

Certification Management System

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Prepared For

CRM SFDC

Capgemini Technology Services

Syed Salif Moin

Senior Analyst

Capgemini Technology Services

Abstract

Certification Management System is an application designed to manage, organize and track Certifications by Employees. The system can be accessed by two types of users who manages the whole certification requests process, starting from creating record for Employees to generating Certification Request for them, keeping track of the status of the Certification Request whether it has been approved or not till marking the final status as pass or fail for that Certification Request.

Scopes

Inscope

There are two categories of users who would access the system:

The **App Admins**:

1. Registers and manages Vouchers
2. Registers and manages Certifications
3. Approves or Rejects the Certification Request Approval Request by App Users
4. View reports and dashboards
5. Views charts

The **App Users**:

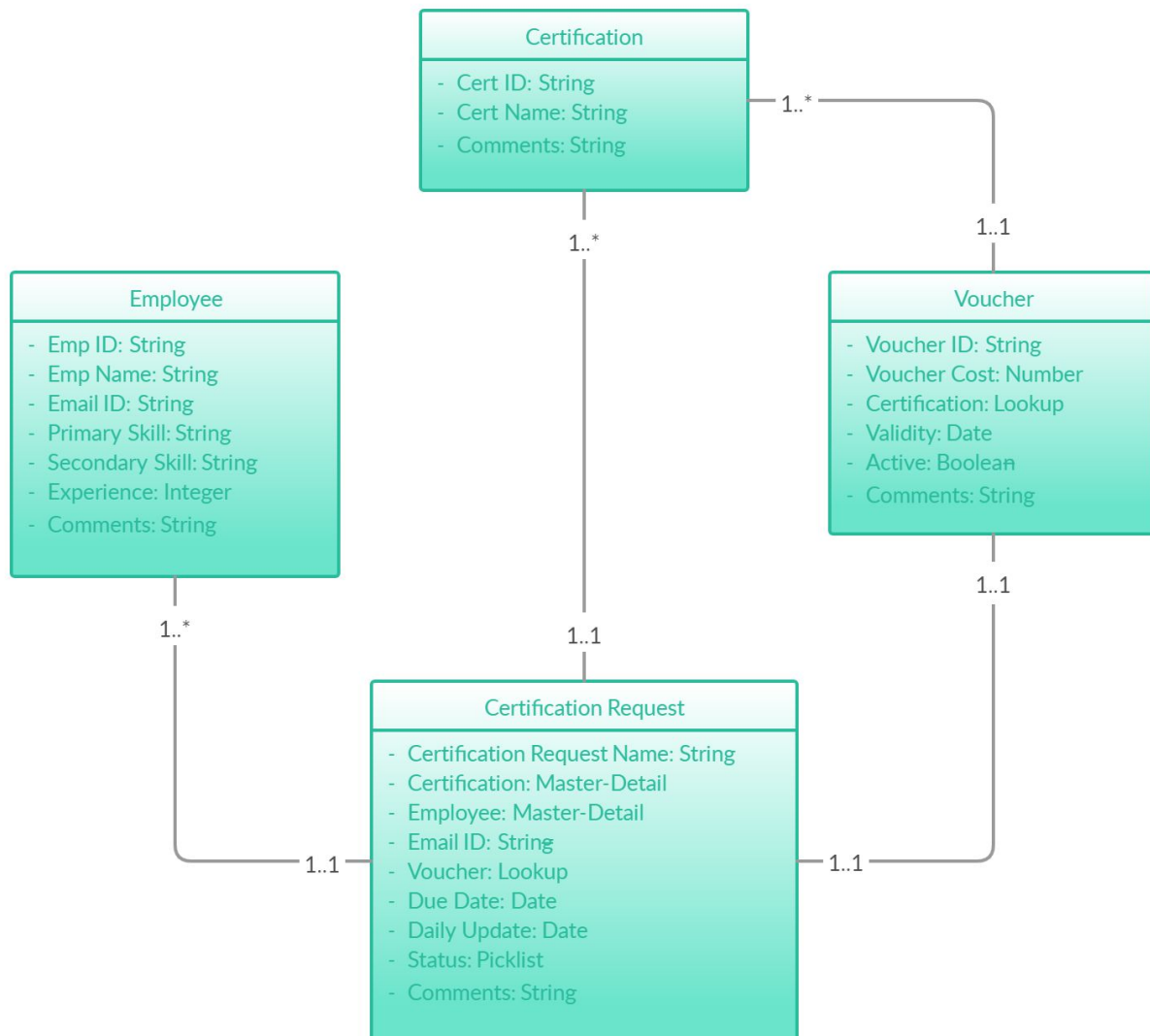
1. Registers and manages Employees
2. Registers and manages Certification Requests
3. Raises a Certification Request Approval Request
4. View reports and dashboards
5. Views charts

Outscope

The following functionalities has not been included in the system:

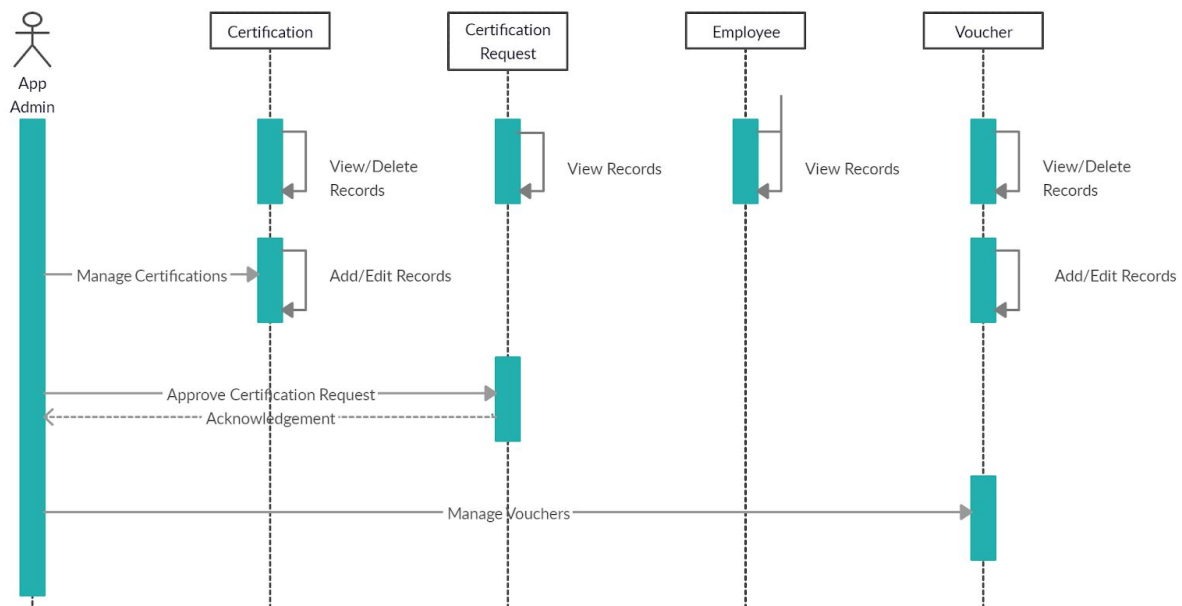
1. The app in no place includes billing and payment procedures.
2. Employee is not a salesforce user and has to mail the App User for Certification Requests.

Class Diagram

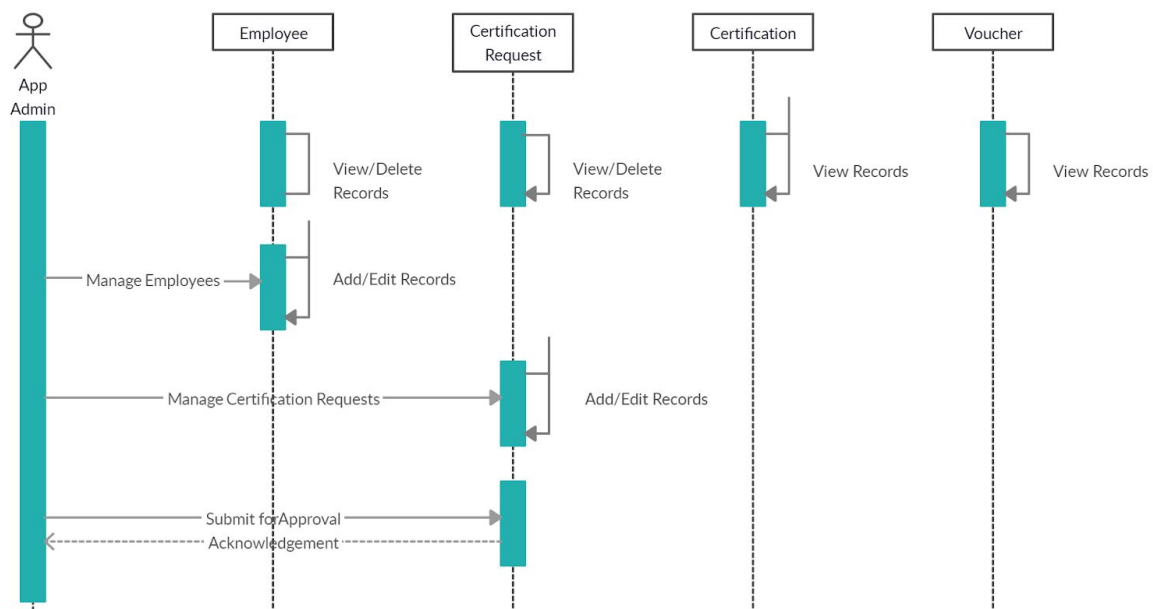


Sequence Diagram

For App Admin

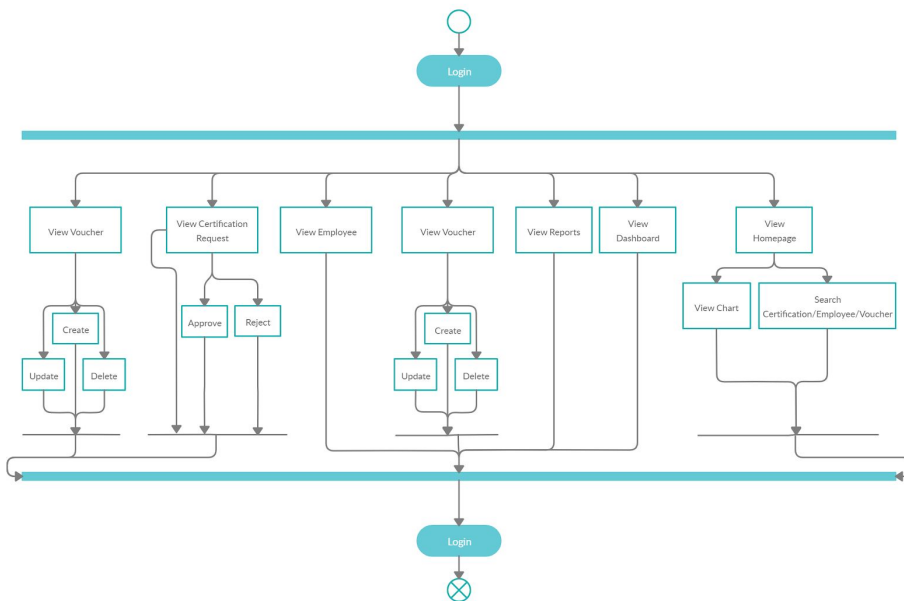


For App User

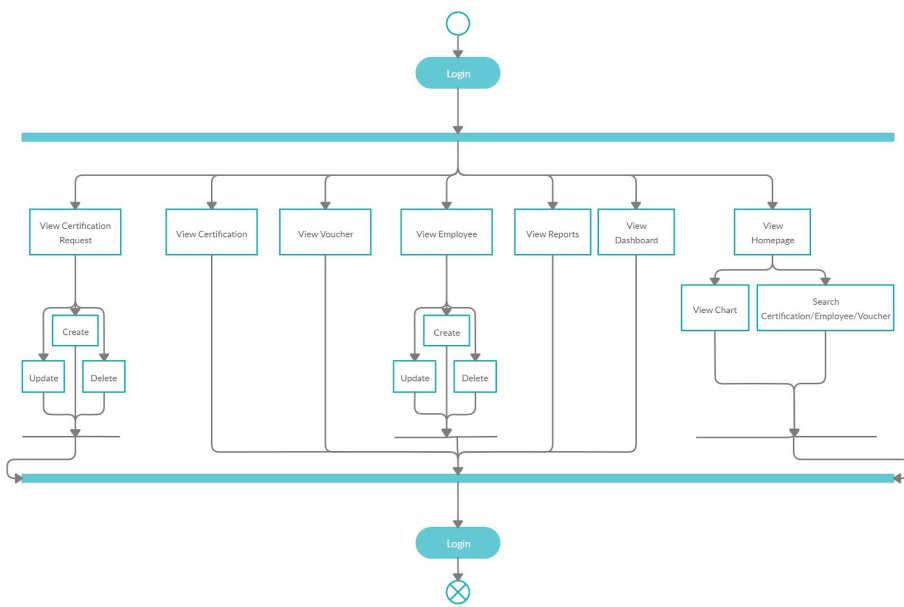


Activity Diagram

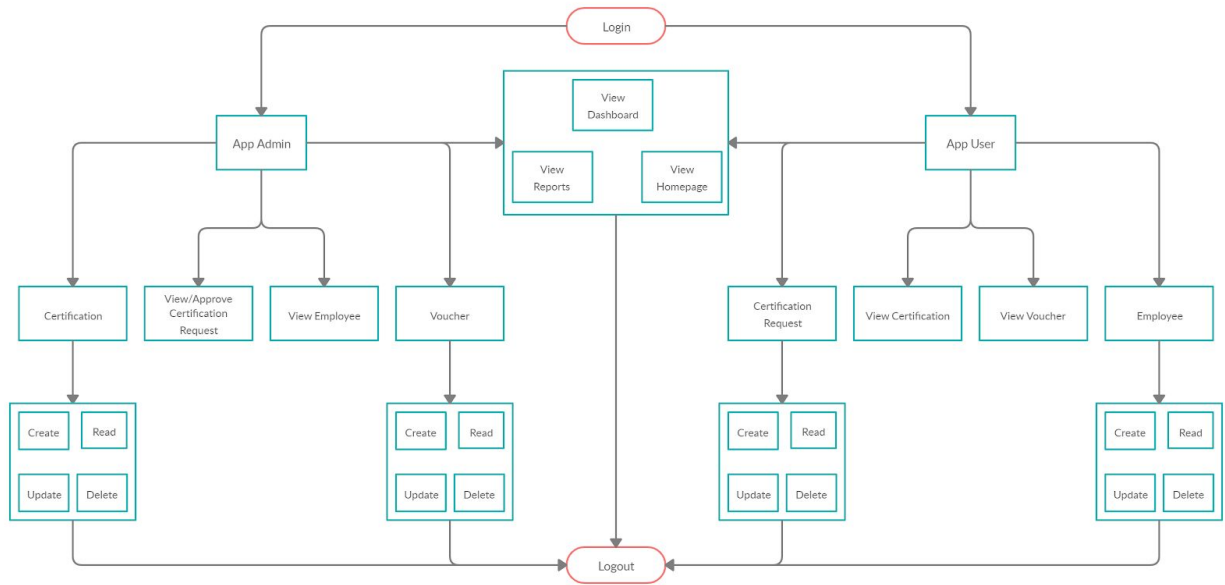
For App Admin



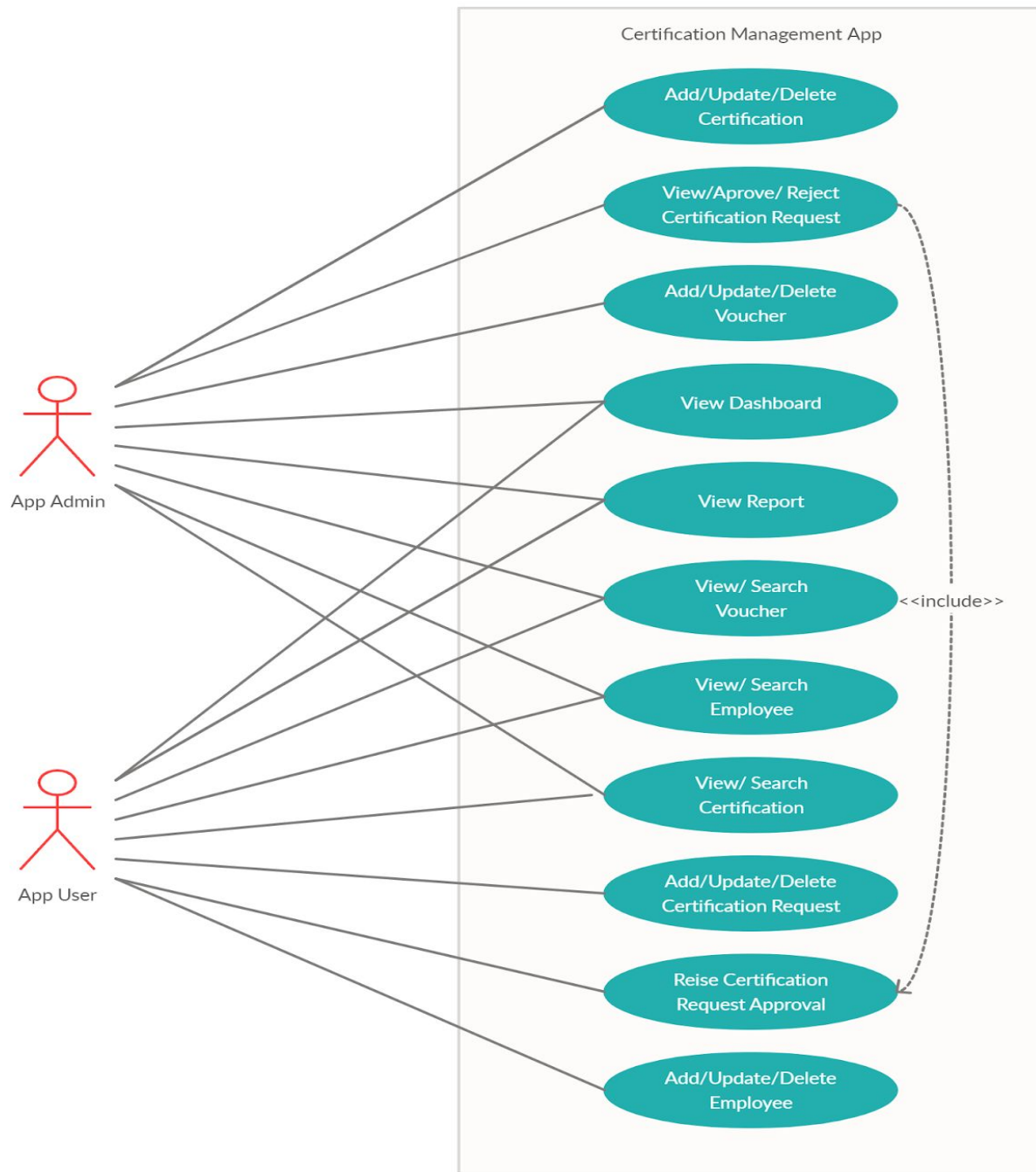
For App User



Flow Chart

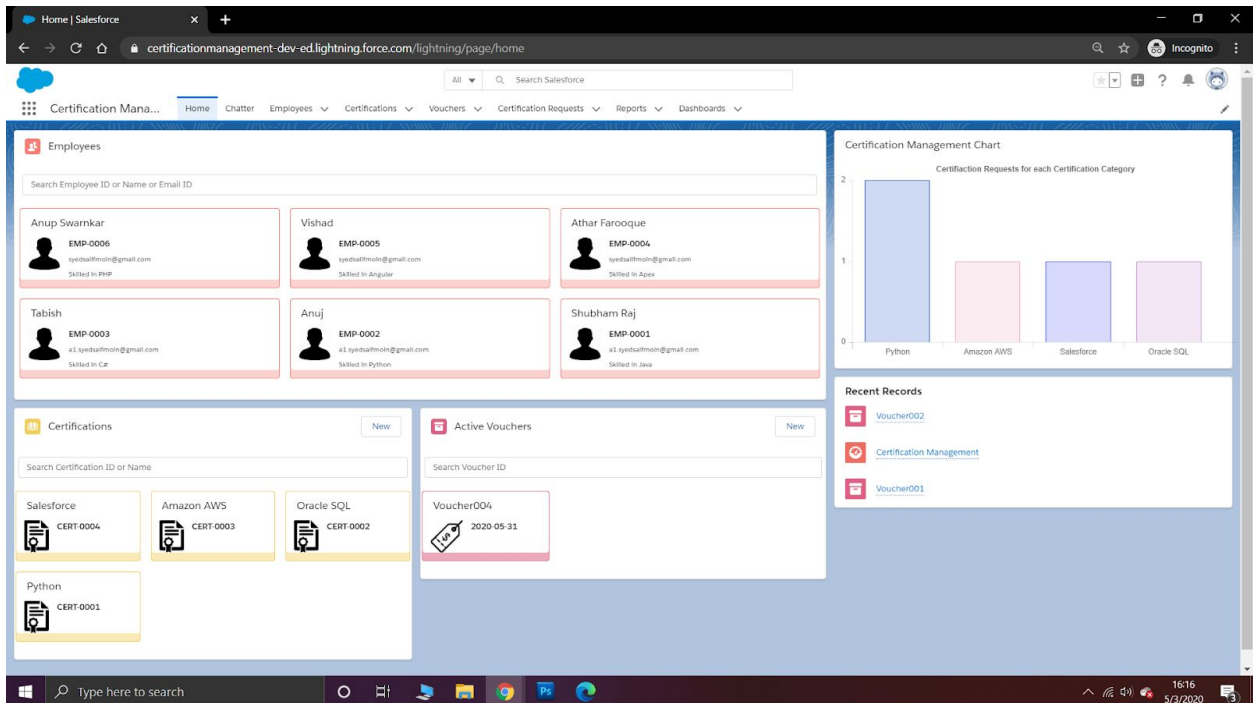


Use Case Diagram



Screenshots

Home Page



The screenshot displays the Salesforce Certification Management Home Page. The interface includes a navigation bar with tabs for Home, Chatter, Employees, Certifications, Vouchers, Certification Requests, Reports, and Dashboards. The main content area is divided into several sections:

- Employees:** A section with a search bar and a grid of employee cards. Each card displays the employee's name, EMP ID, email, and skill set.
- Certifications:** A section with a search bar and a grid of certification cards. Each card displays the certification name, CERT ID, and skill set.
- Active Vouchers:** A section with a search bar and a grid of active voucher cards. Each card displays the voucher ID, date, and skill set.
- Certification Management Chart:** A bar chart showing the number of certification requests for each category.
- Recent Records:** A section displaying a list of recent records, including Voucher002, Certification Management, and Voucher001.

The bottom of the page shows the Windows taskbar with the search bar and various application icons.

Name	EMP ID	Email	Skill Set
Anup Swarnkar	EMP-0006	syedsaifmoin@gmail.com	Skilled in PHP
Vishad	EMP-0005	syedsaifmoin@gmail.com	Skilled in Angular
Athar Farooque	EMP-0004	syedsaifmoin@gmail.com	Skilled in Apex
Tabish	EMP-0003	a1.syedsaifmoin@gmail.com	Skilled in C#
Anuj	EMP-0002	a1.syedsaifmoin@gmail.com	Skilled in Python
Shubham Raj	EMP-0001	a1.syedsaifmoin@gmail.com	Skilled in Java

Name	CERT ID	Skill Set
Salesforce	CERT-0004	
Amazon AWS	CERT-0003	
Oracle SQL	CERT-0002	
Python	CERT-0001	

Voucher ID	Date	Skill Set
Voucher004	2020-05-31	

Category	Requests
Python	2
Amazon AWS	1
Salesforce	1
Oracle SQL	1

Record
Voucher002
Certification Management
Voucher001

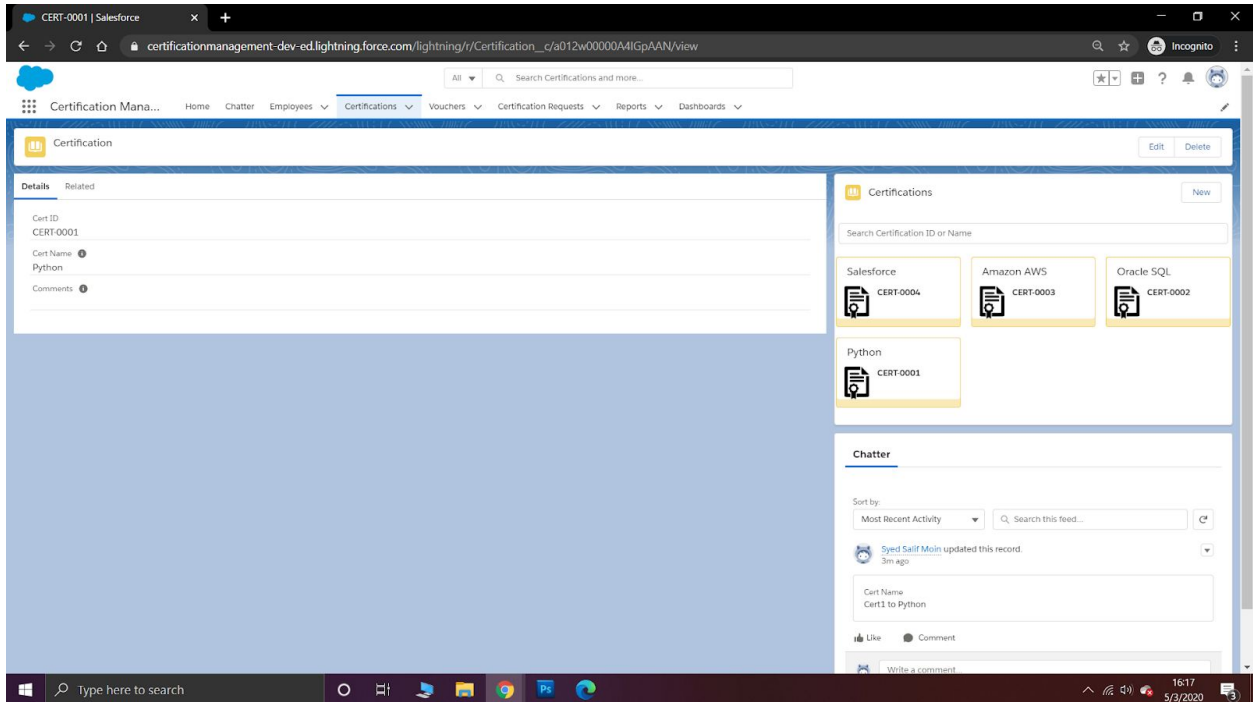
Certification Creation/Edit Page

The screenshot shows a web browser window displaying the Salesforce Certification Creation/Edit page. The browser's address bar shows the URL: `certificationmanagement-dev-ed.lightning.force.com/lightning/r/Certification__c/a012w0000A4IGpAAN/edit`. The page title is "Edit CERT-0001 | Salesforce". The Salesforce navigation bar is visible, with the "Certifications" tab selected. The main content area has a blue background with a subtle pattern. A central form titled "Certification" contains the following fields:

- Cert Name**: A text input field containing the value "Python".
- Comments**: A text area for additional information.

At the bottom of the form, there are two buttons: "Save" (blue) and "Cancel" (red). The Windows taskbar is visible at the bottom of the screen, showing the search bar and several application icons. The system clock in the bottom right corner indicates the time is 16:17 on 5/3/2020.

Certification Record Page



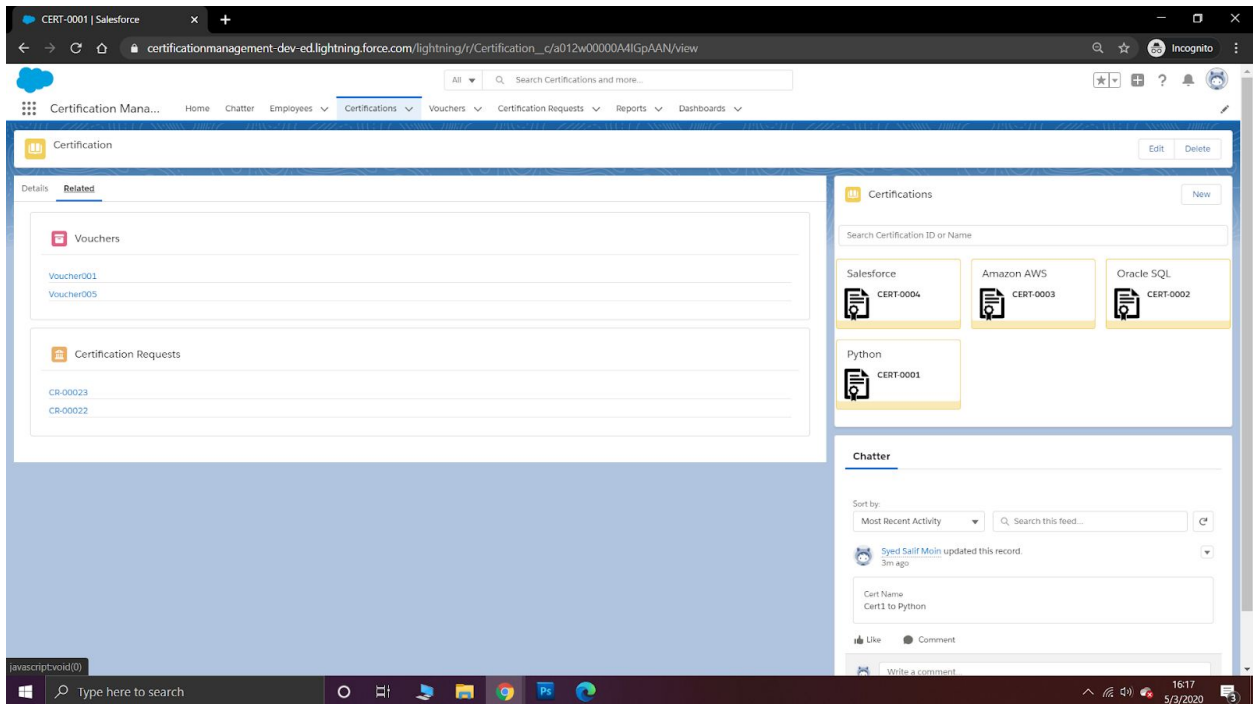
This screenshot shows the 'Details' tab of a Salesforce Certification record. The left sidebar contains the following information:

- Cert ID: CERT-0001
- Cert Name: Python
- Comments: (empty)

The main content area is mostly blank. On the right, there is a 'Certifications' section with a search bar and a grid of certification cards:

- Salesforce CERT-0004
- Amazon AWS CERT-0003
- Oracle SQL CERT-0002
- Python CERT-0001

Below this is a 'Chatter' section showing a feed with one entry: 'Syed Saif Moin updated this record. 3m ago'. The entry includes a text field with 'Cert Name Cert1 to Python' and buttons for 'Like' and 'Comment'.



This screenshot shows the 'Related' tab of the same Salesforce Certification record. The left sidebar contains two sections:

- Vouchers**: Voucher001, Voucher005
- Certification Requests**: CR-00023, CR-00022

The main content area is mostly blank. On the right, there is a 'Certifications' section with a search bar and a grid of certification cards (identical to the first screenshot):

- Salesforce CERT-0004
- Amazon AWS CERT-0003
- Oracle SQL CERT-0002
- Python CERT-0001

Below this is a 'Chatter' section showing a feed with one entry: 'Syed Saif Moin updated this record. 3m ago'. The entry includes a text field with 'Cert Name Cert1 to Python' and buttons for 'Like' and 'Comment'.

Voucher Creation/Edit Page

The screenshot shows a web browser window displaying the Salesforce 'Edit Voucher001' page. The browser's address bar shows the URL: `certificationmanagement-dev-ed.lightning.force.com/lightning/r/Voucher__c/a022w000003ILipAAG/edit`. The Salesforce navigation bar at the top includes links for Home, Chatter, Employees, Certifications, Vouchers, Certification Requests, Reports, and Dashboards. A search bar is also present. The main content area features a 'Voucher' form with the following fields:

- Voucher ID:** Voucher001
- Certification:** CERT-0001 (with a dropdown arrow)
- *Voucher Cost:** \$2,500.00
- *Validity:** Apr 29, 2020 (with a calendar icon)
- Active:** Yes (with a dropdown arrow)
- Comments:** (with a text area and a plus icon for more options)

At the bottom of the form are 'Save' and 'Cancel' buttons. The Windows taskbar at the bottom of the screen shows the search bar and several application icons, with the system clock indicating 16:18 on 5/3/2020.

Voucher Record Page

Voucher001 | Salesforce

certificationmanagement-dev-ed.lightning.force.com/lightning/r/Voucher__c/a022w000003ILipAAG/view

Search Vouchers and more...

Certification Mana... Home Chatter Employees Certifications Vouchers Certification Requests Reports Dashboards

Voucher Edit Delete

Details Related

Voucher ID
Voucher001

Certification
CERT-0001

Voucher Cost
\$2,500.00

Validity
4/29/2020

Active
No

Comments

Active Vouchers New

Search Voucher ID

Voucher004
2020-05-31

Chatter

Sort by
Most Recent Activity

Search this feed...

16:18 5/3/2020

Voucher001 | Salesforce

certificationmanagement-dev-ed.lightning.force.com/lightning/r/Voucher__c/a022w000003ILipAAG/view

Search Vouchers and more...

Certification Mana... Home Chatter Employees Certifications Vouchers Certification Requests Reports Dashboards

Voucher Edit Delete

Details **Related**

Certification Requests

CR 00023

Active Vouchers New

Search Voucher ID

Voucher004
2020-05-31

Chatter

Sort by
Most Recent Activity

Search this feed...

16:18 5/3/2020

Employee Creation/Edit Page

The screenshot displays the Salesforce 'Employee Creation/Edit' page. The browser address bar shows the URL: `certificationmanagement-dev-ed.lightning.force.com/lightning/r/Employee__c/a002w000004eB5rAAE/edit`. The Salesforce navigation bar includes the 'Certification Mana...' app icon and a search bar. The main content area features a blue background with a pattern of white circles. A white form titled 'Employee' is centered on the page. The form contains the following fields:

- * Emp Name**: Shubham Raj
- * Email ID**: a1.syed@fmo.in@gmail.com
- * Primary Skill**: Java
- Secondary Skill**: (empty)
- Comments**: (empty text area)

At the bottom of the form are two buttons: 'Save' (blue) and 'Cancel' (red). The Windows taskbar at the bottom shows the search bar, task view icon, and several application icons (File Explorer, Chrome, VS Code, etc.). The system clock indicates 16:26 on 5/3/2020.

Employee Record Pages

The screenshot shows the Salesforce interface for the 'Employee' record page. The left sidebar contains navigation links: Home, Chatter, Employees, Certifications, Vouchers, Certification Requests, Reports, and Dashboards. The main content area is divided into two sections: 'Details' and 'Related'. The 'Details' section shows the following information for Employee EMP-0001:

- Emp ID: EMP-0001
- Emp Name: Shubham Raj
- Email ID: a1.syedsaifmoin@gmail.com
- Primary Skill: Java
- Secondary Skill:
- Experience:

The 'Related' section shows a list of employees with their names, IDs, email addresses, and skills. The list includes:

- Anup Swarnkar (EMP-0006, Skilled in PHP)
- Vishad (EMP-0005, Skilled in Angular)
- Athar Farooque (EMP-0004, Skilled in Apex)
- Tabish (EMP-0003, Skilled in C#)
- Anuj (EMP-0002, Skilled in Python)
- Shubham Raj (EMP-0001, Skilled in Java)

The screenshot shows the same Salesforce interface, but the 'Related' section now displays a list of certification requests. The list includes:

- CR-00023

Certification Request Creation/Edit Page

The screenshot shows a web browser window displaying the Salesforce Certification Request Creation/Edit page. The browser's address bar shows the URL: `certificationmanagement-dev-ed.lightning.force.com/lightning/r/Certification_Request__c/a032w000002p0G9AAJ/edit`. The Salesforce navigation bar at the top includes the following items: Home, Chatter, Employees, Certifications, Vouchers, Certification Requests (selected), Reports, and Dashboards. A search bar is also present.

The main content area features a "Certification Request" form with the following fields:

- *Employee**: EMP-0003
- *Certification**: CERT-0003
- Voucher**: Voucher003
- *Due Date**: Apr 12, 2020
- Status**: Approved
- Comments**: (empty text area)

At the bottom of the form, there are "Save" and "Cancel" buttons. The Windows taskbar at the bottom of the screen shows the search bar and several application icons, with the system clock indicating 16:31 on 5/3/2020.

Certification Request Record Page

The screenshot shows the Salesforce Certification Request Record Page for CR-00021. The page is viewed in a web browser with the URL `certificationmanagement-dev-ed.lightning.force.com/lightning/r/Certification_Request__c/a032w000002p0G9AAJ/view`. The page layout includes a navigation bar with tabs for Home, Chatter, Employees, Certifications, Vouchers, Certification Requests, Reports, and Dashboards. The main content area is divided into two sections: Details and Related.

Details:

- Certification Request Name: CR-00021
- Employee: EMP-0003
- Certification: CERT-0003
- Voucher: Voucher003
- Due Date: 4/12/2020
- Status: Approved
- Comments:

Related:

Approval History (2)

- Approvers Action**
 - Date: 4/16/2020, 4:09 PM
 - Status: Approved
 - Assigned To: Certification Request Approval Queue
 - Actual Approver: Syed Saif Moin
 - Comments:
- Approval Request Submitted**
 - Date: 4/12/2020, 3:41 PM
 - Status: Submitted
 - Assigned To: Syed Saif Moin
 - Actual Approver: Syed Saif Moin
 - Comments:

[View All](#)

The screenshot shows the Salesforce Certification Request Record Page for CR-00021, displaying the Approval History section. The page is viewed in a web browser with the URL `certificationmanagement-dev-ed.lightning.force.com/lightning/r/Certification_Request__c/a032w000002p0G9AAJ/view`. The page layout includes a navigation bar with tabs for Home, Chatter, Employees, Certifications, Vouchers, Certification Requests, Reports, and Dashboards. The main content area is divided into two sections: Details and Related.

Details:

- Certification Request Name: CR-00021
- Employee: EMP-0003
- Certification: CERT-0003
- Voucher: Voucher003
- Due Date: 4/12/2020
- Status: Approved
- Comments:

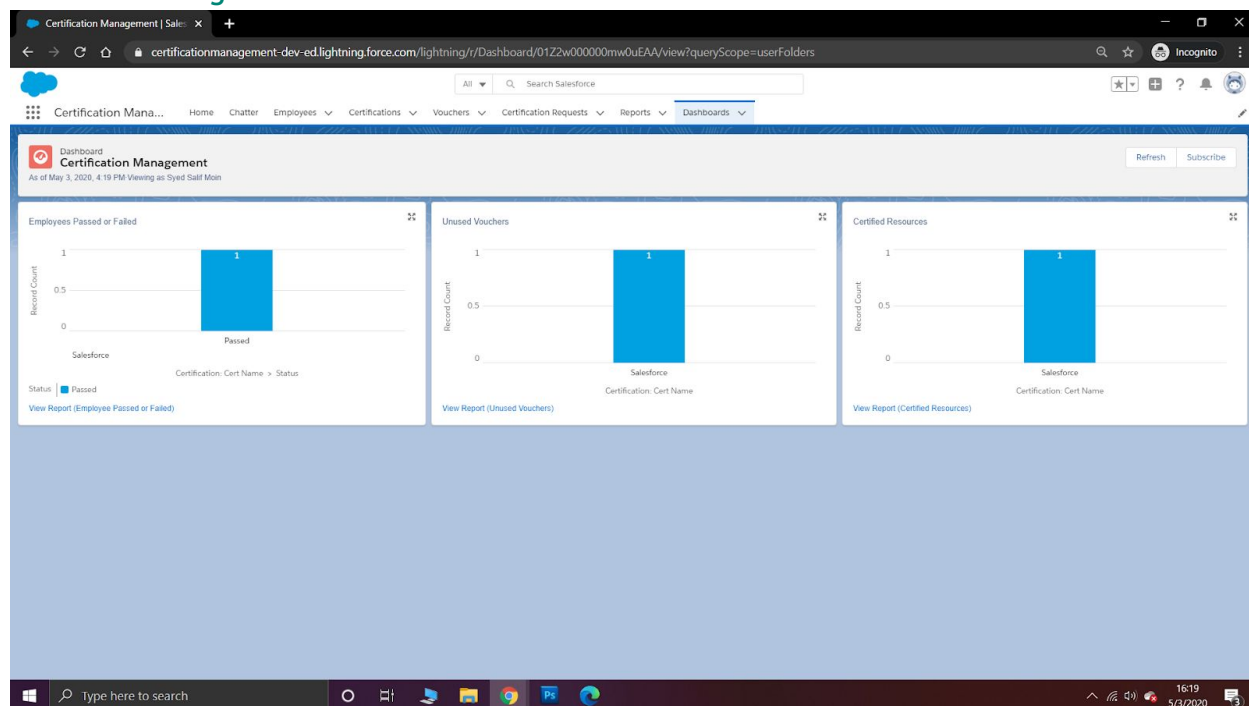
Related:

Approval History (2)

- Approvers Action**
 - Date: 4/16/2020, 4:09 PM
 - Status: Approved
 - Assigned To: Certification Request Approval Queue
 - Actual Approver: Syed Saif Moin
 - Comments:
- Approval Request Submitted**
 - Date: 4/12/2020, 3:41 PM
 - Status: Submitted
 - Assigned To: Syed Saif Moin
 - Actual Approver: Syed Saif Moin
 - Comments:

[View All](#)

Dashboard Page



Models

Certification

1. **Cert ID** : String
2. **Cert Name** : String
3. **Comments** : String

Certification Request

1. **Certification Request Name** : String
2. **Certification** : Master-Detail
3. **Employee** : Master-Detail
4. **Email ID** : String
5. **Voucher** : Lookup
6. **Due Date** : Date
7. **Daily Update** : Date
8. **Status** : Picklist
9. **Comments** : String

Employee

1. **Emp ID** : String
2. **Emp Name** : String
3. **Email ID** : String
4. **Primary Skill** : String
5. **Secondary Skill** : String
6. **Experience** : Integer
7. **Comments** : String

Voucher

1. **Voucher ID** : String
2. **Voucher Cost** : Number
3. **Certification** : Lookup
4. **Validity** : Date
5. **Active** : Boolean
6. **Comments** : String

Views

LWC

1. **certificationCreate** : component for certification record creation and updation
2. **certificationList** : a component to searching certifications
3. **certificationManagementCharts** : a component to display charts using ChartJS
4. **certificationRecordPage** : a component to display certification record
5. **certificationRequestCreate** : component for certification request record creation and updation
6. **certificationRequestRecordPage** : a component to display certification request record
7. **employeeCreate** : component for employee record creation and updation
8. **employeeList** : a component to searching employees
9. **employeeRecordPage** : a component to display employee record
10. **recordHeader** : a component to display the header in record pages
11. **voucherCreate** : component for voucher record creation and updation
12. **voucherList** : a component to searching vouchers
13. **voucherRecordComponent** : a component to display voucher record

AURA

1. **certificationCreateContainer** : a container for certificationCreate LWC component to override the standard New and Edit buttons
2. **certificationRequestCreateContainer** : a container for certificationRequestCreate LWC component to override the standard New and Edit buttons
3. **employeeCreateContainer** : a container for employeeCreate LWC component to override the standard New and Edit buttons
4. **voucherCreateContainer** : a container for voucherCreate LWC component to override the standard New and Edit buttons

Controllers

Certification

1. **Method getCertificationRequests : List<Voucher_c>** Method to get the related certification requests of the certification

2. **Method getVouchers : List<Voucher__c>** Method to get the related vouchers of the certification

CertificationManagementCharts

1. **Method getChartCertificationRequest : Map<String, Integer>** Method to get the certifications registered in the system with their corresponding count of certification request registered

CertificationRequest

1. **Method getApprovalHistory : List<ProcessInstanceStep>** Method to get the approval history for the certification request

Employee

1. **Method getCertificationRequests : List<Voucher__c>** Method to get the related certification requests of the employee

Search

1. **Method searchEmployee : List<Employee__c>** Method to get the search result for employees
2. **Method searchCertifications : List<Employee__c>** Method to get the search result for certifications
3. **Method searchVouchers : List<Employee__c>** Method to get the search result for vouchers

UserAccess


1. **Method UserEntityAccess : List<getUserEntityAccess>** Method to CRUD permission on an object

Voucher

1. **Method getCertificationRequests : List<Voucher__c>** Method to get the related certification requests of the voucher

Validations

1. The Voucher ID should be 10 characters long and unique

- 
2. The voucher's validity date should be ahead of voucher registration date
 3. The voucher applied to a certification request should be for the same certification as the certification request
 4. A new certification request for a employee cannot be generated in the system if there is any pending request that exists for that employee
 5. One voucher can be assigned to only one Certification Request
 6. Vouchers cannot be modified once they are assigned to a certification request

Assumptions

Certain assumptions were made during the development procedure of the application. The are:

1. Employees request App Users to issue certification vouchers to them over email
2. Employees need to share the status of each certification voucher issued to them to the App user to get updated in the system
3. The Vouchers get inactive once they are assigned to a certification request.
4. The certification request, by default, gets a "Drafted" status on creation