

Project Design Phase

Step 1 : creating a table

1. Open servicenow personal developer instance.
2. Navigate to All > System Definition > Tables.
3. Click on 'New' button to create a new table.
4. Fill the following details

servicenow All Favorites History Workspaces Admin Table - New Record

system def No Results

ALL RESULTS

System Definition

- Record Hierarchy
- Application Menus
- Menu Categories
- Dictionary
- Tables
- Choice Lists
- Language File
- Bookmarks
- Tables & Columns
- Search Groups
- Database Views
- Table Rotations
- Text Index Configurations
- Text Index Groups
- Text Index Stop Words
- Text Index Synonym Dictionaries

ServiceNow recommends creating custom tables in scoped applications. To learn more about creating scoped applications, click [here](#).

A table is a collection of records in the database. Each record corresponds to a row in a table, and each field on a record corresponds to a column on that table. Applications use tables and records to manage data and processes. [More Info](#)

* Label Employee Training Records

* Name u_employee_training_records

Extends table

Application Global

Create module ☒

Create mobile module ☒

Add module to menu -- Create new --

New menu name Employee Training Records

Remote Table ☐

Columns Controls Application Access

Table Columns for text Search

Dictionary Entries

Column label	Type	Reference	Max length	Default value	Display
Insert a new row...					

5. Add the following fields:
6. Training Name (Type: String)
7. Completion Date (Type: Date)
8. Status (Type: Choice)
9. Employee (Type: Reference), (Reference field to sys_user table)

servicenow All Favorites History Workspaces Admin Table - New Record

system def No Results

ALL RESULTS

System Definition

- Record Hierarchy
- Application Menus
- Menu Categories
- Dictionary
- Tables
- Choice Lists
- Language File
- Bookmarks
- Tables & Columns
- Search Groups
- Database Views
- Table Rotations
- Text Index Configurations
- Text Index Groups
- Text Index Stop Words
- Text Index Synonym Dictionaries

New menu name Employee Training Records

Remote Table ☐

Columns Controls Application Access

Table Columns for text Search

Dictionary Entries

Column label	Type	Reference	Max length	Default value	Display
Training Name	String		40		false
Completion Date	Date		40		false
Status	Choice		40		false
Employee	Reference	User	40		false
Insert a new row...					

Submit Cancel

Related Links

[Track in Update Sets](#)

10. Click on submit

11. In application navigator search for the table you have created just now i.e 'Employee Training Records'.
12. Click on module 'Employee Training Records'.
13. Click on new button, there you will find the new 'status' field. Right click on it and click 'Configure Dictionary'.
14. You will be entered into the 'Dictionary Entry Status'. Scroll down and look for choices tab.
15. Under Choices tab click 'new' and fill the following details.

Choice - New Record

* Table: Employee Training Records [u...]

* Element: u_status

* Language: en

* Label: In Progress

* Value: ip

Sequence: []

Inactive: ☐

Dependent value: []

Hint: []

Submit

16. Click on submit.
17. Similarly add 'Completed' choice with value 'c' and click submit. Then it will look as follows :

Dictionary Entry - Status

Choice: Dropdown with -- None --

Create Choice List Delete Column Update

Related Links

Show Table Run Point Scan Advanced view

Access Controls Choices (2) Attributes Labels (1)

Label Search

Choices

	Label	Value	Language	Sequence	Inactive	Updated
<input type="checkbox"/>	Completed	c	en		false	2025-06-27 05:32:41
<input type="checkbox"/>	In Progress	ip	en		false	2025-06-27 05:26:23
+	Insert a new row...					

1 to 2 of 2

Step 2 : Importing Data and Mapping the fields

Importing Data :

1. Navigate to All > System Import Sets > Load Data.
2. Choose the excel file and fill the form as below :

The screenshot shows the 'Load Data' form in ServiceNow. The left sidebar contains the navigation menu with 'System Import Sets' expanded. The main form area has the following fields:

- Import set table:**
 - ☒ Create table
 - ☐ Existing table
 - * Label: Employee Training
 - Name: u_employee_training
- Source of the import:**
 - ☒ File
 - ☐ Data source
 - File: Choose File employee_L..g_data.xlsx
 - Sheet number: 1
 - Header row: 1
- Submit** button

3. Click on submit and you will see the status as below :

The screenshot shows the 'Progress' page for the 'ImportProcessor' in ServiceNow. The page displays the following information:

- Name:** ImportProcessor
- State:** Complete
- Completion code:** Success
- Message:** Processed: 20, inserts 20, updates 0, errors 0, empty and ignored 0, ignored errors 0 (0:00:01.05:9)
- Next steps...**
 - [Import sets](#) Go to the import sets for this data load
 - [Loaded data](#) Go to the newly imported data inside the staging table: u_employee_training
 - [Create transform map](#) Create a transform map for the newly staged data
 - [Import log](#) View the import log

Mapping Data :

1. Navigate to All > System Import Sets > Create Transform Map.
2. Fill the following details to create a new table.

servicenow All

Favorites History Workspaces Admin Table Transform Map - New Record

transform ma

FAVORITES
No Results

ALL RESULTS

- System Import Sets
 - Create Transform Map
- Administration
 - Transform Maps
- System LDAP
 - Transform Maps

* Name: Employee Transform

* Source table: Employee Training [u_employ...]

Application: Global

Created:

* Target table: Employee Training Records [u...]

Order: 100

Run script: ☐

Active: ☒

Run business rules: ☒

Enforce mandatory fields: No

Copy empty fields: ☐

Create new record on empty coalesce fields: ☐

Submit

3. Click on submit.

4. Scroll down and you will see fields tab in that click new button and fill the form as below :

servicenow All

Favorites History Workspaces Admin Field Map - New Record

Filter

Self-Service

- Business Applications
- Dashboards
- Service Catalog
- Employee Center
- Knowledge
- Visual Task Boards
- Incidents
- Watched Incidents
- My Requests
- Requested Items
- Watched Requested Items
- My Connected Apps
- My Profile
- My Tagged Documents
- My Tags
- My Knowledge Articles
- Take Survey

Map: Employee Transform

Source table: Employee Training [u_employ...]

Source field: Completion Date

Date format: yyyy-MM-dd HH:mm:ss

Use source script: ☐

Application: Global

Target table: Employee Training Records [u...]

Target field: Completion Date

Coalesce: ☐

Submit

5. Similarly add the remaining fields as in shown below :

servicenow All

Favorites History Workspaces Table Transform Map - Employee Transform

Filter

Self-Service

- Business Applications
- Dashboards
- Service Catalog
- Employee Center
- Knowledge
- Visual Task Boards
- Incidents
- Watched Incidents
- My Requests
- Requested Items
- Watched Requested Items
- My Connected Apps
- My Profile
- My Tagged Documents
- My Tags
- My Knowledge Articles

Create new record on empty coalesce fields: ☐

Copy Update Delete

Related Links

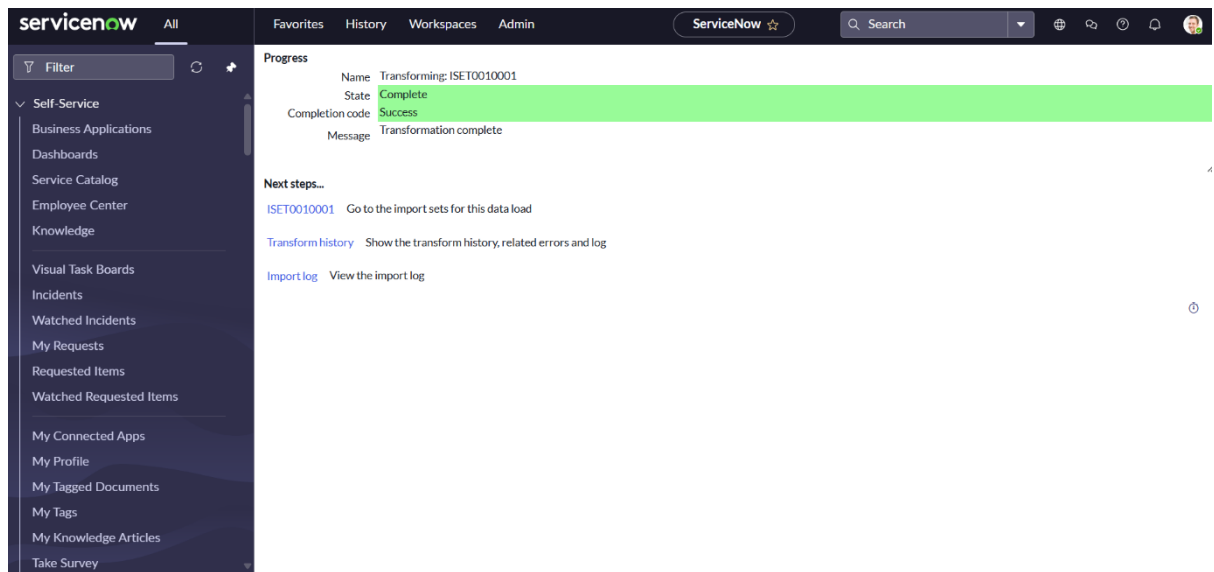
- [Auto Map Matching Fields](#)
- [Mapping Assist](#)
- [Validate Coalesce Fields](#)
- [Transform](#)
- [Index Coalesce Fields](#)
- [Run Point Scan](#)

Field Maps (4) Transform Scripts Empty reference fields (1)

Source field	Target field	Coalesce
u_training_name	u_training_name	false
u_employee_email	u_employee	false
u_status	u_status	false
u_completion_date	u_completion_date	false

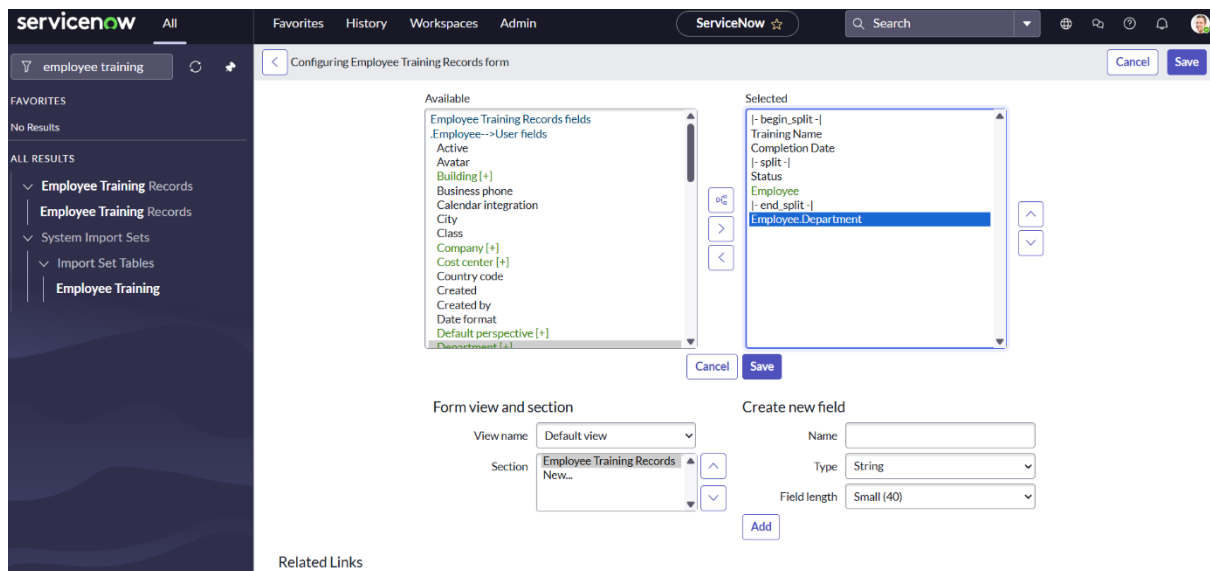
1 to 4 of 4

6. In the related links click on transform map and click transform.

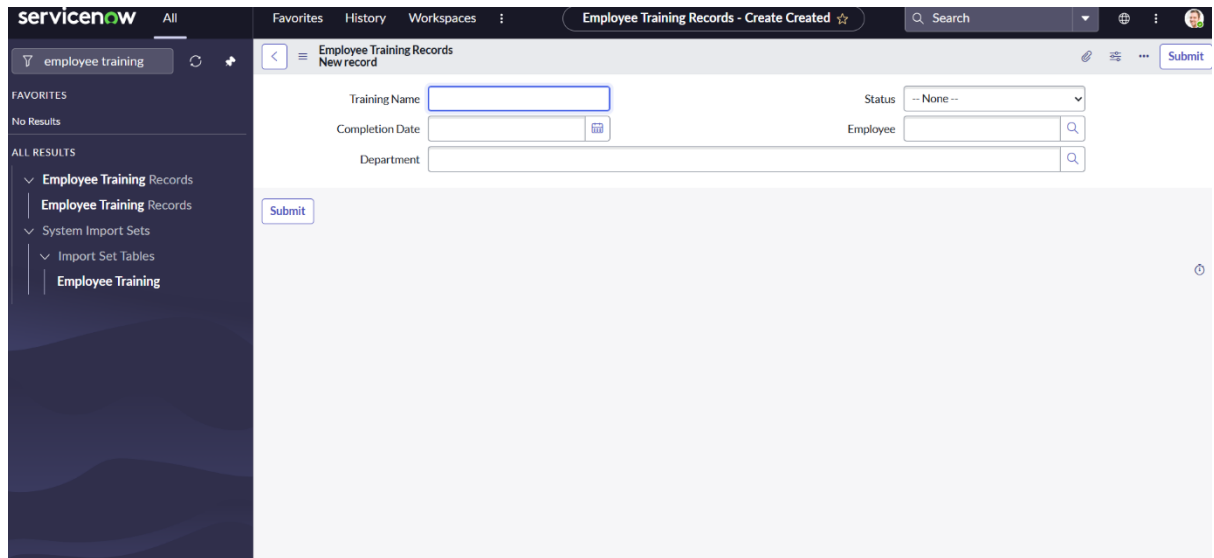


Step 3 : Using Dot Walking to Access Employee Department Information

1. In the application navigator search for Employee Training Records and click on that module.
2. Click new button and you will navigate to the form.
3. Click on context menu > configure > form layout.
4. Click on employee which has + icon beside. When you click on it you will see new option above the '>' button.
5. Search for department field in that and double click on it or use '>' to add to the form.
6. And keep the fields in the selected list as shown below.

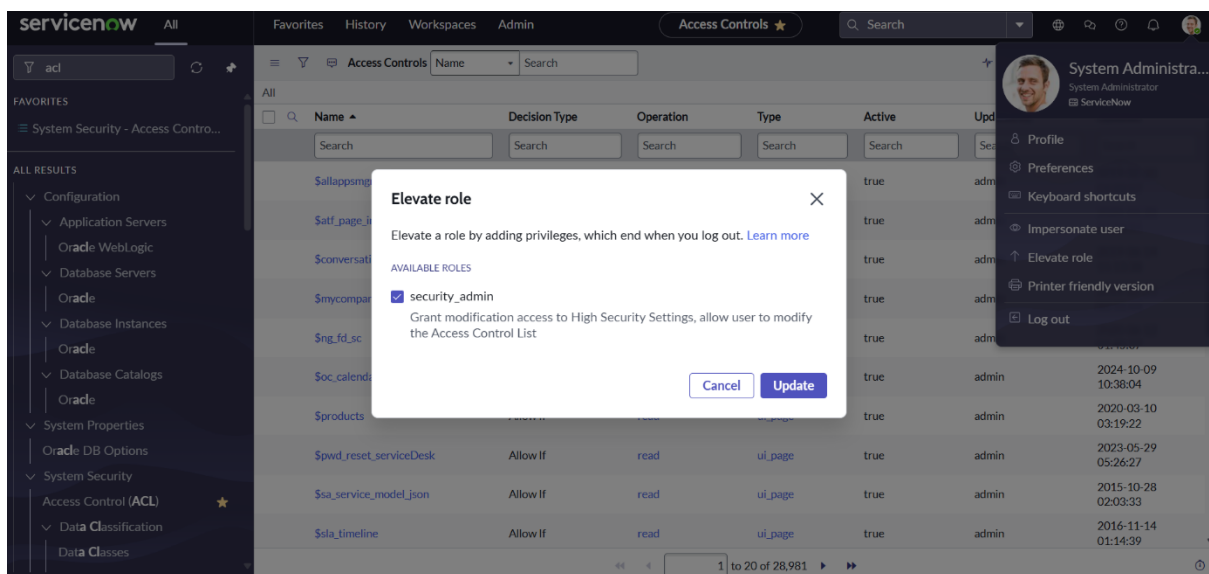


7. Now you can see the fields in the form.



Step 4 : Creating an ACL (Access Control List)

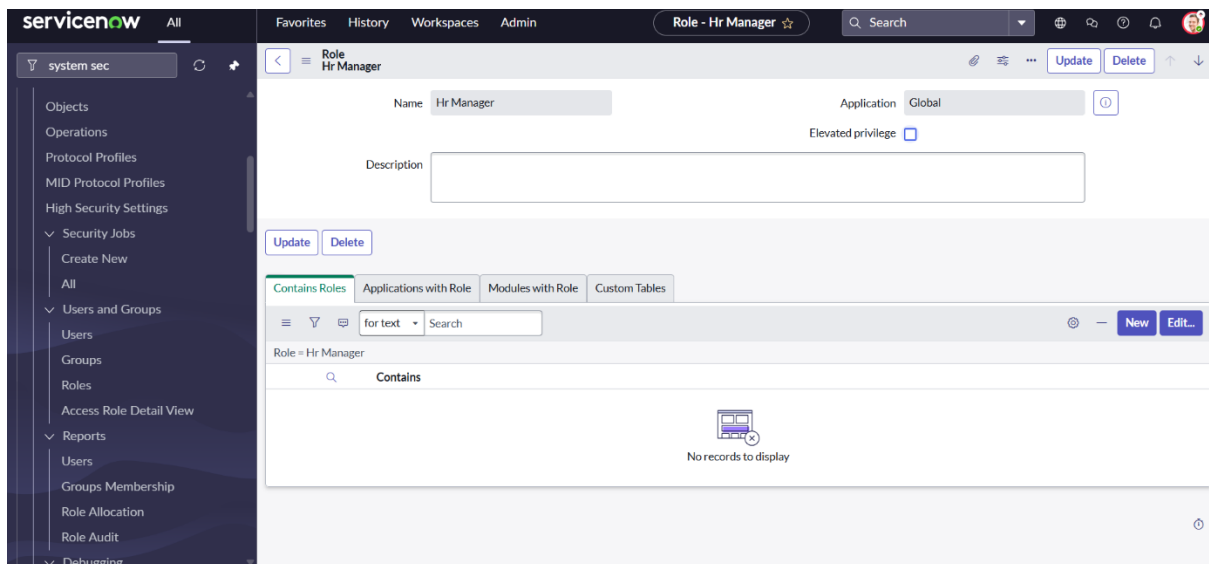
1. First you need to Elevate the role to security_admin.
2. Go to user menu and click elevate role and check security_admin and update.



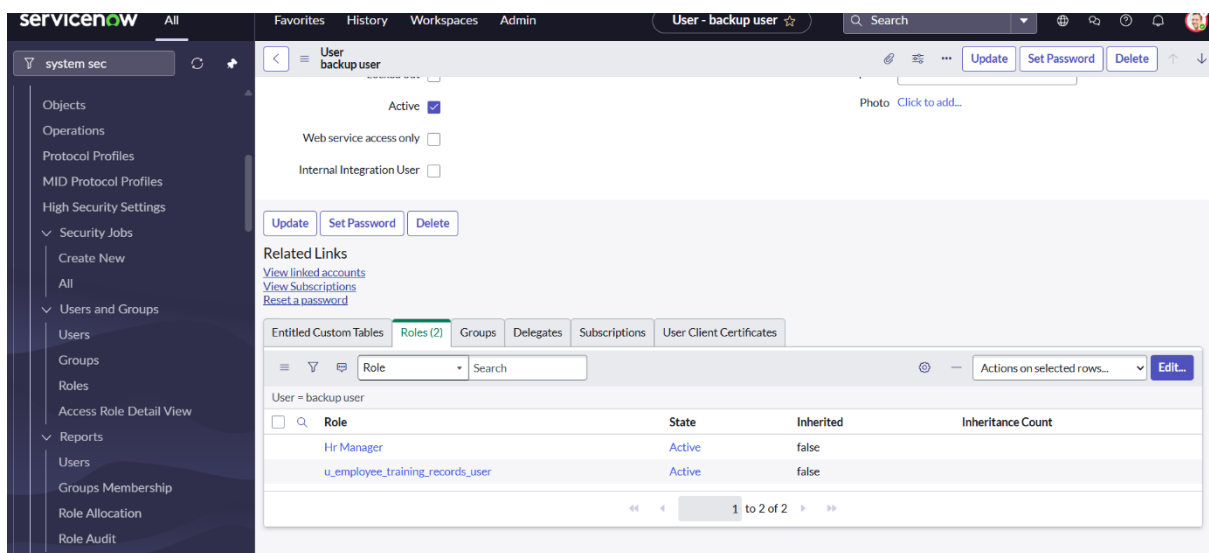
3. Navigate to All > System Security > Access Control (ACL)
4. Click on new button. This is only visible if you have elevated the role as shown.
5. Define ACL (Employees)
6. Operation: Read

Step 5 : Creating Roles

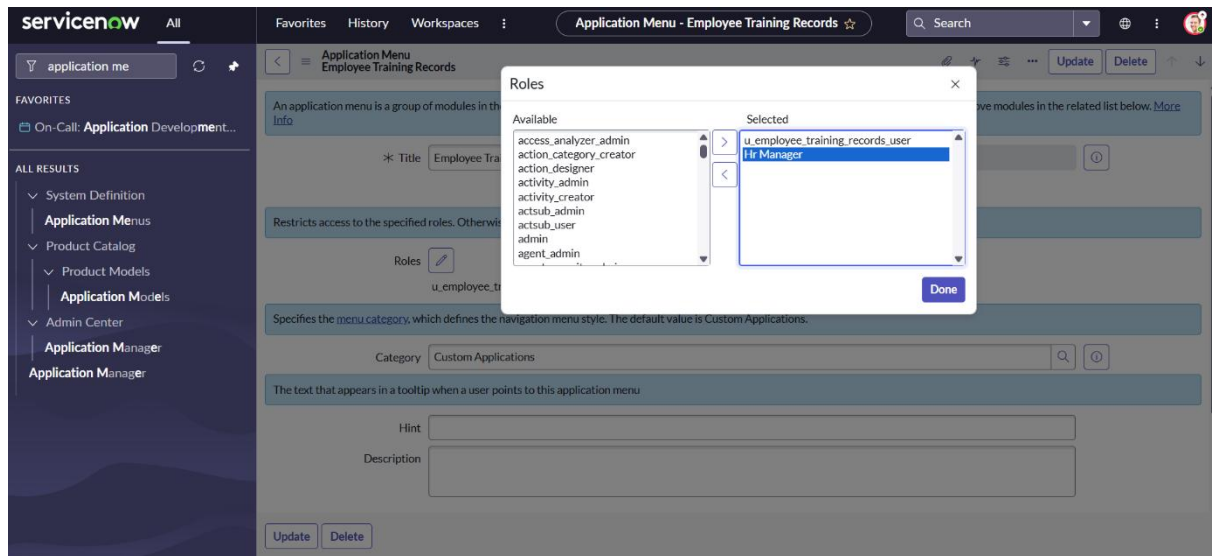
1. Create Hr manager role. Navigate to All > system security > users and groups > roles
2. Click on new and name as Hr Manager and click submit.



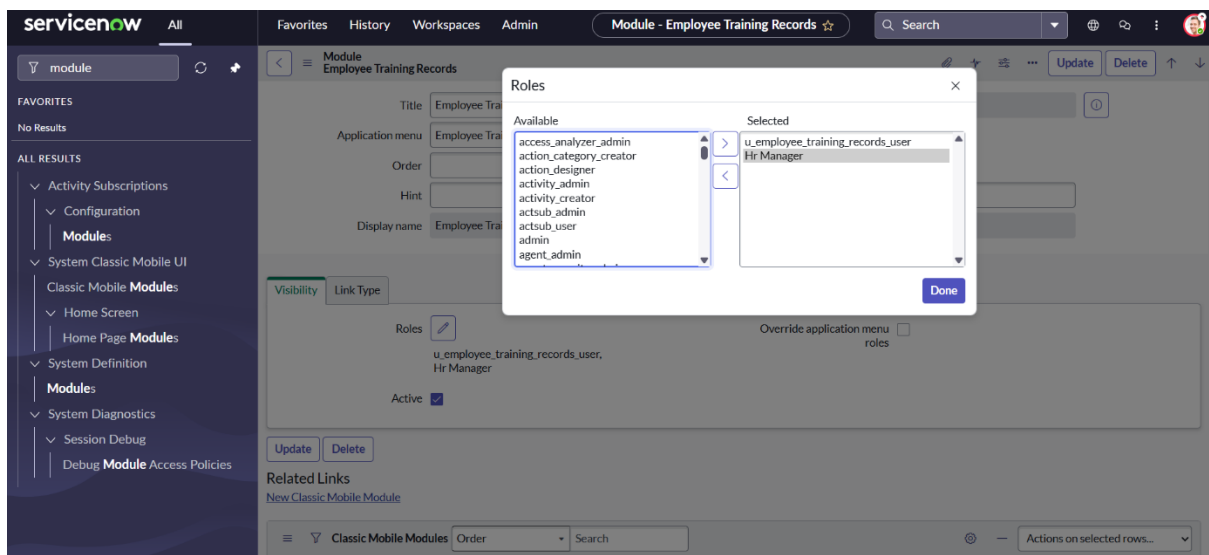
3. Create backup user i.e manager. Navigate to All > system security > users and groups > users
4. Add the following roles to the backup user.



5. Add the Hr manager role to application.
Navigate to All > System Definition > Application menus
6. Search for the table Employee training records. Open it.
7. Click on roles pencil icon and Add the Hr manager role.
8. Click done and update the record.



9. Similarly add the Hr manager role to module. Go to All > System Definition > Modules.



Update to Elevate Role :

1. Navigate to All > System Security > Access Controls (ACL) .
2. Click on new and give write access to Employee Training Records as shown below.

servicenow All Favorites History Workspaces Admin **Access Control - New Record** Search

Access Control New record

Warning: A role, security attribute, data condition, script or ACL control via reference fields is required to properly secure access with this ACL.

* Type: record Application: Global

* Operation: write Active: ☒

Decision Type: Allow If Advanced: ☐

Admin overrides: ☒

Protection policy: -- None --

* Name: Employee Training Records [u_employee_training_records] -- None --

Description:

Applies To: No. of records matching the condition: 20

Add Filter Condition Add OR Clause

-- choose field -- -- oper -- -- value --

Conditions

Access Control Rules have two decision types, and these types will behave differently depending on conditions.

1. Allow Access: Allows access to a resource if all conditions are met. Additional ACLs may grant access to records where this ACL has not granted access.
2. Deny Access: Denies access to a resource unless all conditions are met. Additional ACLs may not grant access to records where this ACL has denied access.

3. Add Hr manager role as shown below :

servicenow All Favorites History Workspaces Admin **Access Control - New Record** Search

Access Control New record

Access Control Rules have two decision types, and these types will behave differently depending on conditions.

1. Allow Access: Allows access to a resource if all conditions are met. Additional ACLs may grant access to records where this ACL has not granted access.
2. Deny Access: Denies access to a resource unless all conditions are met. Additional ACLs may not grant access to records where this ACL has denied access.

[More Info](#)

Requires role

Role

Hr Manager

Insert a new row...

Security Attribute Condition

Local or Existing: ☐ Existing ☒ Local

Condition: All of these conditions must be met

Role is Hr Manager

OR AND

New Criteria

Data Condition

Condition: No. of records matching the condition: 20

Add Filter Condition Add OR Clause

4. Click on submit and continue
5. Similarly create write access and add Hr manager role

servicenow All Favorites History Workspaces Access Control - u_employee_training_records

system s

FAVORITES

System Security - Access Contro...

ALL RESULTS

System Scheduler

Scheduled Jobs

Today's Scheduled Jobs

Scheduled Jobs

Slow Job Log

Job Classification Rules

Schedules

Schedules

Schedule Pages

Relative Durations

System Security

Security Center

Access Control (ACL)

Key Management Administration

Password2 Administration

Access Control - u_employee_training_records

* Type record

* Operation read

Decision Type Allow If

Admin overrides

Protection policy --None--

* Name Employee Training Records [u_employee_training_records]

Description

Applies To No. of records matching the condition: 20

Add Filter Condition Add OR Clause

-- choose field -- -- oper -- -- value --

Application Global

Active

Advanced

Update Delete

Conditions

Access Control Rules have two decision types, and these types will behave differently depending on conditions.

1. Allow Access: Allows access to a resource if all conditions are met. Additional ACLs may grant access to records where this ACL has not granted access.

2. Deny Access: Denies access to a resource unless all conditions are met. Additional ACLs may not grant access to records where this ACL has denied access.

More Info

Step 6 : Testng Results

1. Impersonate the backup user and we can see that the user is able to access the application, modules as well as data in that.
2. To impersonate go to user menu and click impersonate and search for backup user and click impersonate.
3. Search for employee training records.

servicenow All Favorites History Process Mining Workspace Employee Training Records

employee t

FAVORITES

No Results

ALL RESULTS

Employee Training Records

Employee Training Records

Self-Service

Employee Center

Completion Date Search

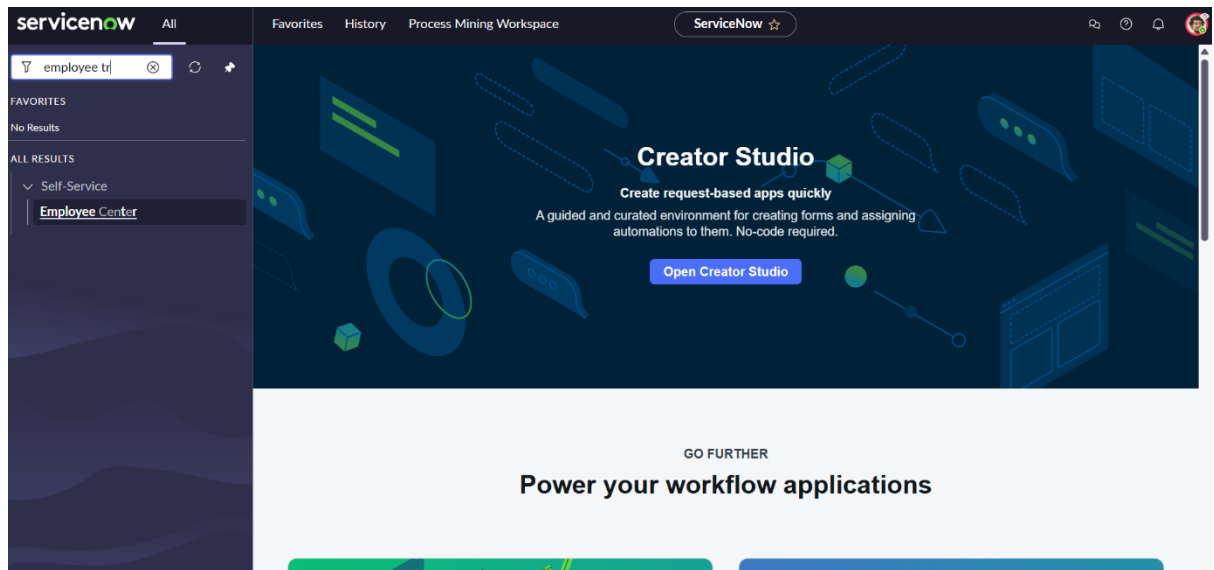
Actions on selected rows...

New

	Completion Date	Employee	Status	Training Name
<input type="checkbox"/>	(empty)	eva.miller@example.com	In Progress	Compliance Training
<input type="checkbox"/>	(empty)	bob.johnson@example.com	In Progress	Cybersecurity Awareness
<input type="checkbox"/>	(empty)	henry.taylor@example.com	Not Started	Customer Service
<input type="checkbox"/>	(empty)	frank.wilson@example.com	Completed	Advanced ITSM
<input type="checkbox"/>	(empty)	henry.taylor@example.com	In Progress	Advanced ITSM
<input type="checkbox"/>	(empty)	henry.taylor@example.com	Not Started	Project Management
<input type="checkbox"/>	(empty)	jack.thomas@example.com	Completed	Customer Service
<input type="checkbox"/>	(empty)	eva.miller@example.com	In Progress	Incident Handling
<input type="checkbox"/>	(empty)	eva.miller@example.com	Not Started	Customer Service
<input type="checkbox"/>	(empty)	frank.wilson@example.com	In Progress	Time Management
<input type="checkbox"/>	(empty)	frank.wilson@example.com	In Progress	Project Management
<input type="checkbox"/>	(empty)	frank.wilson@example.com	Completed	Compliance Training
<input type="checkbox"/>	(empty)	irene.anderson@example.com	Not Started	Compliance Training
<input type="checkbox"/>	(empty)	frank.wilson@example.com	Completed	Communication Skills
<input type="checkbox"/>	(empty)	jack.thomas@example.com	Completed	Communication Skills
<input type="checkbox"/>	(empty)	henry.taylor@example.com	Completed	Communication Skills
<input type="checkbox"/>	(empty)	frank.wilson@example.com	Not Started	Project Management

1 to 20 of 20

4. Impersonate another user let say abel tutor



5. In the above picture we can see that the user is not able to see the applications and modules. Hence it is secured.

Conclusion :

This project demonstrated the essential process of importing data into ServiceNow using Import Sets, leveraging dot-walking to access and utilize related table data efficiently, and applying Access Control Rules (ACLs) to enforce robust data security. By combining these core functionalities, we ensured accurate data integration, streamlined data relationships, and protected sensitive information through role-based access control.