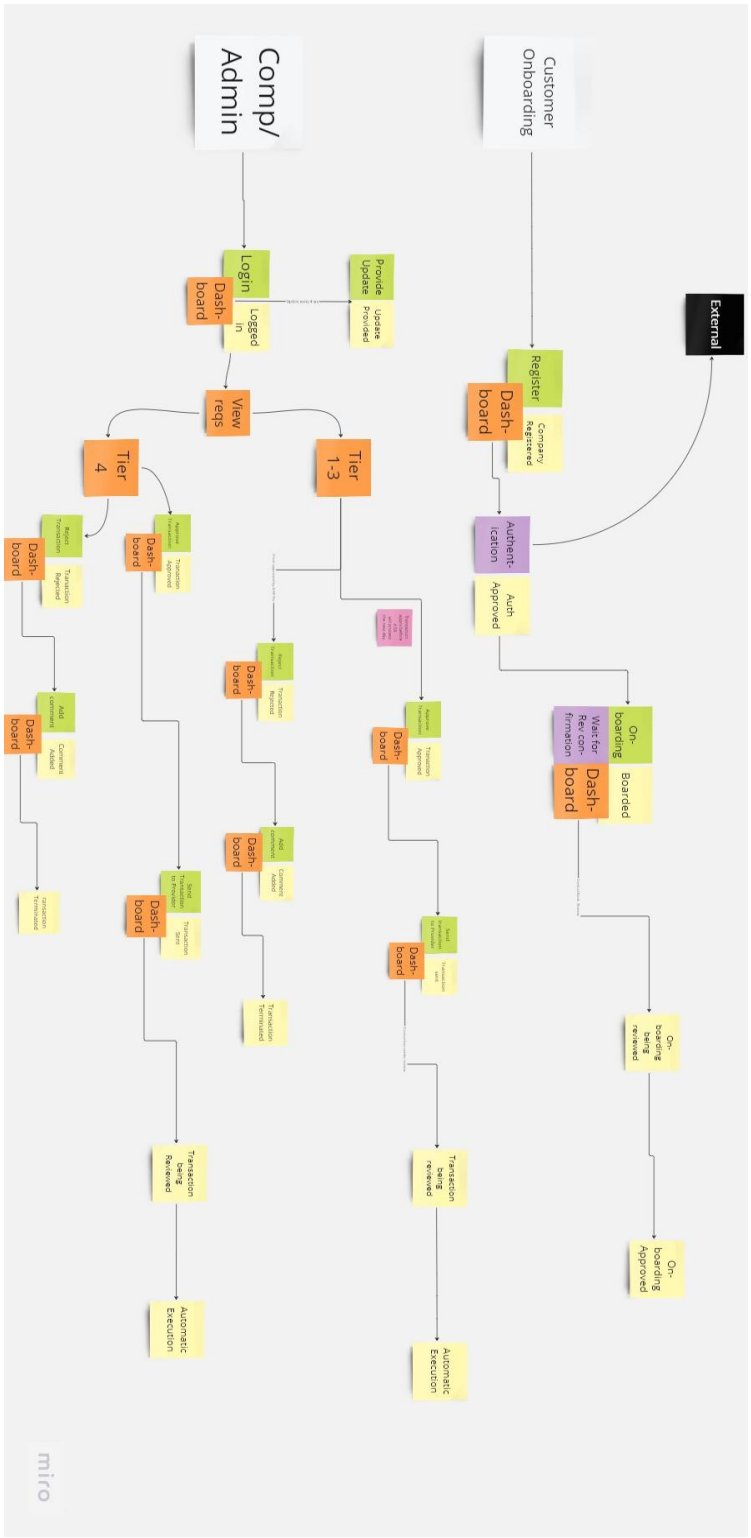
- Any transaction approved by the company after 5 pm will be executed the next day

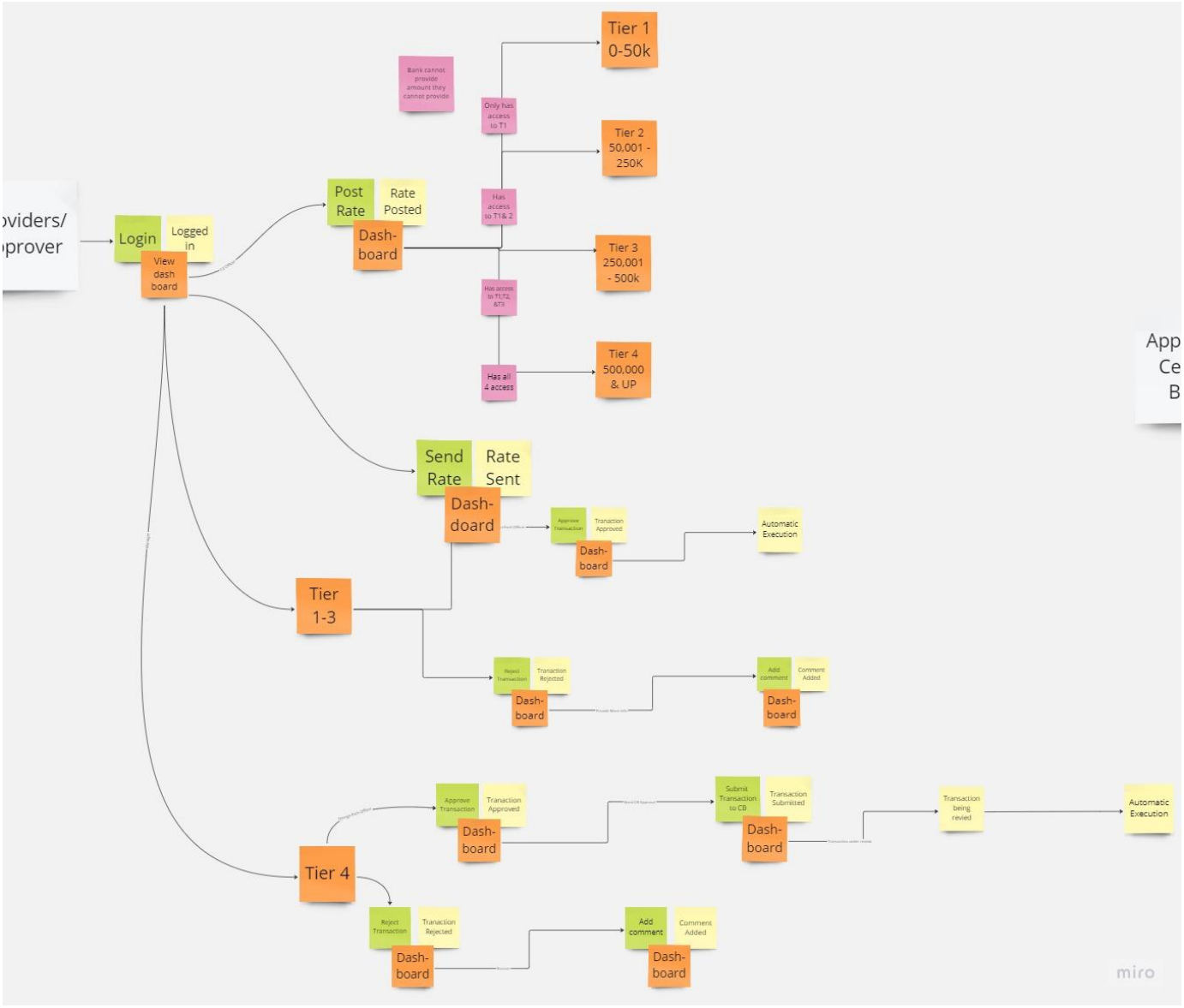
User Stories:

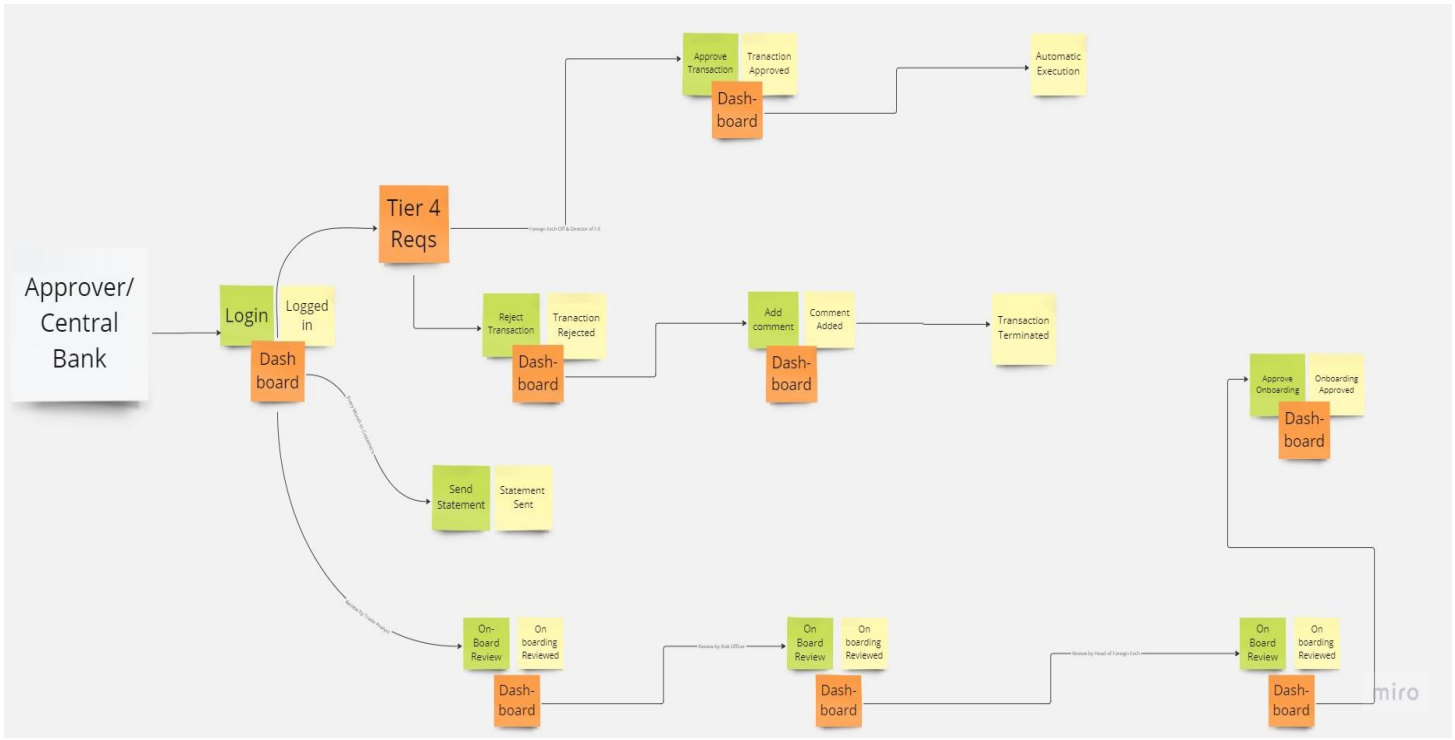
1. As a customer, I want to request rates from providers so I can create a transaction.
2. As a customer, I want to create a transaction so that I can sell foreign currency in order to make a profit.
3. As a customer, I want to cancel my transaction so that I can submit a new one.
4. As a provider/Exch Officer, I want to post daily rates on the system so that customers can see them.
5. As a provider/Manager, I want to approve transactions so that customers can sell foreign currency.
6. As a provider/Manager, I want to reject customers' transactions.
7. As an admin, I want to check if a customer is a Provider so that we can prevent a customer from being a provider.
8. As an admin, I want to approve customers' transactions so that they can Buy or Sell Foreign Currency.
9. As a CB Approver (Trade Analyst), I want to login into the CRS System to view all transactions we received for the day so that I can approve them.
10. As a CB Head of Foreign Exch, I want to review Onboard so that I can confirm or deny the customer's Onboard process.

Story Mapping:

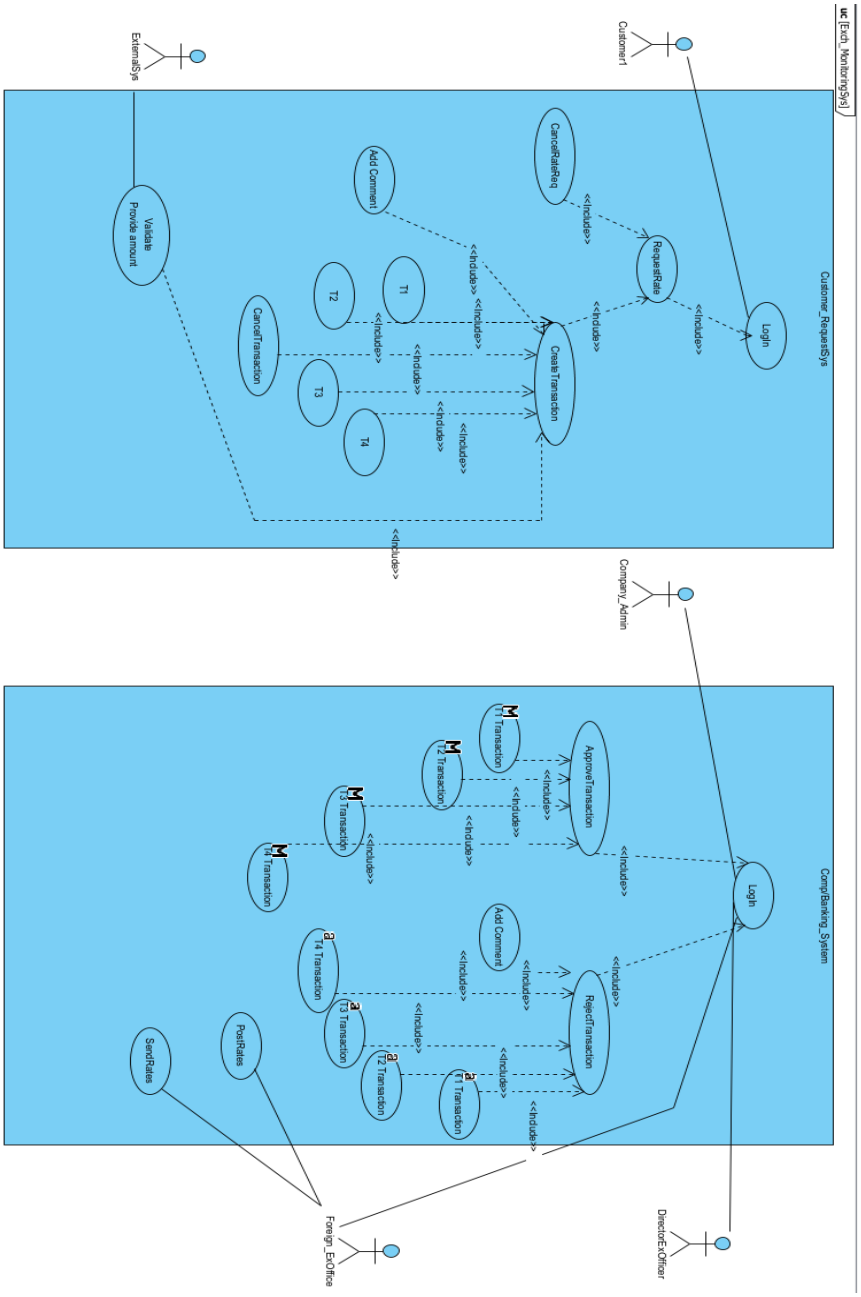


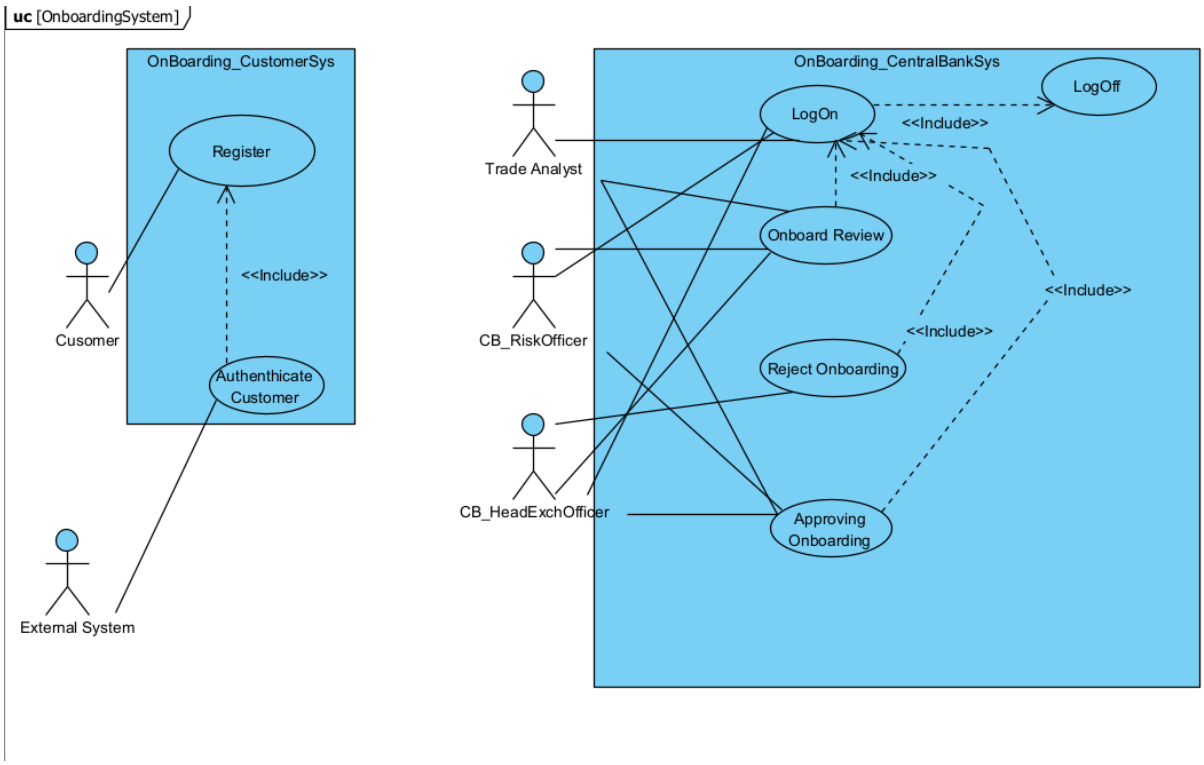



oviders/
pprover
Login
Logged in
View dash board
Post Rate
Rate Posted
Dash-board
Bank cannot provide amount they cannot provide
Only has access to T1
Has access to T1& 2
Has access to T1,T2, &T3
Has all 4 access
Tier 1 0-50k
Tier 2 50,001 - 250K
Tier 3 250,001 - 500k
Tier 4 500,000 & UP
Send Rate
Rate Sent
Dash-doard
Approve Transaction
Tranaction Approved
Dash-board
Automatic Execution
Tier 1-3
Reject Transaction
Transaction Rejected
Dash-board
Add comment
Comment Added
Dash-board
Approve Transaction
Transaction Approved
Dash-board
Submit Transaction to CD
Transaction Submitted
Dash-board
Transaction being revied
Automatic Execution
Tier 4
Reject Transaction
Tranaction Rejected
Dash-board
Add comment
Comment Added
Dash-board
App
Ce
B
miro


Approver/ Central Bank
Login
Logged in
Dash board
Tier 4 Reqs
Approve Transaction
Tranaction Approved
Dash-board
Automatic Execution
Reject Transaction
Tranaction Rejected
Dash-board
Add comment
Comment Added
Dash-board
Transaction Terminated
Send Statement
Statement Sent
On-Board Review
On boarding Reviewed
Dash-board
On Board Review
On boarding Reviewed
Dash-board
On Board Review
On boarding Reviewed
Dash-board
Approve Onboarding
Onboarding Approved
Dash-board
miro

Use Case Diagram:




uc [OnboardingSystem]
OnBoarding_CustomerSys
Register
<<Include>>
Authenthicate Customer
Cusomer
External System
OnBoarding_CentralBankSys
LogOn
LogOff
<<Include>>
<<Include>>
Onboard Review
<<Include>>
<<Include>>
Reject Onboarding
Approving Onboarding
Trade Analyst
CB_RiskOfficer
CB_HeadExchOfficer

Use Case Scenario:

1. **Customer logs into the system**
2. **Customer request daily rates**
3. **Customer cancel daily rates**
4. **Customer then choose the Bank they prefer with the rate (tier) they want.**
5. **Customer then creates a transaction and then waits for the approval or rejection of the transaction**
6. **Customer cancel transactions.**

Comp/Admin:

1. **Admin logs into the system and view all transaction requests**
2. **Admin approves transactions requests**
3. **Admin sends the transaction to the Bank or Central Bank for approval.**
4. **Admin rejects transaction requests**
5. **Admin add a comment as to why the transaction was rejected.**

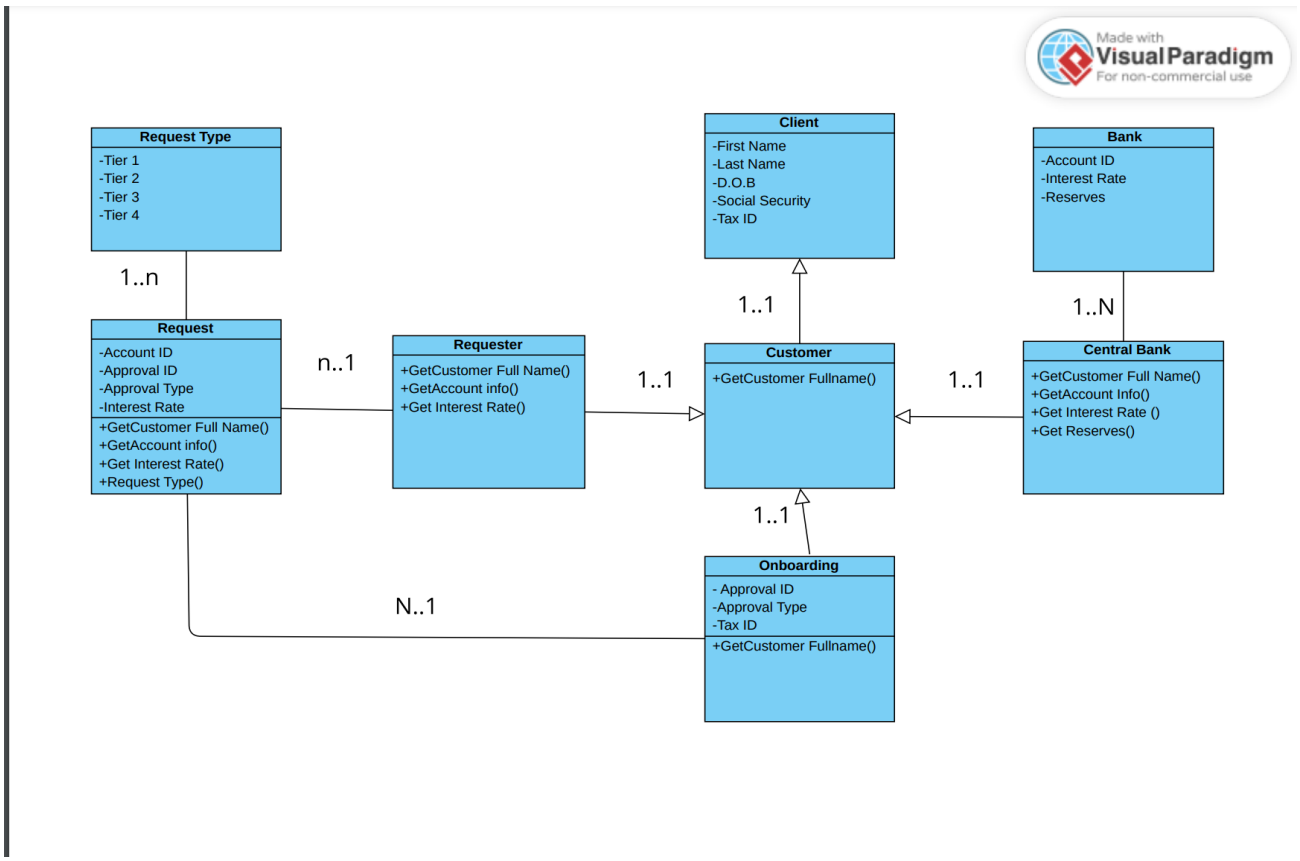
Bank Level:

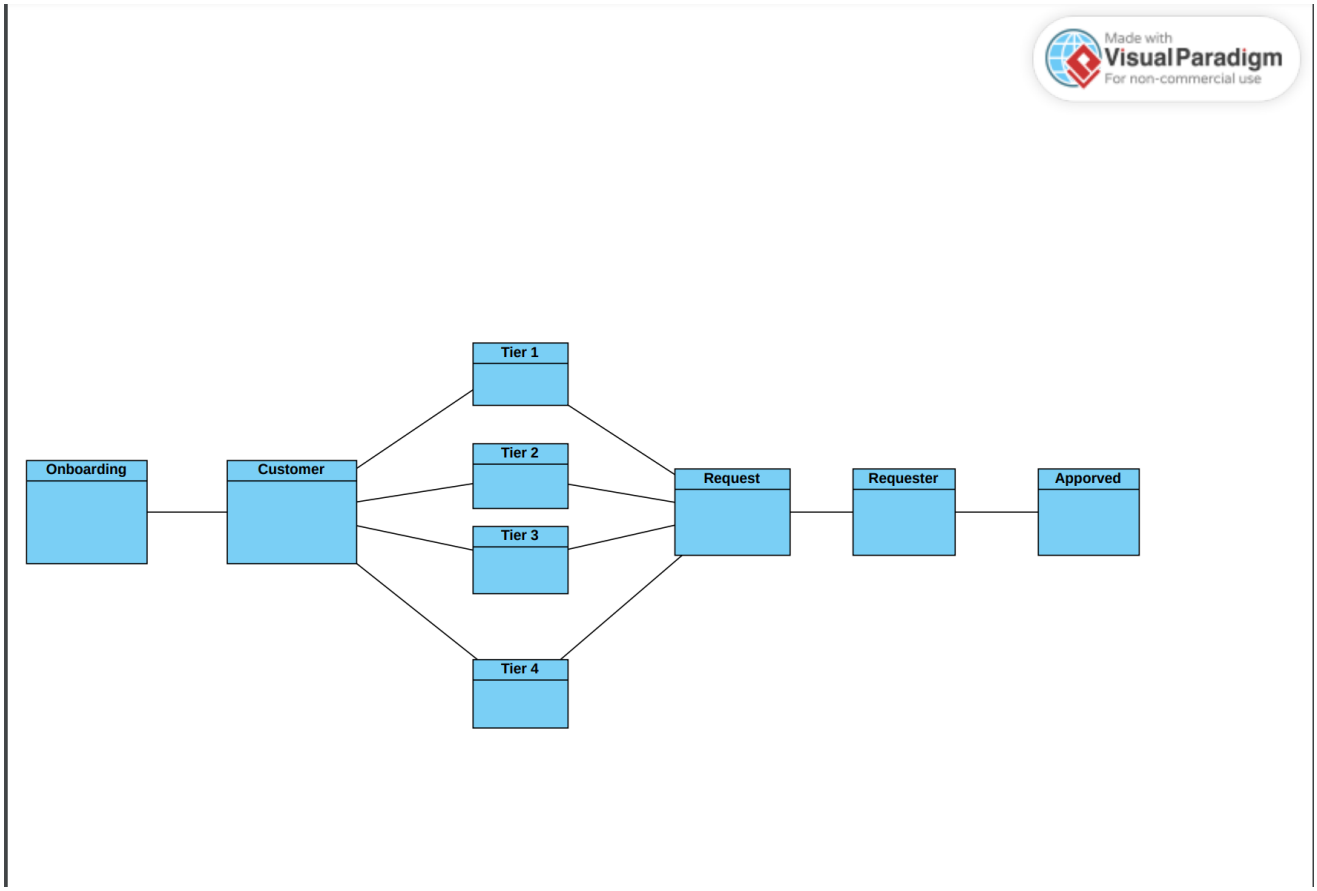
1. **Provider logs into the system**
2. **Providers post their rates on the system for each tier**
3. **The provider sends their rate to the customer**
4. **Provider approves customer transaction**
5. **Provide sends customer transactions to Central Bank for approval**
6. **Provider rejects customer transaction and adds a comment stating why it was rejected**

Central Bank: Risk office, Head of Foreign Exch, Analyst

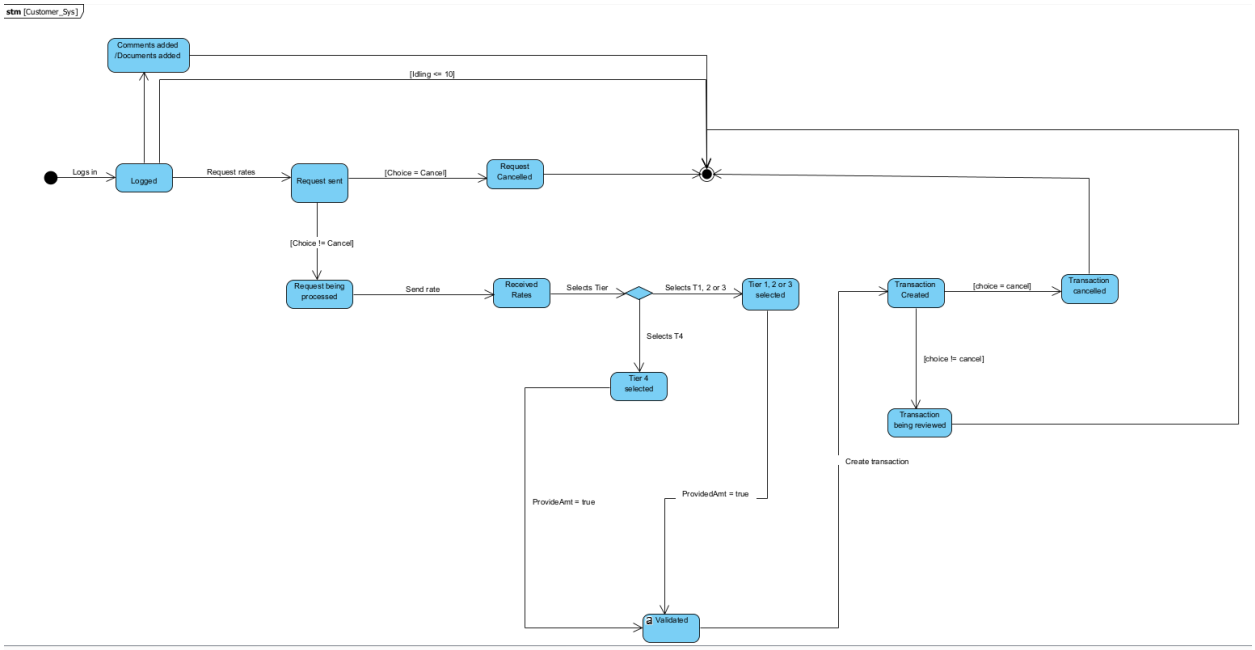
1. **Foreign E.F logs into the system**
2. **Foreign E.F view all request for the day**
3. **Foreign E.F and Director approve the transaction**
4. **Foreign E.F and Director reject the transaction and add a comment stating why**
5. **Foreign E.F sends a statement to customers every month**
6. **Foreign E.F**

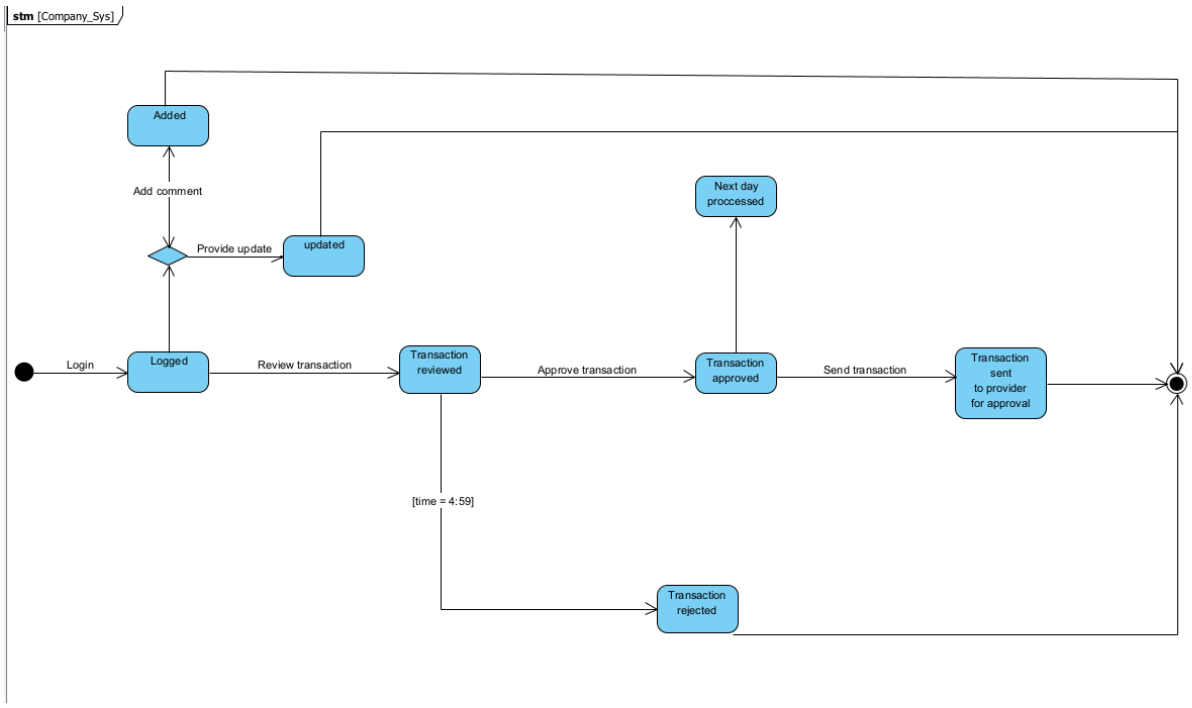
Class Diagram:

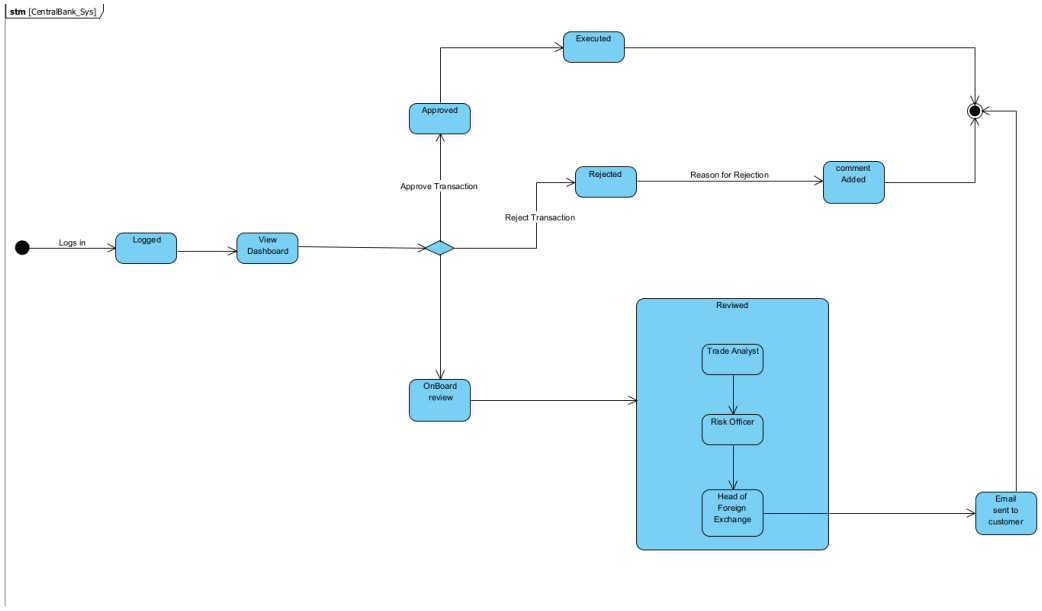



Made with
Visual Paradigm
For non-commercial use
Tier 1
Tier 2
Tier 3
Tier 4
Onboarding
Customer
Request
Requester
Apporved

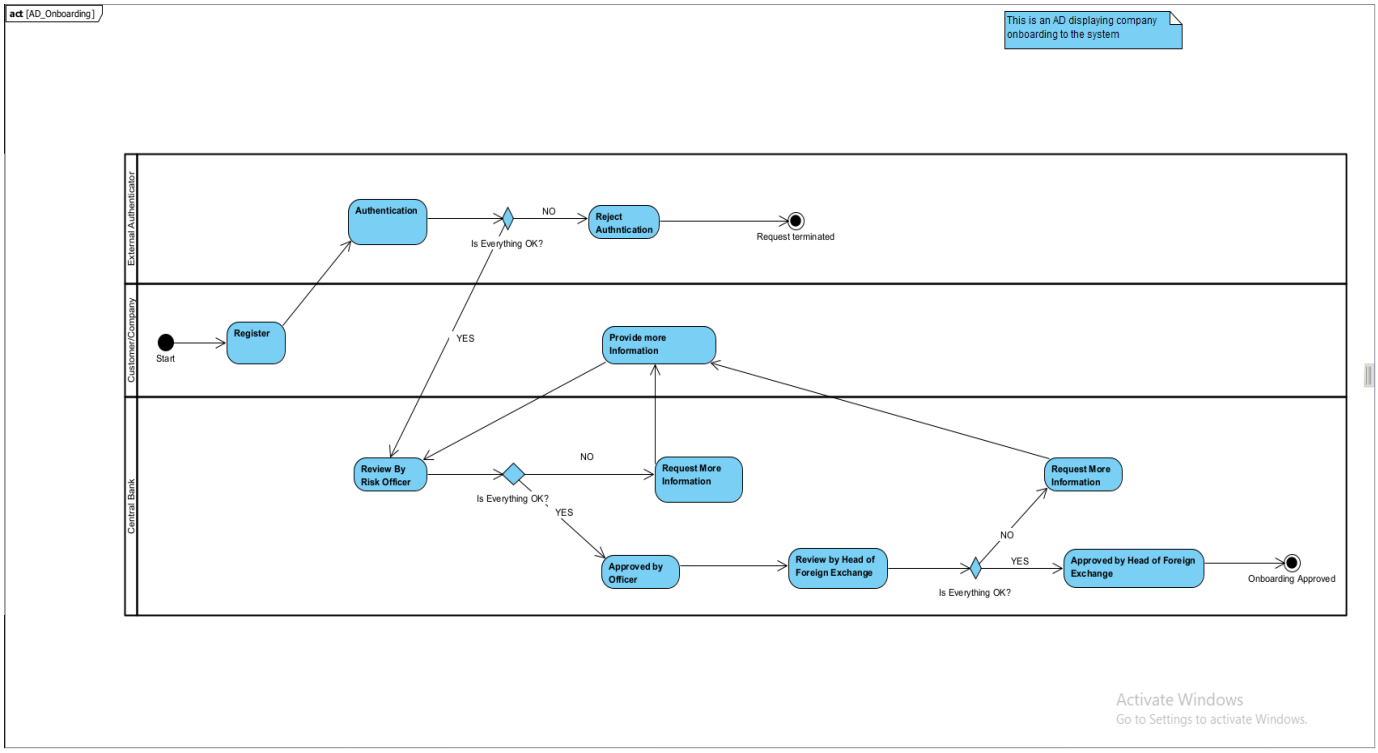
State Diagram:

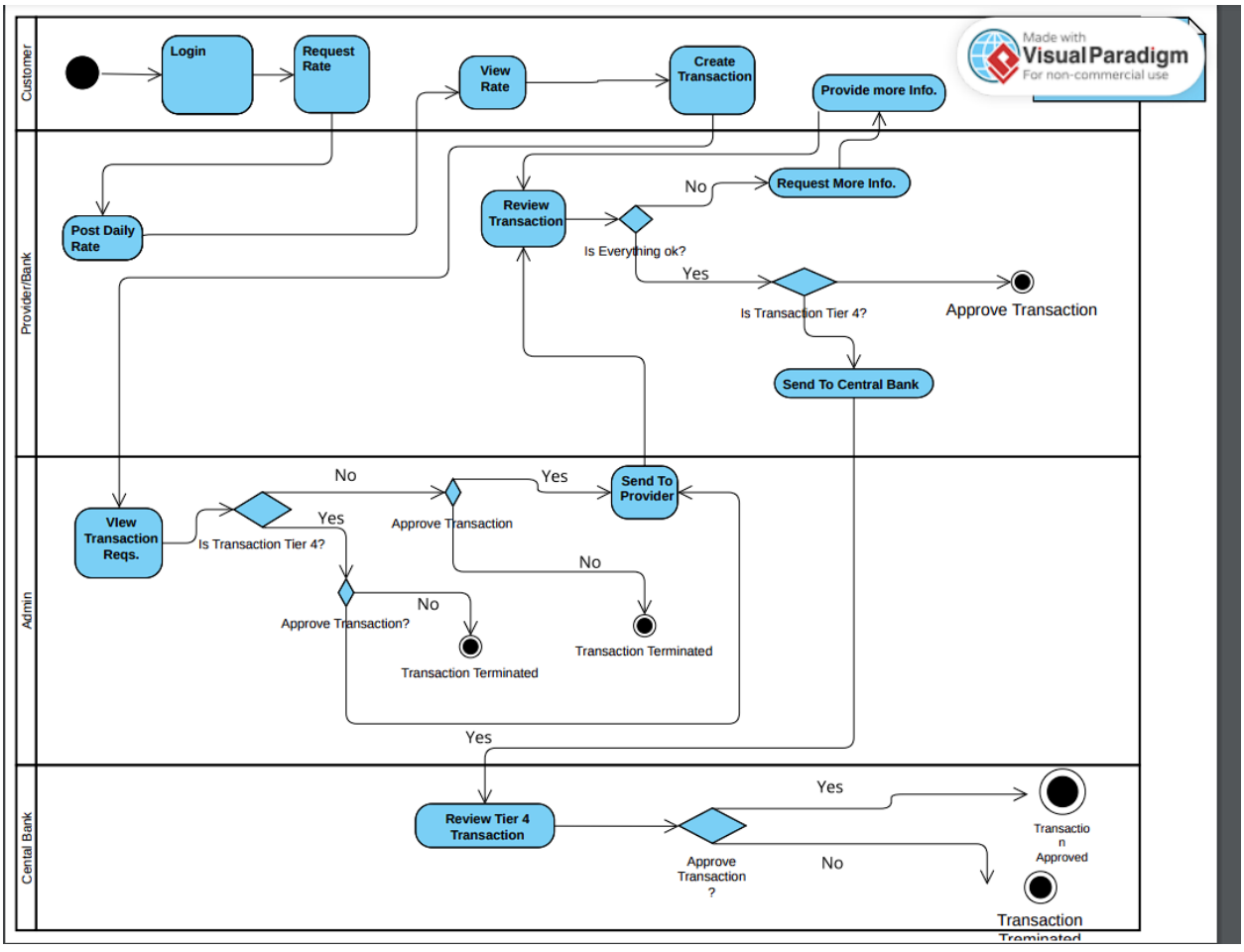




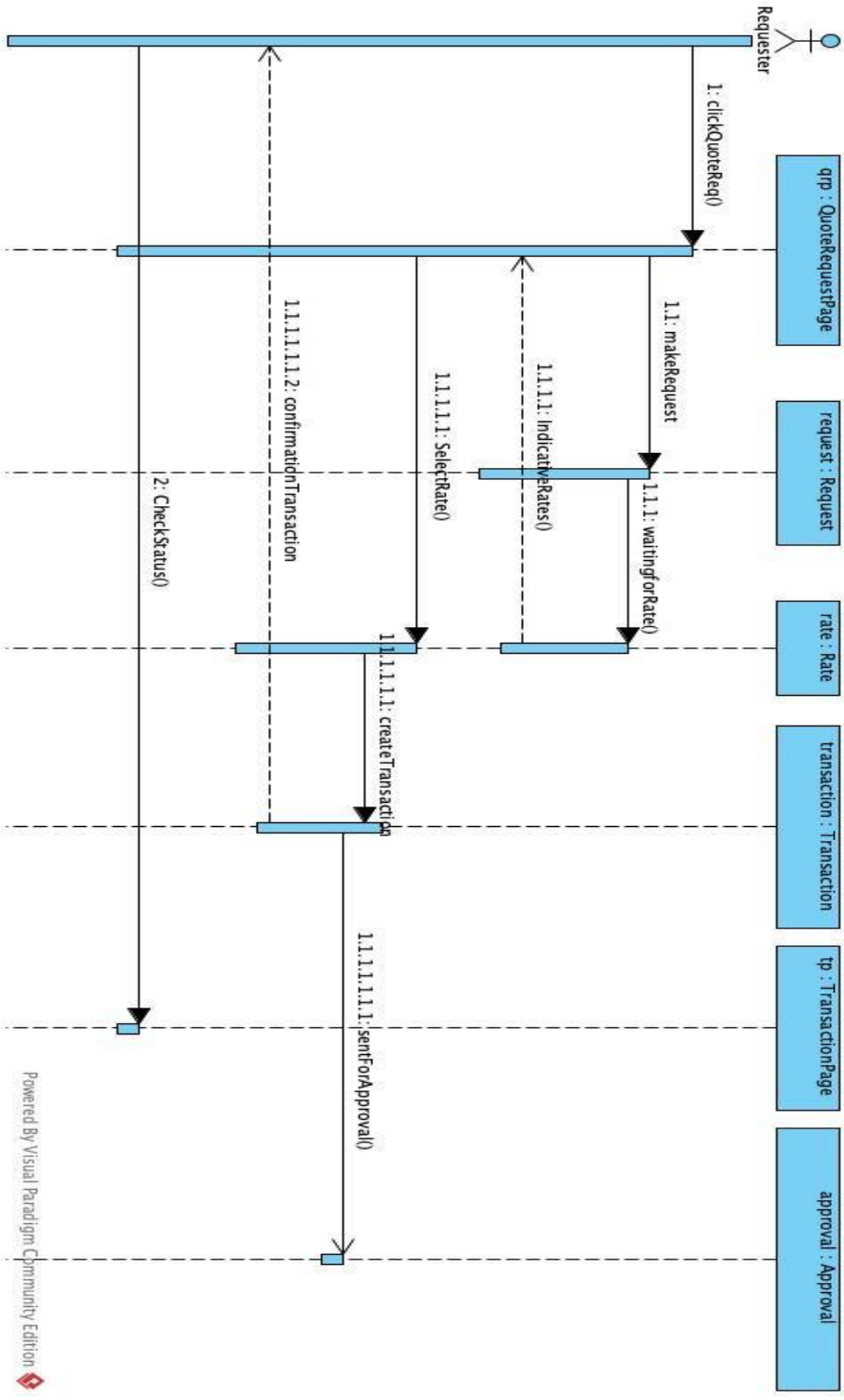

stm [CentralBank_Sys]
Executed
Approved
Approve Transaction
Rejected
Reason for Rejection
comment Added
Reject Transaction
Logs in
Logged
View Dashboard
Reviwed
Trade Analyst
OnBoard review
Risk Officer
Head of Foreign Exchange
Email sent to customer

Activity Diagram:

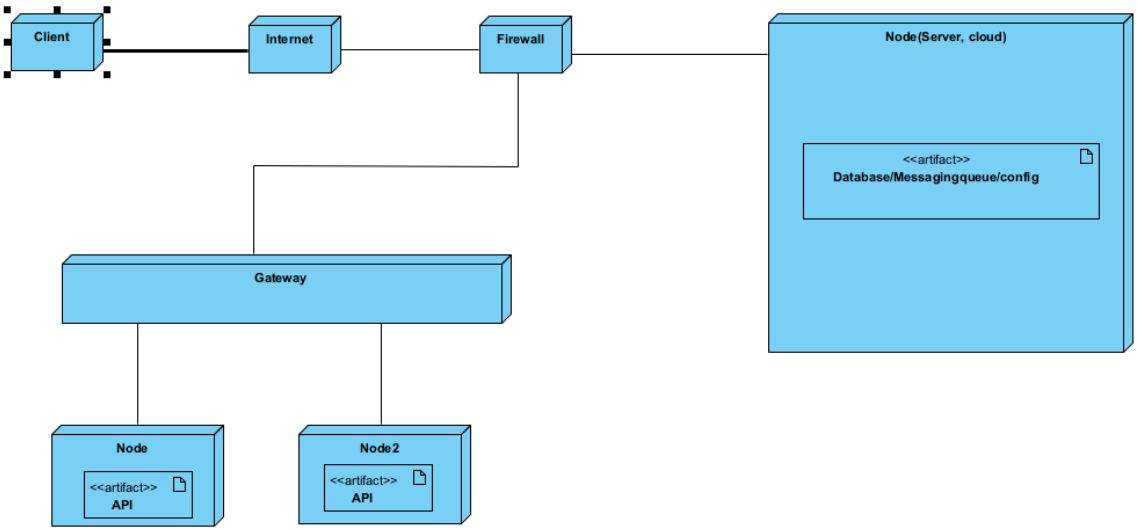




Sequence Diagram:



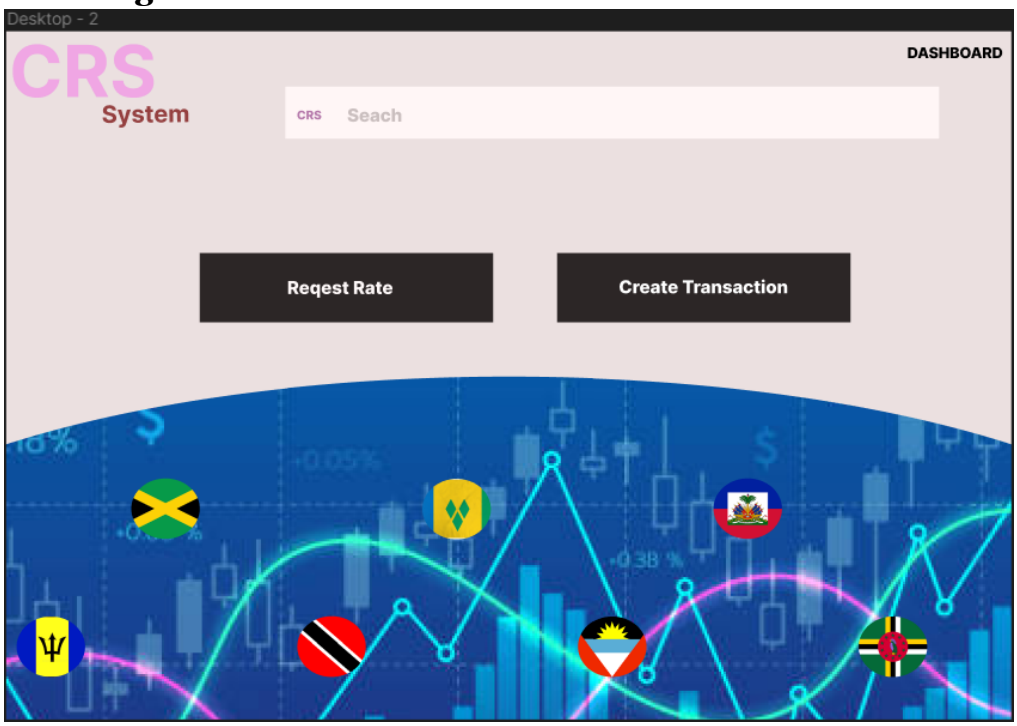
Deployment Diagram:



User Interface:

Login Page:

Main Page:



Lesson Learned:

This project taught us how to gather requirements for a specific project, and the importance of teamwork. The most challenging parts of the project was gathering the requirements, understanding what is required and how to apply it to please the stakeholder, and last but not least the MAPPING. The mapping shows the actors and all the roles they will play while using the CRS System.

We learned a lot in class and while doing the project. I would not consider ourselves pros but this is the first or maybe the second step of becoming a great Scrum Master and developer.

Document History

All in person meeting was 20mins or less							
Zoom	Feb 15	Feb 20	Feb 22	March 11	March 23	April 26	May 3
	Spent 35 min in Zoom	Spent 47 min in Zoom	Spent 36 min in Zoom	25 Mins	Zoom With Professor	Met for 30mins	On Team with Professor
Whatsapp	Feb 23	March 1	March 24				
	Discuss requirements	Discuss requirements	Divided word. Who works on what				
In-Person	Feb 16	Apr 12	April 11	April 9			

Edits	**Miro Board**		
	April 1	Board started	
	April 20	Made changes to all the actors. Added External System, added cancel transaction and request feilds to the customers mapping. Included Onboarding mapping.	
	April 26	We met with the Professor and made more edits/changes to the the board. Included Transaction being review to the company and provider level. Edit that the customer only need a third level of approval if appling for teir 4	

	May 7	Made small changes to the board shoulding only providers can send rates to customers	
	Use Case Diagrams		
	May 3	Maybe changes to the OnBoarding System: By adding how the actors will use the system in a System container. Also added an external actor who will authenticate whether the user/customer before submitting registration. "Made changes to the Request and the Banking system: Removed all extended to include base on create, approve and reject transactions. "	
		Deleted the Cantral bank system and joing the action to 1 system call the Comp/Banking system.	
	May 16		
	State Diagram		
	May 19	Made changes by adding a system shutdown. If the system is idle for more than ten minutes the user will be logged out automatically.	