

Importing & Securing Data in ServiceNow

Project Documentation Format

1.Introduction

- **Project Name :** Importing & Securing Data in ServiceNow
- **Team ID :** LTVIP2026TMIDS65579
- **Team Leader :** Gadiga Urukundu
- **Team Members :** Modagala Jayasri , Koratam Nikitha , Kudeti Navya

2. Project Overview

- **Objective:**
To automate the process of importing employee data into ServiceNow and link each record to an employee, while pulling additional details (like department) using dot-walking, and securing the data access using ACLs and role-based permissions.
- **Description:**
This project focuses on enabling secure and structured data handling within ServiceNow. It demonstrates how employee records can be imported, transformed, connected, and presented dynamically using platform features like transform maps, dot-walking, and ACL (Access Control Lists). The system also ensures proper access segregation based on user roles, making it ideal for real-time enterprise environments where security and efficiency are critical.
- **Key features:**

Features	Description
Data Import & Mapping	Imports employee data from external sources using Import Sets & Transform Maps.
Dot-Walking	Automatically pulls related fields like Department from linked user records.
Access Control (ACL)	Restricts field/table-level access based on user roles.
Role-Based Access Management	Defines different permissions for admin, HR, and IT users.

Custom Tables and Fields	Creates tailored data structures to store employee and training data.
Dynamic Reporting	Enables filtered and department-wise reporting using imported data.
Testing with User Impersonation	Verifies data visibility/editability using impersonated user sessions.
Scalability and Performance	Designed to handle large datasets with fast loading and secure operations.

3. Project Ideation Phase

- **Project Title:** Importing & Securing Data in ServiceNow
- **Problem Statement:** Linking each record to an employee and pulling some employee details (like department) into the record for easier reporting.

4. Requirement Analysis Phase

- **Tables:** Define custom table to store employee data.
- **Import Data:** Load data via Import Sets.
- **Dot-Walking:** Auto-pull department using reference field.
- **Access Control List (ACL):** Secure fields based on roles.
- **Roles:** Create HR Manager role
- **Results:** Test outcome—verify links and field population.
- **Conclusion:** Evaluate success and readiness for deployment.

5. Project Planning Phase

1. Project Timeline:

- Break your project into phases:
 - Ideation
 - Requirement Analysis
 - Design
 - Development (Import, ACL, Roles setup)

- Testing
- Report generation
- Review & Conclusion

2. Risk Management:

Risk	Probability	Impact	Mitigation Strategy
Data import fails due to format	Medium	High	Validate CSV before import
ACLs restrict legitimate access	Low	Medium	Test roles thoroughly before deploy
Dot-walking does not auto-populate	Medium	High	Script include fallback logic

3. Task Allocation:

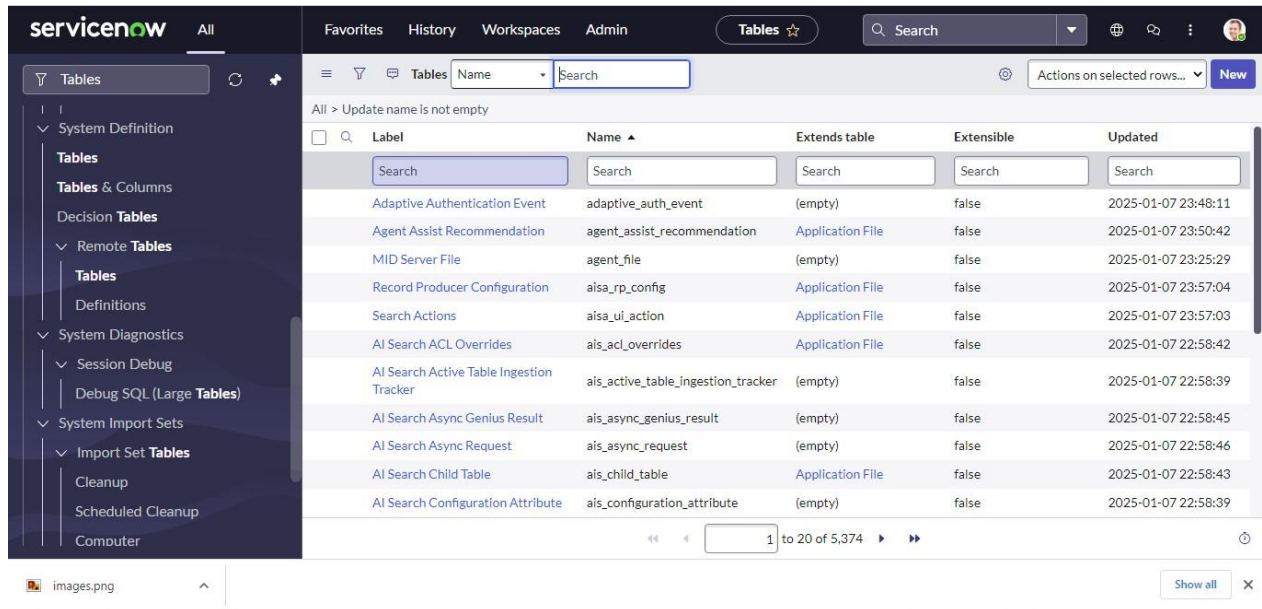
Task	Assigned To	Time Estimate	Tools Required
Import Table Setup	Developer	2 Days	ServiceNow Studio
Transform Map Configuration	Developer	2 Days	Import Set, Map Script
ACL Creation	Admin	1 Days	ACL Editor
Dot-walking Setup	Developer	1 Days	Dictionary Field Config
Reporting Dashboard	Analyst	1 Days	Report Builder

6. Project Design Phase

1. Create Table

- Open service now.
- Click on **All** >> search for **Tables**

- Select Tables under **system security**
- Click on **New**



- Fill the following details to create a new Table

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: Application:

* Name: Create module: ☒

Extends table: Create mobile module: ☒

Add module to menu:

New menu name:

Columns Controls Application Access

Table Columns Type Search

Dictionary Entries

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

- Add the following fields:
- **Training Name** (Type: **String**)
- **Completion Date** (Type: **Date**)
- **Status** (Type: **Choice**)
- **Employee** (Type: **Reference**), (Reference field to **sys_user** table)

servicenow All Favorites History Admin : Table - Employee Training Records

Search

Table Employee Training Records

Columns * Controls Application Access

Table Columns Type Search

1 to 10 of 10 New

Dictionary Entries

	Column label	Type	Reference	Max length	Default value	Display
×	Status	Choice	(empty)		40	false
×	Completion Date	Date	(empty)		40	false
	Updated	Date/Time	(empty)		40	false
	Created	Date/Time	(empty)		40	false
	Updates	Integer	(empty)		40	false
×	Employee	Reference	User		32	false
×	Training Name	String	(empty)		40	false
	Created by	String	(empty)		40	false
	Updated by	String	(empty)		40	false
	Sys ID	Sys ID (GUID)	(empty)		32	false
+	Insert a new row...					

images.png Show all

- Click on **submit**
- Click on Choice and Add to choices in the **Dictionary Entry Status**
- **Right click** on **Status** Field
- Select **Configure Dictionary**
- Enter **choices** under **Related list**(choices)

servicenow All Favorites History Admin : Dictionary Entry - Status

Search

Dictionary Entry Status

Create Choice List Delete Column Update

Create Choice List Delete Column Update

Related Links

Show Table
Run Point Scan
Advanced view

Access Controls Choices (2) Attributes Labels (1)

Label Search

Actions on selected rows... New

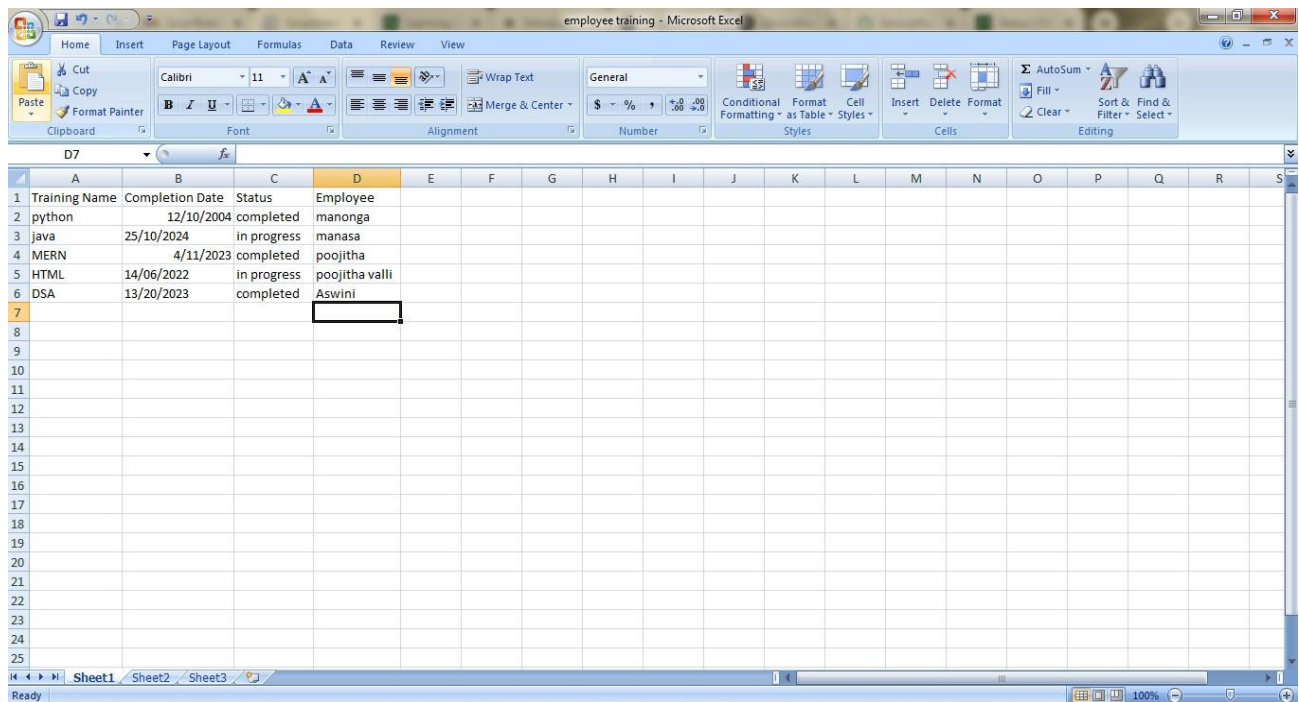
Choices

	Label	Value	Language	Sequence	Inactive	Updated
<input type="checkbox"/>	Completed	c	en		false	2025-06-20 22:41:18
<input type="checkbox"/>	Inprogress	ip	en		false	2025-06-20 22:40:56
+	Insert a new row...					

1 to 2 of 2

2. Create Data

- Create XLSX sheet for Training Employee table
- Sheet fields will be:
 - ✓ Training Name
 - ✓ Completion Date
 - ✓ Status
 - ✓ Employee



The screenshot shows a Microsoft Excel window titled "employee training - Microsoft Excel". The ribbon includes Home, Insert, Page Layout, Formulas, Data, Review, and View. The Home ribbon is active, showing Font, Alignment, Number, Styles, Cells, and Editing groups. The worksheet contains a table with the following data:

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1	Training Name	Completion Date	Status	Employee															
2	python	12/10/2004	completed	manonga															
3	java	25/10/2024	in progress	manasa															
4	MERN	4/11/2023	completed	poojitha															
5	HTML	14/06/2022	in progress	poojitha valli															
6	DSA	13/20/2023	completed	Aswini															
7																			
8																			
9																			
10																			
11																			
12																			
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24																			
25																			

3. Importing Data

- Open service now.
- Click on All >> search for **System Import Sets**
- Select **Load Data** and **Upload File** that you have already created.
- **Label:** Employee Training
- **Name:** u_employee_training

dev220069.service-now.com/now/nav/ui/classic/params/target/create_import_set.do

service-now All

system i

FAVORITES

No Results

ALL RESULTS

- System Import Sets
 - Load Data
 - Create Transform Map
 - Run Transform
- Administration
 - Data Sources
 - Robust Import Set Transform
 - ETL Definitions
 - Transform Maps
 - Scheduled Imports
 - Execution Contexts
- Advanced

Load Data

Submit

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...ning.xlsx

Sheet number 1

Header row 1

Submit

- Click on **Submit**.

service-now All

system i

FAVORITES

No Results

ALL RESULTS

- System Import Sets
 - Load Data
 - Create Transform Map
 - Run Transform
- Administration
 - Data Sources
 - Robust Import Set Transform
 - ETL Definitions
 - Transform Maps
 - Scheduled Imports
 - Execution Contexts
- Advanced

ServiceNow

Search

Progress

Name ImportProcessor

State Complete

Completion code Success

Message Processed: 5, inserts 5, updates 0, errors 0, empty and ignored 0, ignored errors 0 (0:00:01.221)

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_employees_training

Create transform map Create a transform map for the newly staged data

Import log View the import log

- Click on **Create Transform Map**

servicenow All Favorites History Admin Table Transform Map - New Record

system i

FAVORITES
No Results

ALL RESULTS

- System Import Sets
 - Load Data
 - Create Transform Map
 - Run Transform
- Administration
 - Data Sources
 - Robust Import Set Transform...
 - ETL Definitions
 - Transform Maps
 - Scheduled Imports
 - Execution Contexts
- Advanced

* Name

* Source table employees training [u_employ...]

Application Global

Created

* Target table -- None --

Order 100

Run script

Active

Run business rules

Enforce mandatory fields No

Copy empty fields

Create new record on empty coalesce fields

Submit

Related Links

[Auto Map Matching Fields](#)

[Mapping Assist](#)

- Give **Name** and **Target Table** Name to store the sheet data

servicenow All Favorites History Admin Table Transform Map - employees training

system im

FAVORITES
No Results

ALL RESULTS

- System Import Sets
 - Load Data
 - Create Transform Map
 - Run Transform
- Administration
 - Data Sources
 - Robust Import Set Transform...
 - ETL Definitions
 - Transform Maps
 - Scheduled Imports
 - Execution Contexts
- Advanced

Related Links

[Auto Map Matching Fields](#)

[Mapping Assist](#)

[Validate Coalesce Fields](#)

[Transform](#)

[Index Coalesce Fields](#)

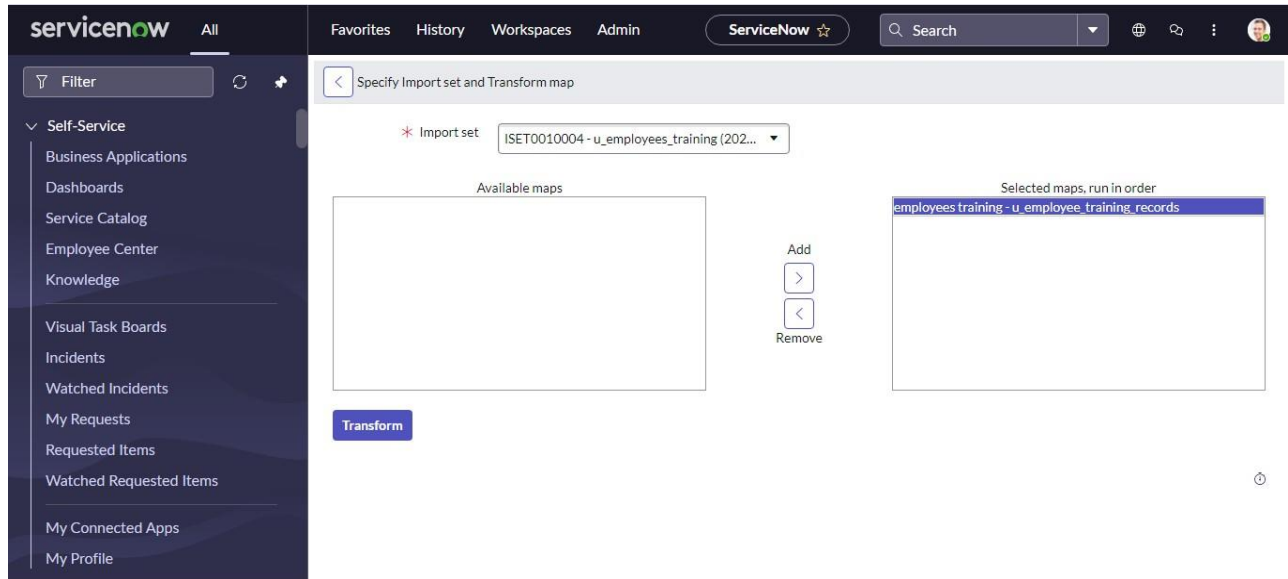
[Run Point Scan](#)

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

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

1 to 4 of 4

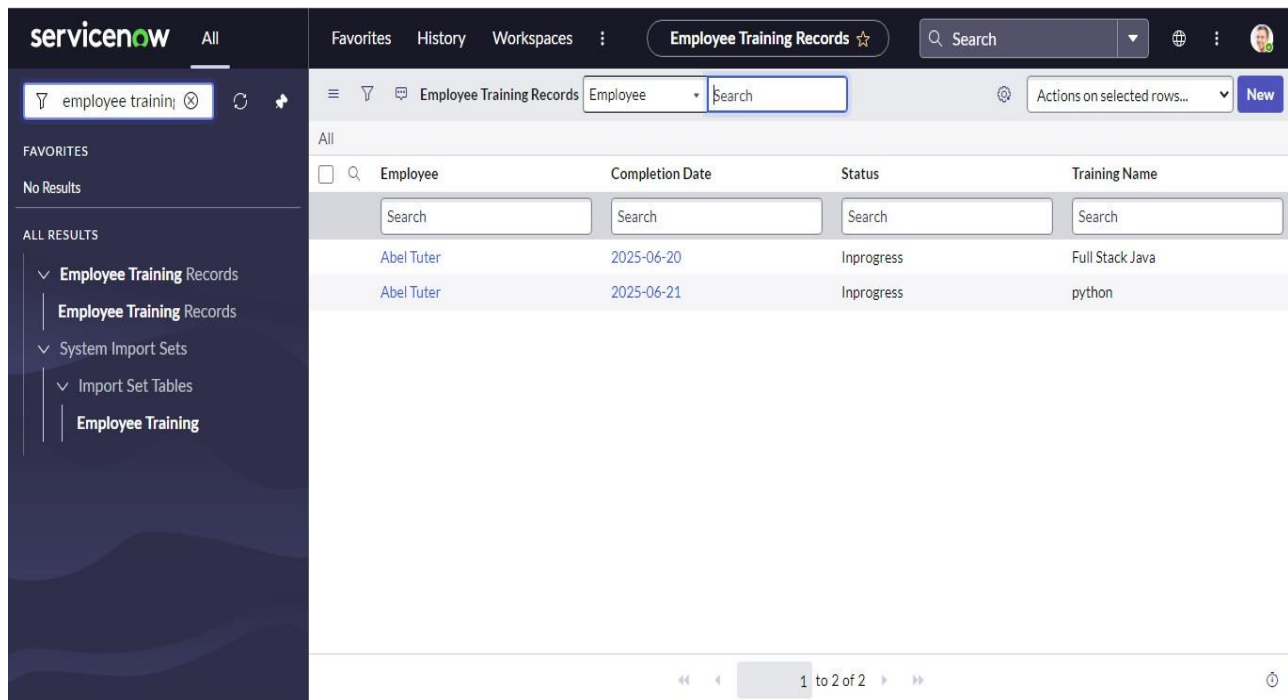
- Click On **Submit**
- Click on **Run Transform**



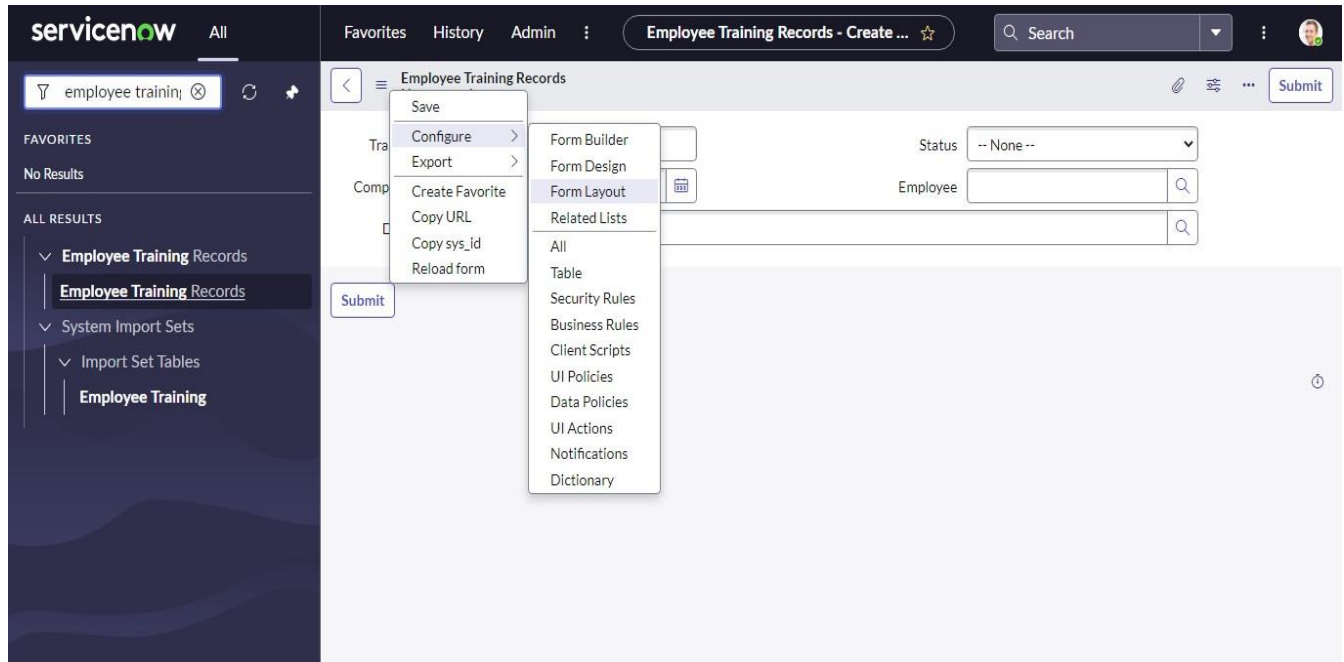
- Click on **Transform**

4. Dot-Walking

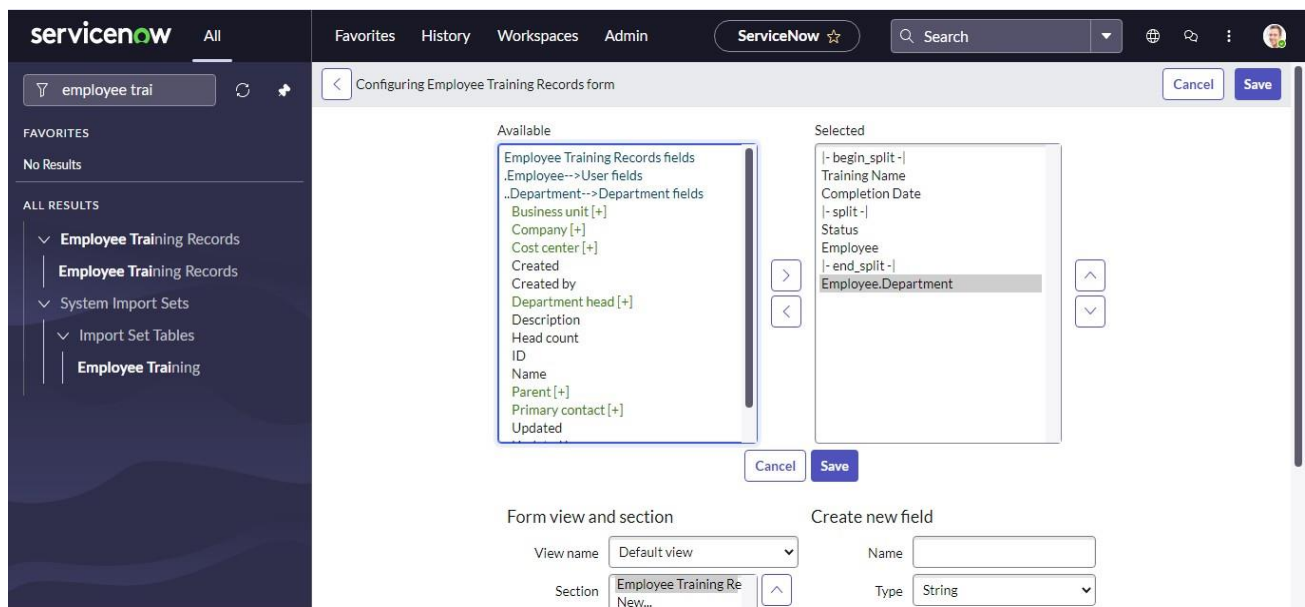
- Using “**Dot Walking**” To Access Employee Department Information.
- Click on **All** >> **Search** the **employee training records** table.
- Click on **New**, the form will open



- Go to the **Form Context Menu>>Configure>>Form Layout**



- Search for customer orders
- Add the “**Employee Department**” field by using dot walking
- Select the field and **Save** changes



- Now you can see the field in the **Form view**.

The screenshot shows the ServiceNow interface for creating a new record in the 'Employee Training Records' table. The left sidebar contains navigation links under 'Self-Service', including Business Applications, Dashboards, Service Catalog, Employee Center, Knowledge, Visual Task Boards, Incidents, Watched Incidents, My Requests, Requested Items, Watched Requested Items, My Connected Apps, and My Profile. The main form area has a header with 'Employee Training Records - Create ...' and a search bar. Below the header, there are input fields for 'Training Name', 'Status' (a dropdown menu with '-- None --'), 'Completion Date' (with a calendar icon), 'Employee' (with a search icon), and 'Department' (with a search icon). A 'Submit' button is located at the bottom left of the form area.

5. Access Control List (ACL)

- To add ACL we have to do **Elevate Role** to the “security_admin”
- Click on **All>>ACL>>Create New ACL**
- Define ACL (Employees)
- **Operation:** Read

The screenshot shows the ServiceNow interface for creating a new Access Control List (ACL) for the 'u_employee_trainin...' table. The left sidebar is the same as in the previous screenshot. The main form area has a header with 'Access Control - u_employee_trainin...' and a search bar. Below the header, there are input fields for 'Type' (set to 'record'), 'Operation' (set to 'read'), 'Decision Type' (set to 'Allow If'), 'Application' (set to 'Global'), 'Active' (checked), and 'Advanced' (unchecked). There is also a checkbox for 'Admin overrides' which is checked. The 'Protection policy' is set to '-- None --'. The 'Name' field is set to 'Employee Training Records [u_employee_trainin_r...' and the 'Description' field contains the text 'Allow read for records in u_employee_trainin_records, for users with role admin.' Below the description, there is a section for 'Applies To' with a link to 'No. of records matching the condition: 2'. There are buttons for 'Add Filter Condition' and 'Add "OR" Clause'. Below these buttons, there are dropdown menus for 'choose field', 'oper', and 'value'. At the bottom of the form, there is a section for 'Conditions'.

6. Roles

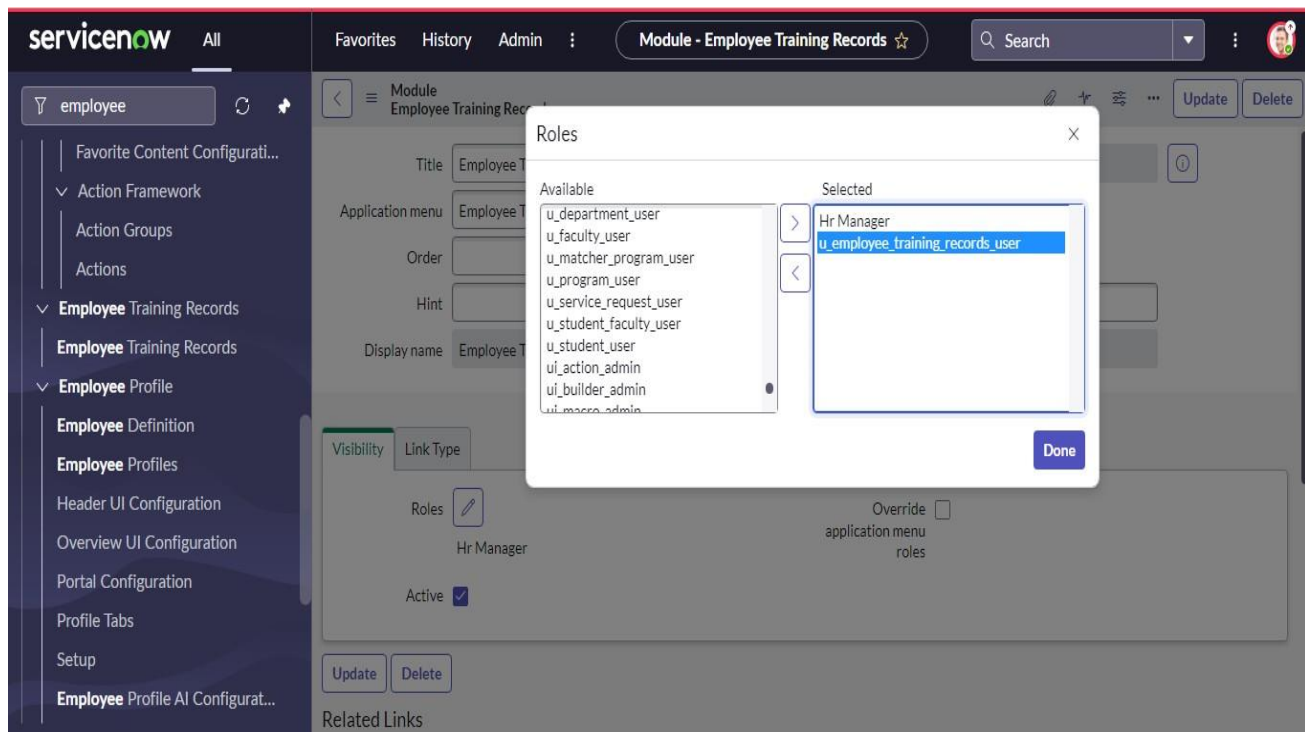
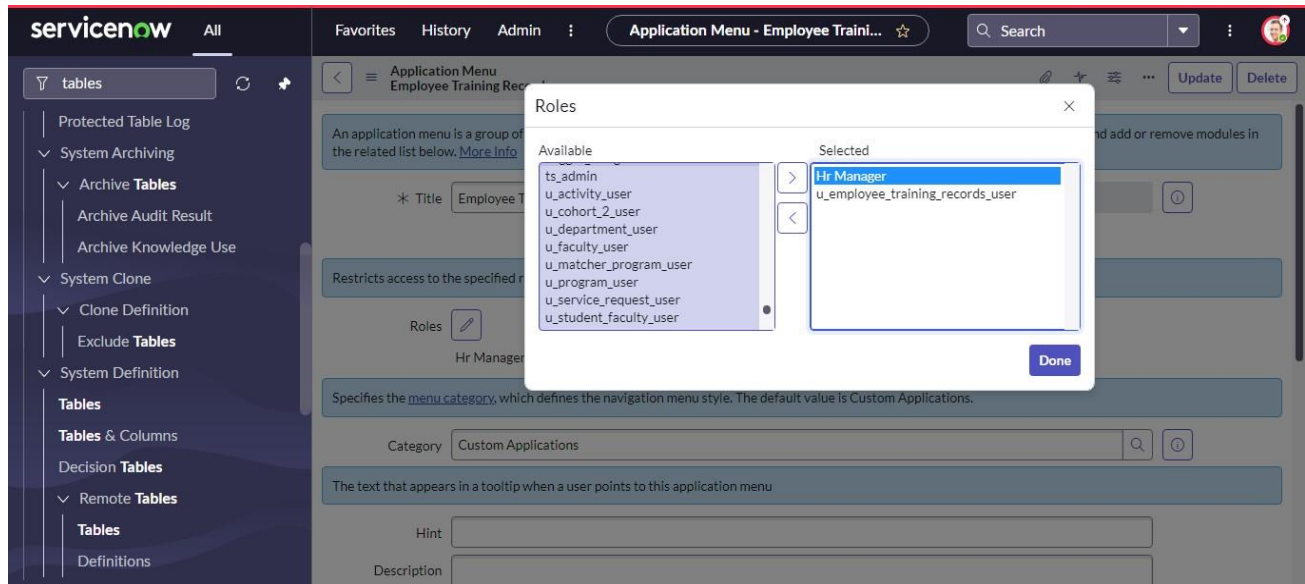
- Click on **All>>Roles>>** create a **New**
- **Role : HR Manager**

The screenshot shows the ServiceNow interface for configuring a role. The left sidebar has a search bar with 'roles' entered. The main content area is titled 'Role - Hr Manager'. It includes fields for 'Name' (Hr Manager), 'Application' (Global), and 'Elevated privilege' (unchecked). There is a 'Description' text area. Below these are 'Update' and 'Delete' buttons. A 'Related Links' section contains a link to 'Run Point Scan'. A tabbed interface shows 'Contains Roles' as the active tab, with a search bar and a table listing roles. The table has a header 'Role = Hr Manager' and a search bar. The table is currently empty.

- **Add that Role in the sys_user(User) table**

The screenshot shows the ServiceNow interface for configuring a module. The left sidebar has a search bar with 'user' entered. The main content area is titled 'Module - Users'. It includes fields for 'Title' (Users), 'Application' (Global), 'Application menu' (System Security), 'Order' (410), 'Hint', and 'Display name' (Users). Below these are 'Update' and 'Delete' buttons. A 'Visibility' tab is active, showing a 'Link Type' section with 'Roles' (Hr Manager) and 'Active' (checked). There is an 'Override application menu roles' checkbox (unchecked). A 'Related Links' section is at the bottom.

- Add this **Role** to the **Tables Application** and **Module**



- Add the **HR Manager** Role to the **sys_user**(table)

Module - Users

Title: Users Application: Global

Application menu: System Security

Order: 410

Hint:

Display name: Users

Link Type

Roles: Hr Manager

Active: ☒

Override application menu roles: ☐

Update Delete

- Now, you can view each employee's department information directly in the **Employee Training Records list view**

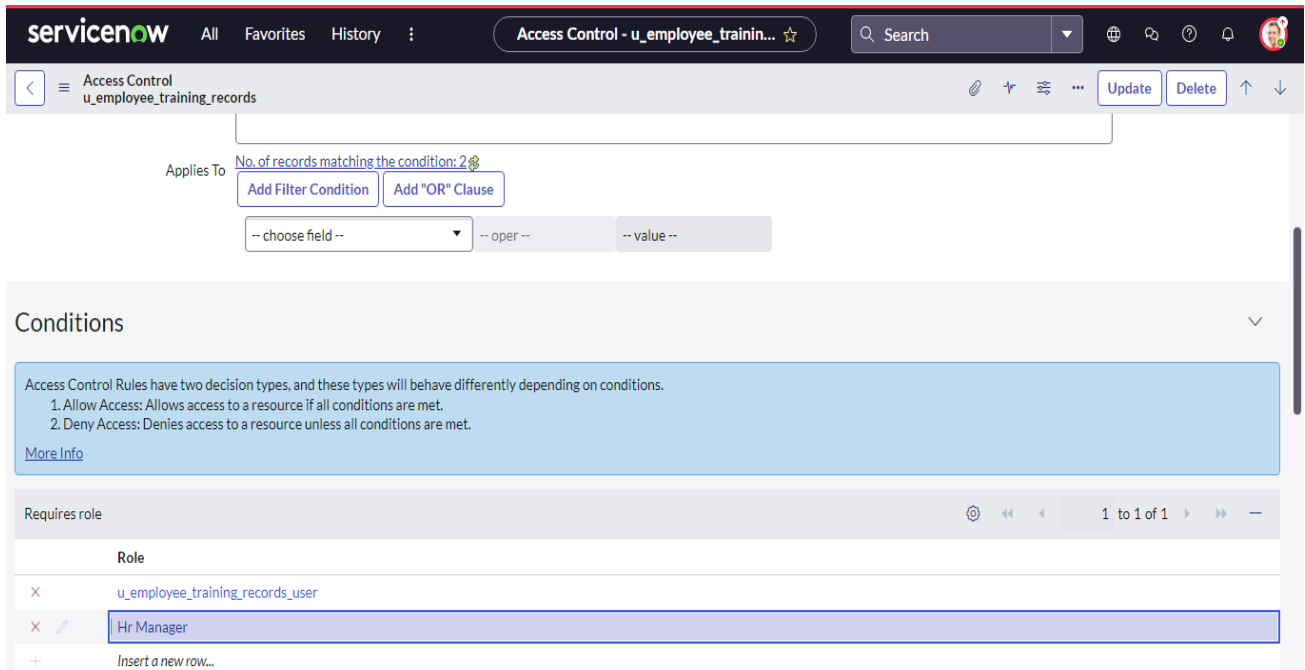
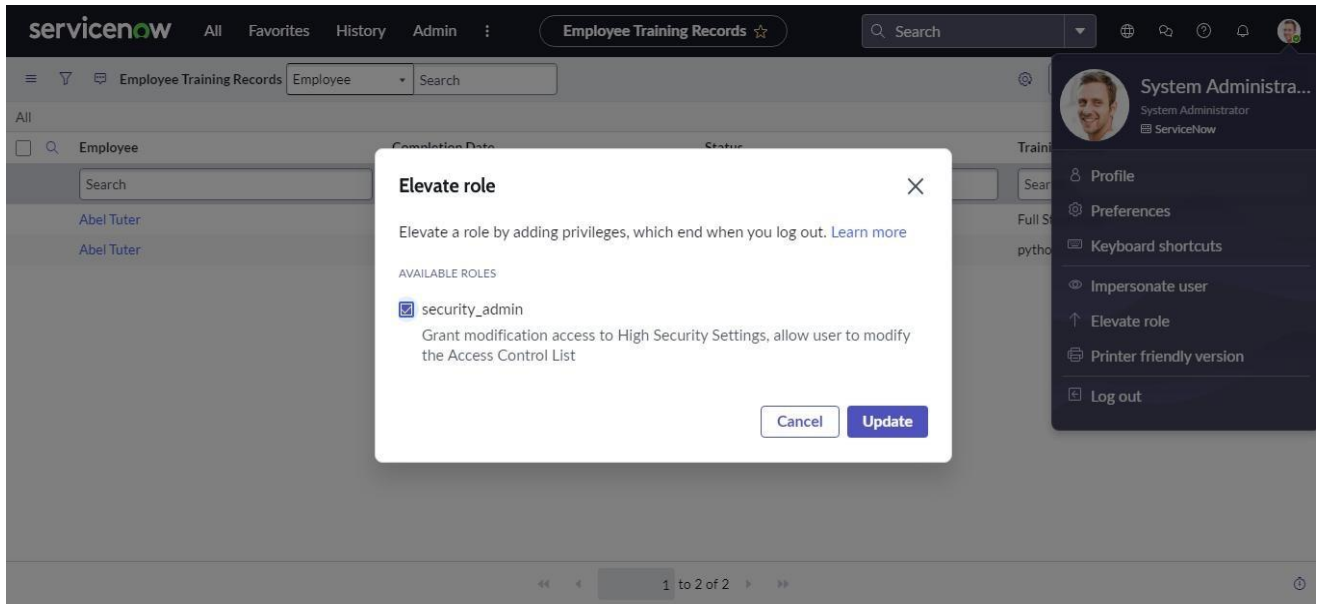
Employee Training Records

Employee Training Records

Employee	Completion Date	Status	Training Name
Abel Tuter	2025-06-20	Inprogress	Full Stack Java
Abel Tuter	2025-06-21	Inprogress	python

1 to 2 of 2

- Create **New ACL** and give **Read Access** to **Employee Training Records Table**



- Give **HR Manager** Role to the **ACL**

The screenshot shows the ServiceNow interface for configuring an Access Control Rule for the resource 'u_employee_training_records'. The breadcrumb trail is 'Access Control - u_employee_trainin...'. The page title is 'Access Control u_employee_training_records'. Below the title, there are buttons for 'Update' and 'Delete'. The 'Applies To' section shows 'No. of records matching the condition: 2' and buttons for 'Add Filter Condition' and 'Add "OR" Clause'. Below this is a dropdown menu for 'choose field --', followed by 'oper --' and 'value --'. The 'Conditions' section contains a blue box with text: '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. 2. Deny Access: Denies access to a resource unless all conditions are met. More Info'. Below this is a 'Requires role' section with a table. The table has a header 'Role' and one row with 'Hr Manager' selected. The table has a pagination bar showing '1 to 1 of 1'.

Access Control - u_employee_trainin...

Access Control u_employee_training_records

Update Delete

Applies To No. of records matching the condition: 2

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.
2. Deny Access: Denies access to a resource unless all conditions are met.

[More Info](#)

Requires role

Role
u_employee_training_records_user
Hr Manager

1 to 1 of 1

- Create Another **New ACL** and Repeat the same Process to the **Write** Access

The screenshot shows the ServiceNow interface for configuring an Access Control Rule for the resource 'u_employee_training_records'. The breadcrumb trail is 'Access Control - u_employee_trainin...'. The page title is 'Access Control u_employee_training_records'. Below the title, there are buttons for 'Update' and 'Delete'. The 'Type' is set to 'record'. The 'Operation' is set to 'write'. The 'Decision Type' is set to 'Allow If'. The 'Application' is set to 'Global'. The 'Active' checkbox is checked. The 'Advanced' checkbox is unchecked. The 'Admin overrides' checkbox is checked. The 'Protection policy' is set to '-- None --'. The 'Name' is set to 'Employee Training Records [u_employee_training_records]'. The 'Description' is 'Default access control on u_employee_training_records'. The 'Applies To' section shows 'No. of records matching the condition: 2' and buttons for 'Add Filter Condition' and 'Add "OR" Clause'. Below this is a dropdown menu for 'choose field --', followed by 'oper --' and 'value --'. The 'Conditions' section is visible at the bottom.

Access Control - u_employee_trainin...

Access Control u_employee_training_records

Update Delete

* Type record

* Operation write

Decision Type Allow If

Application Global

Active ☒

Advanced ☐

Admin overrides ☒

Protection policy -- None --

* Name Employee Training Records [u_employee_training_records]

Description Default access control on u_employee_training_records

Applies To No. of records matching the condition: 2

Add Filter Condition Add "OR" Clause

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

Conditions

7. Performance s Functional Testing Phase

- Impersonate the **sys_user** and **Search Employee Training Records**
- Now you can see and **edit** the **Fields**

The screenshot shows the ServiceNow interface for the 'Employee Training Records' list. The left sidebar contains a navigation menu with 'employee training' selected. The main area displays a table with the following data:

Employee	Completion Date	Status	Training Name
Abel Tuter	2025-06-20	Inprogress	Full Stack Java
Abel Tuter	2025-06-21	Inprogress	python

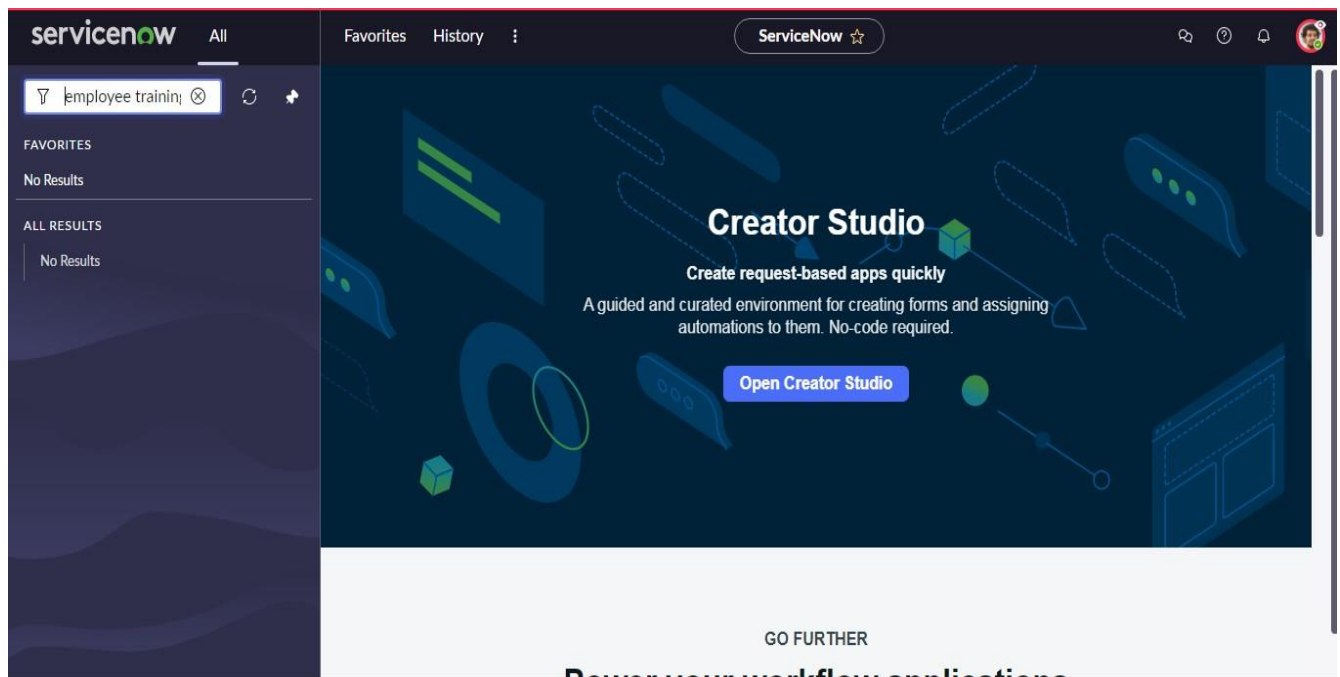
At the bottom of the screen, a status bar indicates 'Waiting for dev220069.service-now.com...' and a pagination control shows '1 to 2 of 2'.

The screenshot shows the 'Employee Training Records - Create ...' form. The form contains the following fields:

- Training Name:
- Status:
- Completion Date:
- Employee:
- Department:

A 'Submit' button is located at the bottom left of the form area.

- Impersonate the other User you **CANNOT** See the Table



- Successful linking of employee records
- Dot-walking retrieves department info accurately
- ACLs protect sensitive fields
- Role-based access is enforced properly

8. Final Conclusion

The ServiceNow project successfully demonstrates how to **import, link, secure, and display** employee-related data using best practices including **dot-walking** and **ACLs**. This setup ensures secure, efficient, and scalable reporting for real-world enterprise needs.