Certification Management App

Done By:

Akshay Sethia

Mentor:

Rahul Vikash

Course:

Salesforce Admin and Developer

Abstract – The Intro

The Certification Management Application is a Salesforce-based certification manager. The basis of the project is to help keep track of the Employees' who have completed their certification. Also, here the app allows only 2 types of profile in this whole system, which includes the "App User" and the "App Admin". The App admin is the one who produces the Certifications and the Vouchers for them. The role of the App User is to add Employees and create Certification Request for these employees, which is further reviewed by the App Admin. The application also gives us information about the results of the Certification Exam for each Employee. Apart from this, the app includes Reports and Dashboards which helps us in compiling information more easily.

Scope – Features of the System

The Following is the functionality which is provided by the system. Over here, there are 2 categories of people using this system. Each of them has their pros in the app.

1. App Admin

    1.1. Create, Edit, Update and Delete Certifications.

    1.2. Create, Edit, Update and Delete Vouchers.

    1.3. Approve or Reject the Certification Requests.

    1.4. View and Edit the Reports and Dashboard.

    1.5. View the Employees in the System

2. App User

    2.1. Create, Edit, Update and Delete Employees

    2.2. Create, Edit, Update and Delete Certification Request

    2.3. Update the Pass and Fail Status of the Employee.

    2.4. View and Edit the Reports and Dashboards

    2.5. View the Certifications and Vouchers in the System.

Now as we have discussed about the in scopes of the app, let's go and review the out bounds of the app. The Out Scope of the app include

1. The application does not include the Employee login

2. The employee can only share his details and see his status on the page

3. The employee certification registration page is not autonomous.

4. Third Party integrations are not yet included, except for Emails.

Class & Methods - Objects

Employee Object

The Employee Object in Salesforce is used to Store the necessary details about the Employee.

Fields

-   Employee ID

-   Employee Name

-   Employee Email

-   Primary Skill

-   Secondary Skill

-   Experience

-   Comments

Certification Object

The Certification Object in Salesforce is used to store the details related to the certification

Fields

-   Certification ID

-   Certification Name

-   Comments

Certification Request Object

The Certification Request Object Aka Request Object in Salesforce is used to store the vital relationships of the Certification, Voucher, and Employee that is assigned by the App User.

Fields

- Certification Object (Master Detail)
- Employee Object (Master Detail)
- Voucher Object (Look Up)
- Due Date
- Status
    - o Draft
    - o Approved
    - o Rejected
    - o Passed
    - o Failed
- Comments

Voucher Object

The Voucher Object in Salesforce is used to store the Voucher codes and the voucher related information.

Field

- Voucher ID
- Voucher Name
- Voucher Cost
- Certification Object (Look Up)
- Validity
- Active
    - o True
    - o False
- Comments

Routing – Process & Approval

Process Builder

There are 2 Process builders which have been utilized over here. The 2 Process Builders include "Approval Caller" & "Voucher Inactivator". These 2 vouchers have their own use which is provided below

Approval Caller

The "Approval Caller" Process builder is used to perform the initial operations once a record I created in the Request Object. Once the Request record is created this process is invoked and the Employee Email is copied for Reference, to send mails and the Approval Process which is used to Approve or Reject the Employees' Certification is called after that which is reviewed by the App Admin.

Voucher Inactivator

The "Voucher Inactivator" Process builder is utilized once the 1st approval process builder has completed its work. After the approval process ends and the Status is set to Approved, then if a voucher is applied, then that voucher is Deactivated. If the Status is set to rejected, then the Voucher is activated and left as is. Now if there is no Voucher applied but Status is set to approved, and a Voucher is available, then that voucher is automatically applied with the help of an aid (Trigger). Now the second approval process is called to set the status of the certification to either pass or failed depending upon the results which are provided by the Employee to the App User.

Approval Process

There are 2 approval process in total in this Salesforce application. The Approval processes include "Certification Request Approval" & "Passed or Fail". The Certification Request Approval is handled by the App Admin and he sets the Request Status to either Approved or Rejected accordingly. The Second approval process is handled by the App User, who on after being notified by the Employee, Updates the Status to either Passed or Failed based upon the Results received from the Employee via Email.
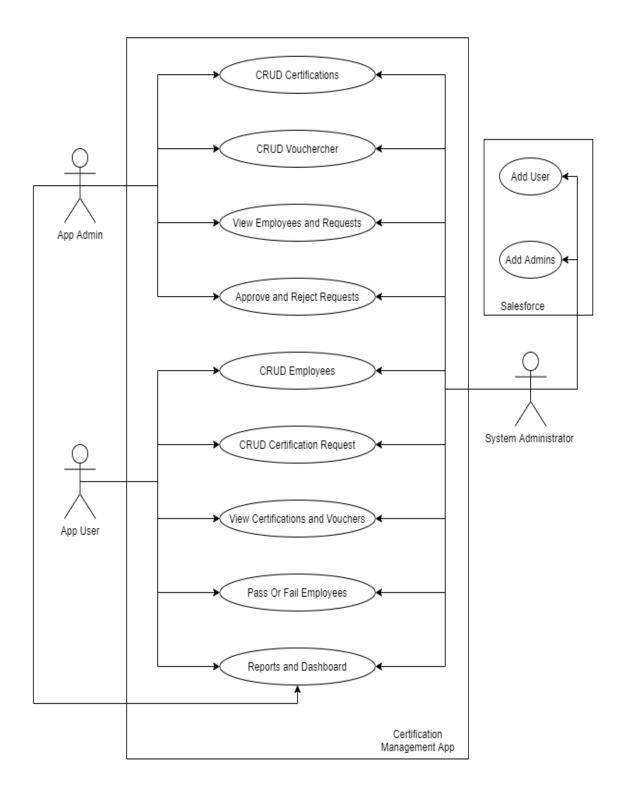
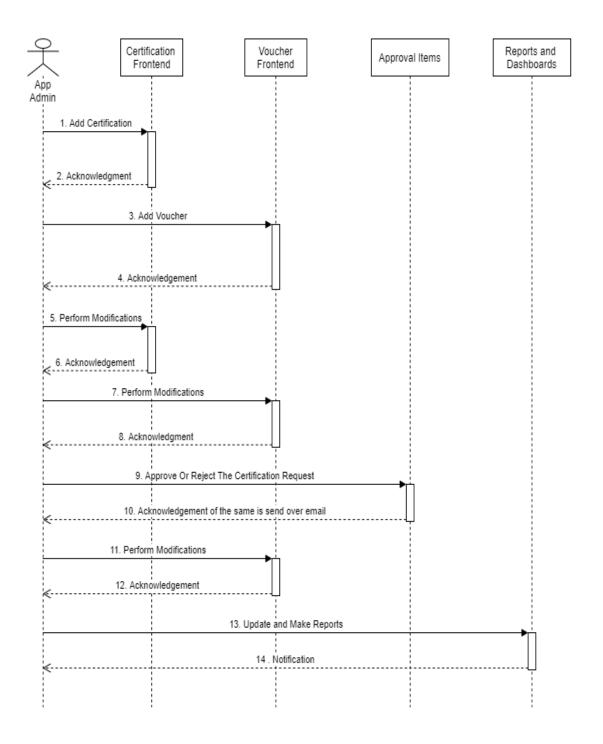# Simplifiers – UML Diagrams
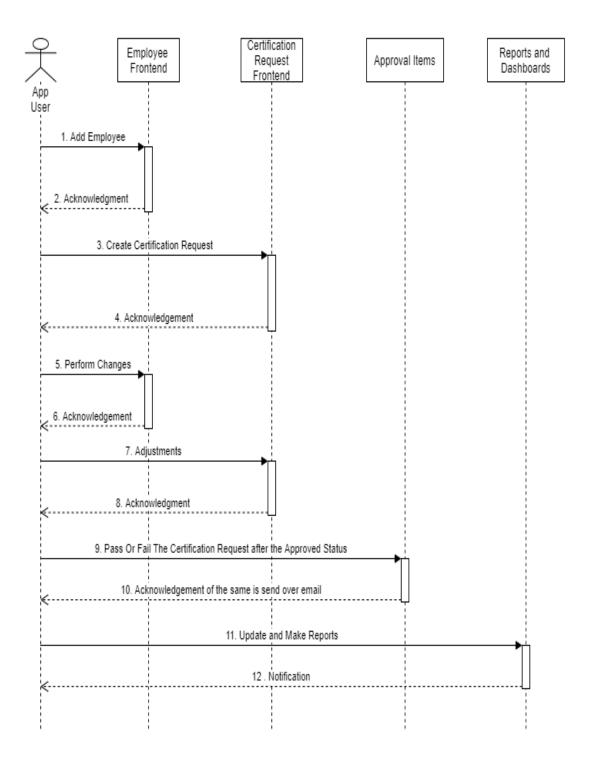
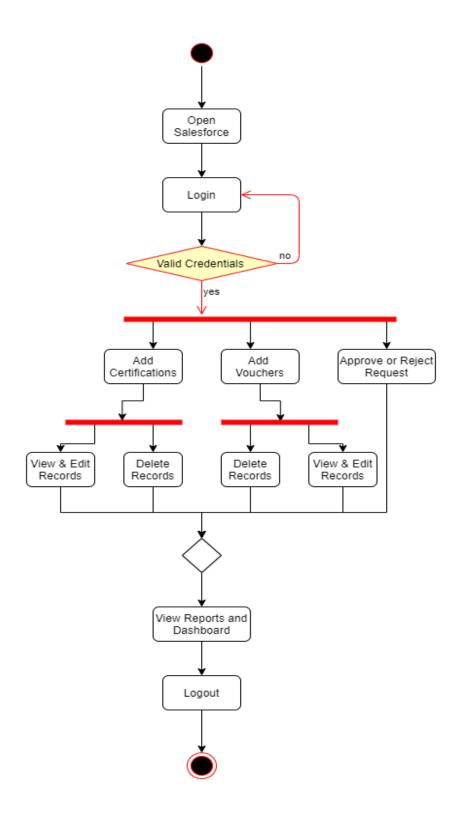## Class Diagram

Entity Relation Diagram

Use Case Diagram

App Admin

App User

System Administrator

CRUD Certifications

CRUD Vouchercher

View Employees and Requests

Approve and Reject Requests

CRUD Employees

CRUD Certification Request

View Certifications and Vouchers

Pass Or Fail Employees

Reports and Dashboard

Add User

Add Admins

Salesforce

Certification
Management App

Sequence Diagram (Admin)

Sequence Diagram (User)

Actors and objects: App User, Employee Frontend, Certification Request Frontend, Approval Items, Reports and Dashboards

1. Add Employee
2. Acknowledgment
3. Create Certification Request
4. Acknowledgement
5. Perform Changes
6. Acknowledgement
7. Adjustments
8. Acknowledgment
9. Pass Or Fail The Certification Request after the Approved Status
10. Acknowledgement of the same is send over email
11. Update and Make Reports
12. Notification

Activity Diagram (Admin)

Activity Diagram (User)

Flow Chart

Start

Login

Invalid Credentials

Validate

App Admin Login | App User Login

App Admin | App User

CRUD Certification | CRUD Vouchers | Approve Or Reject Request | CRUD Employees | CRUD Requests | Pass Or Fail Employee Status

DO Operations | DO Operations | Status Set | DO Operations | DO Operations | Status Set

Invalid | Invalid

Validate | Validate | Changes Saved | Validate | Validate | Changes Saved

True | True | True | True

Changes Saved | Changes Saved | Changes Saved | Changes Saved

Manage Reports and DashBoards

Perform Modifications and save the Changes.

Terminate

Validations – Triggers & Rules

Rules

The rules over here represent the Validations that the input and other details follow in order for the App to work in an Organized Manner. The rules that were used here include

- Employee Name must be Unique.

- Experience should be in Months

- Certification Name must be Unique.

- Due date should not be less than Today.

- Status should always be Draft at the beginning.

- Once an employee has requested for certification, he cannot make any more requests

- Same certification and Voucher cannot be used over again, if already used.

- Voucher Name must be unique and 10 chars long.

- Validity should be greater than today.

- A Voucher should be Active for it to be applied.

- If a request has been approved and has no voucher, but a voucher is available, then it should be automatically applied.

Triggers

The triggers are nothing but the Apex Triggers which have helped us in maintaining the Proper flow of the Application and aiding us in performing some vital validations which were necessary and important. There are 3 triggers in total, which are –

Checking Duplicates (Certification Request)

This trigger helps us in checking if a Certification request is not being made with the same set of Certification and Voucher details, which were used previously (if any).

Employee Duplicate (Certification Request)

This trigger helps us in checking if a Certification request is being made with an Employee who already has a request pending or approved.

Auto Voucher (Certification Request)

This trigger comes into run only when a Request Status has been set to Approved without any voucher for that Request. If a voucher is available in the Voucher object for that certification (unused), then only this trigger will help in applying that voucher to the appropriate Request and deactivate that voucher.

Beliefs – Assumptions

The things that are presumed by this Application encompass a variety of features, some of which are

- The Employee mails for a Request

- The Employee is not a type of user on salesforce.

- The Employee can only see his details but cannot edit them.

- The App Admin cannot add App users.

- Employee results are passed over by mail

- Certification request is assigned to approved by the Approval Process, but not when a voucher has been applied.

- CC to other users is done by the Roles accordingly. (Out of the Salesforce Domain)

- Reports and Dashboards have the time frequency set to the Current Financial Year, and this can be changed b the viewer accordingly, to fit his timeline.

Path – Application Flow

- The App Admin creates a Certification for the Employees to be performed.

- Now an Employee who has to perform the Certification, mails the App User regarding the Certification he wants to apply for.

- Now the App User, creates that Employee in the Application and raises the Certification Request for the Employee taking in the Certification he wants to apply for.

- Now in this process is a voucher was available, the app user would have pre-assumingly applied for the same to the Request.

- Now the App admin can either create Certifications, vouchers as he could do before.

- Now the App Admin performs reviews over the records of the Certification Request, to check the Approval items in the records which are send to him by default.

- Now, if the App Admin, Approved the Request, then the Employee can write the exam.

- Else, if Status is et to Rejected, then the Employee cannot appear for the Certification exam.

- Once, the Employee has been approved to write the Exam, if he has no voucher applied at that moment, and there is a voucher available in the Vouchers, then it is automatically applied, in that case.

- Now after the Employee has appeared for the Examination, he passes on the details to the App User about his results.

- Now the App User updates the results accordingly in the Application.

- So, this Is the whole process and this repeats over and over again.

Figures – App Snippets

Employee

Add Employee

View Employee Table
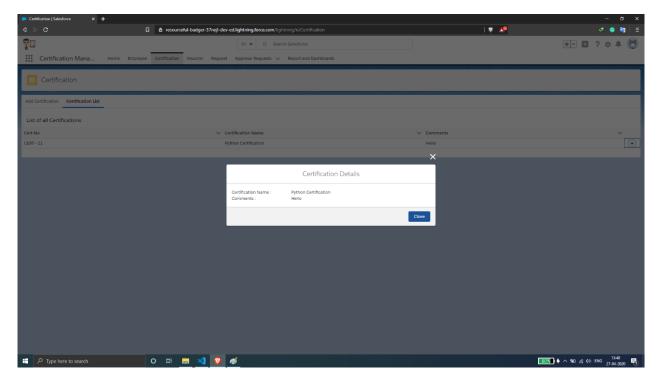
View Employee Detail

Employee Edit

Certification

Add Certification
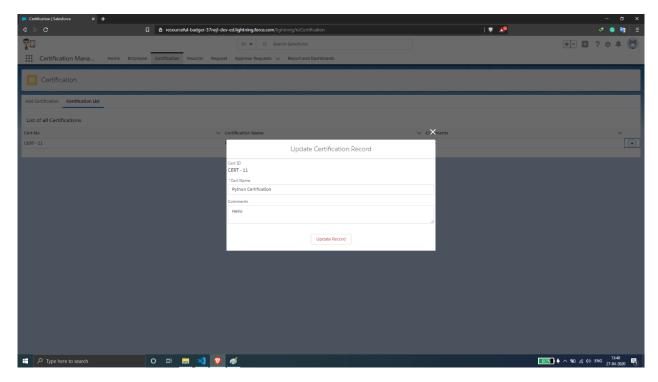

View Certification Table

View Certification Record
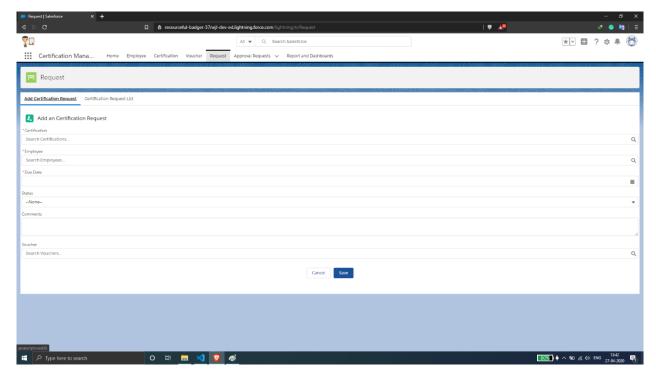

Edit Certification Details

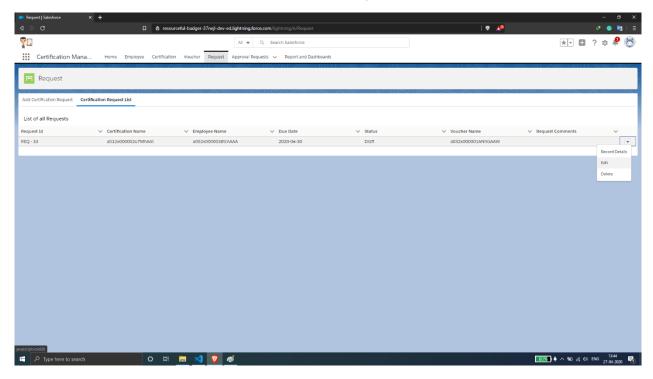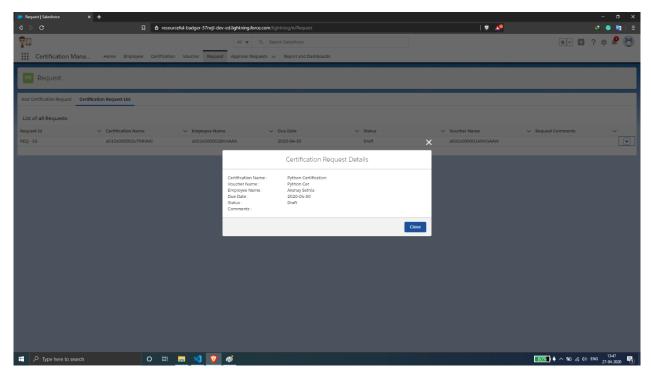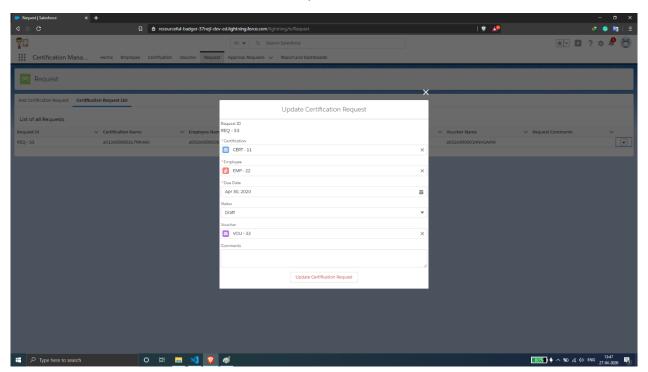# Certification Request

Add Certification Request

View Certification Request Table

View Request Record

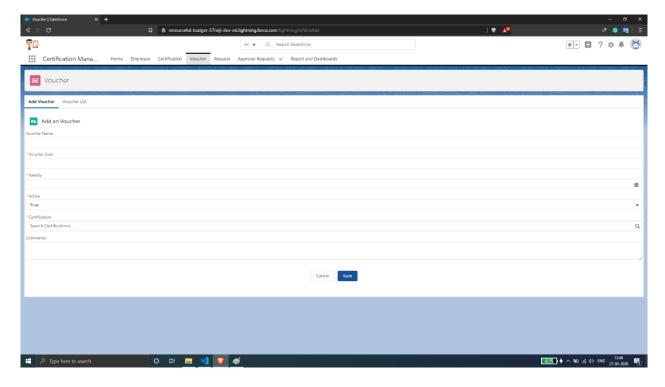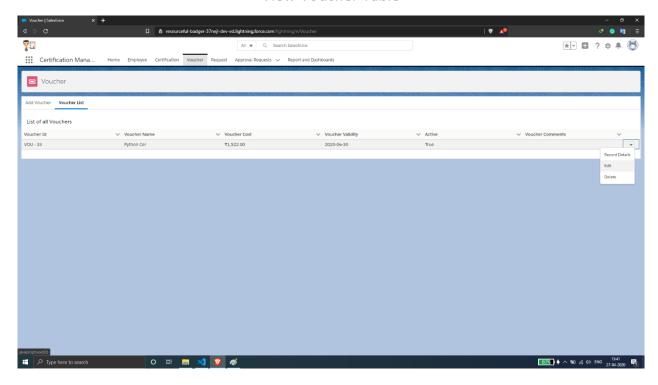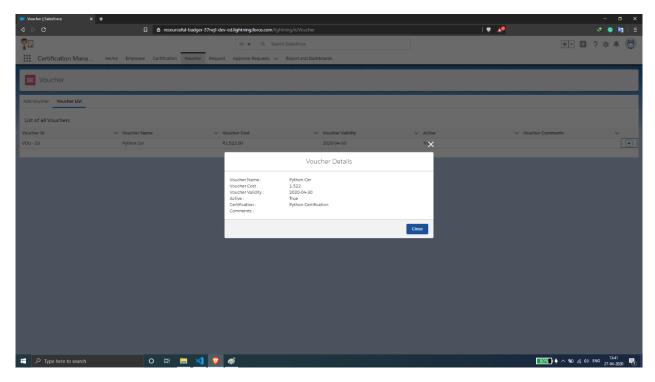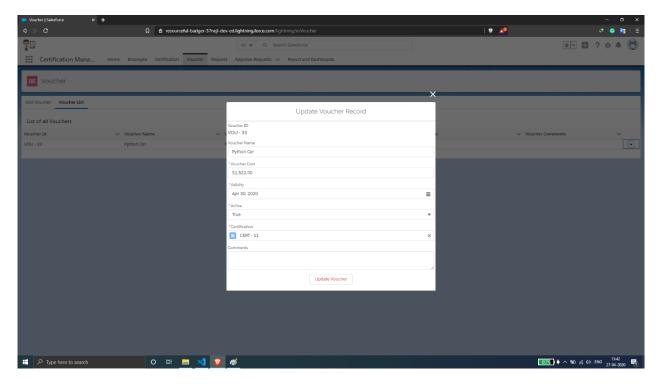# Edit Request Record

Voucher Object

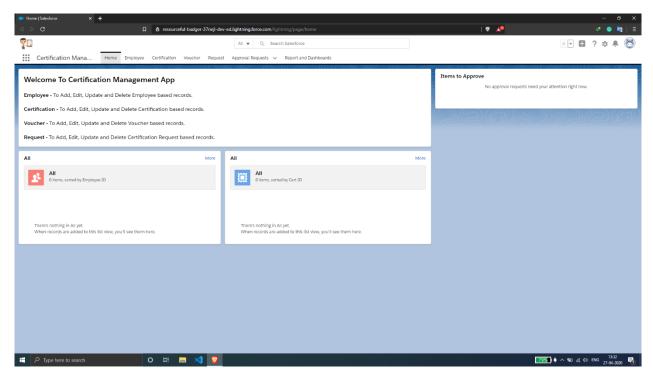### Add Voucher

View Voucher Table
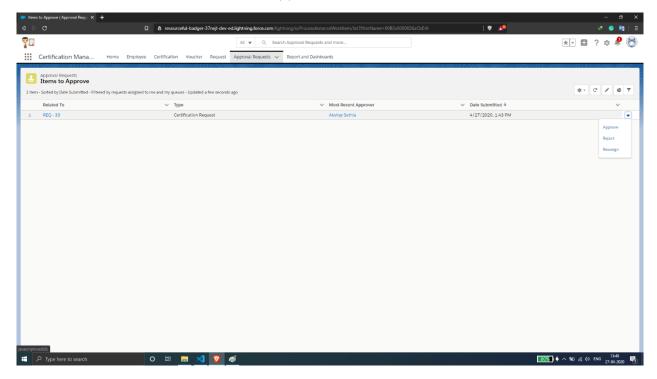
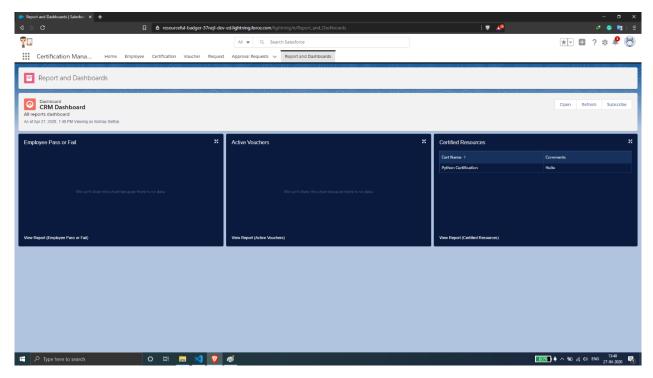## View Voucher Details

Edit Voucher Details

Home & Others

Home

Approval Records

Summarization – Result

So, with this it can be concluded that the Certification Management App, has been implemented with all the above features and works according to the use cases provided by the Problem Statement.