

# Importing & Securing Data in ServiceNow

## Project Documentation

### 1. Introduction

- **Project Name:** Importing & Securing Data in ServiceNow
- **Team ID:** LTVIP2026TMIDS76629
- **Team Leader:** Gorusu Prabhas
- **Team Members:** Venkata Sri Dharani Saladi, Sagarapu Anitha, Priyanka Sharmila Nallamilli

### 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, Role's 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 includes 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

The screenshot shows the ServiceNow interface with the 'Tables' module selected in the left sidebar. The main area displays a list of tables, including 'Adaptive Authentication Event', 'Agent Assist Recommendation', 'MID Server File', 'Record Producer Configuration', 'Search Actions', 'AI Search ACL Overrides', 'AI Search Active Table Ingestion Tracker', 'AI Search Async Genius Result', 'AI Search Async Request', 'AI Search Child Table', and 'AI Search Configuration Attribute'. The list includes columns for Label, Name, Extensible, Extensible, and Updated.

- Fill the following details to create a new Table

The screenshot shows the 'Table - New Record' creation form. The 'Label' field is set to 'employee training records' and the 'Name' field is set to 'u\_employee\_training\_records'. Under the 'Application' section, 'Global' is selected. Checkboxes for 'Create module' and 'Create mobile module' are checked. A dropdown for 'Add module to menu' is set to '-- Create new --' and the 'New menu name' is 'employee training records'. The 'Columns' tab is selected, showing a table with columns for 'Column label', 'Type', 'Reference', 'Max length', 'Default value', and 'Display'. A note at the top states: '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.' A link to 'More Info' is also present.

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

The screenshot shows the configuration page for the 'Employee Training Records' table. The 'Columns' tab is selected, displaying a table with columns for 'Column label', 'Type', 'Reference', 'Max length', 'Default value', and 'Display'. The table includes rows for 'Status' (Choice type, max length 40, default false), 'Completion Date' (Date type, max length 40, default false), 'Updated' (Date/Time type, max length 40, default false), 'Created' (Date/Time type, max length 40, default false), 'Updates' (Integer type, max length 40, default false), 'Employee' (Reference type to 'User' table, max length 32, default false), 'Training Name' (String type, max length 40, default false), and 'Created by' (String type, max length 40, default false). Buttons for 'Delete', 'Update', and 'Delete All Records' are visible at the top right.

Updated by	String	(empty)	40	false
Sys ID	Sys ID (GUID)	(empty)	32	false
+ Insert a new row...				

images.png

Show all X

- 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)**

Label	Value	Language	Sequence	Inactive	Updated
Completed	C	en		false	2025-06-20 22:41:18
In progress	ip	en		false	2025-06-20 22:40:56

## 2. Create Data

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

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	mananga														
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														
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## 3. Importing Data

- Other service now search for System Import Sets
- Select Load Data and Upload File that you have already created.
- Label: Employee Training
- Name: u\_employee\_training

The screenshot shows the ServiceNow interface for creating a System Import Set. On the left, the navigation bar includes 'Favorites' and 'No Results'. The main menu under 'ALL RESULTS' is expanded to show 'System Import Sets', which contains 'Load Data', 'Create Transform Map', 'Run Transform', 'Administration' (with sub-options like 'Data Sources', 'Robust Import Set Transformer...', 'ETL Definitions', 'Transform Maps', 'Scheduled Imports', 'Execution Contexts', and 'Advanced'), and 'Advanced'. The right panel is titled 'Load Data' and contains the following fields:

- Import set table:** Radio buttons for 'Create table' (selected) and 'Existing table'.
- Label:** Text input field containing 'employee training'.
- Name:** Text input field containing 'u\_employee\_training'.
- Source of the import:** Radio buttons for 'File' (selected) and 'Data source'.
- File:** A 'Choose File' button with the path 'employee\_training.xlsx' displayed.
- Sheet number:** Text input field containing '1'.
- Header row:** Text input field containing '1'.
- Submit:** A blue 'Submit' button at the bottom right.

- Click on Submit.

The screenshot shows the ServiceNow interface after the import has been submitted. The left sidebar remains the same. The right panel displays the 'Progress' section for the import set 'ImportProcessor':

- 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)

Below the progress section, there is a 'Next steps...' section with the following options:

- 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

The screenshot shows the ServiceNow interface for creating a Table Transform Map. The left sidebar includes 'Favorites' and 'No Results'. The main menu under 'ALL RESULTS' is expanded to show 'System Import Sets', which contains 'Load Data', 'Create Transform Map', 'Run Transform', 'Administration' (with sub-options like 'Data Sources', 'Robust Import Set Transformer...', 'ETL Definitions', 'Transform Maps', 'Scheduled Imports', 'Execution Contexts', and 'Advanced'), and 'Advanced'. The right panel is titled 'Table Transform Map - New Record' and contains the following fields:

- Name:** Text input field.
- Source table:** A dropdown menu showing 'employees training [u\_employee...]'.
- Application:** Text input field containing 'Global'.
- Created:** Text input field.
- Target table:** A dropdown menu showing 'None'.
- Order:** Text input field containing '100'.
- Active:** A checked checkbox.
- Run business rules:** A checked checkbox.
- Enforce mandatory fields:** A dropdown menu showing 'No'.
- Copy empty fields:** An unchecked checkbox.
- Create new record on empty coalesce fields:** An unchecked checkbox.
- Run script:** An unchecked checkbox.
- Submit:** A blue 'Submit' button at the bottom.

Below the form, there is a 'Related Links' section with links to 'Auto Map Matching Fields' and 'Mapping Assist'.

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

The screenshot shows the ServiceNow Table Transform Map interface. The title bar says "Table Transform Map - employees tr...". The left sidebar has a search bar for "system im" and sections for Favorites, ALL RESULTS, System Import Sets, Administration, and Advanced. The main area displays a table titled "Field Maps (4)". The table has columns for "Source field", "Target field", and "Coalesce". The data is as follows:

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

- Click On Submit
- Click on Run Transform

The screenshot shows the ServiceNow Import Set and Transform Map interface. The title bar says "ServiceNow". The left sidebar has a search bar for "Filter" and sections for 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, and My Profile. The main area has a search bar for "Specify Import set and Transform map" and a dropdown for "Import set: ISET0010004 - u\_employee\_training (202...)".

The interface includes two panels: "Available maps" (empty) and "Selected maps, run in order" (containing "employees training - u\_employee\_training.records"). There are "Add" and "Remove" buttons between the panels. A "Transform" button is located at the bottom of the available maps panel.

- 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

The screenshot shows the ServiceNow Employee Training Records table. The title bar says "Employee Training Records". The left sidebar has a search bar for "employee trainin" and sections for Favorites, ALL RESULTS, and Employee Training Records.

The main area displays a table with columns: Employee, Completion Date, Status, and Training Name. A single record is shown for "Abel Tuter" with a completion date of "2025-06-20", status "Inprogress", and training name "Full Stack Java". There are search bars for each column.

Employee Training Records

- System Import Sets
- Import Set Tables
- Employee Training**

Abel Tuter 2025-06-21 In progress python

1 to 2 of 2

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

The screenshot shows the ServiceNow interface for 'Employee Training Records'. A context menu is open over a record, with 'Configure' selected. Under 'Configure', 'Form Layout' is highlighted. The main pane displays fields like 'Status' (None), 'Employee', and search filters.

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

The screenshot shows the 'Form Builder' dialog for 'Configuring Employee Training Records form'. It has two main sections: 'Available' and 'Selected'. The 'Available' section lists fields such as Employee, Training Name, Completion Date, Status, Employee, and Employee.Department. The 'Selected' section contains Employee.Department. At the bottom, there are buttons for 'Cancel' and 'Save'.

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

Employee Training Records - Create ...

Training Name: [ ] Status: --None--

Completion Date: [ ] Employee: [ ]

Department: [ ]

**Submit**

## 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

Access Control - u\_employee\_training\_records

Type: record Operation: read Active:

Decision Type: Allow If Admin overrides:  Advanced:

Protection policy: -- None --

Name: Employee Training Records [u\_employee\_training\_r...]

Description: Allow read for records in u\_employee\_training\_records, for users with role admin.

Applies To: No. of records matching the conditions: 2

Conditions

## 6. Roles

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

Role - Hr Manager

Name: Hr Manager Application: Global

Elevated privilege:

Description: [ ]

Update Delete

Related Links: Run Point Scan

Contains Roles Applications with Role (1) Modules with Role (2) Custom Tables

for text Search

Role = Hr Manager

Contains

- Add that Role in the sys\_user(User) table

Favorites History Workspaces Module - Users Search

Title: Users Application: Global

Application menu: System Security Order: 410

Hint:

Display name: Users

Visibility Link Type

Roles: Hr Manager

Override application menu roles:

Active:

Update Delete

Add this Role to the Tables Application and Module

Tables Application Menu - Employee Training Records Search

Available: ts\_admin, u\_activity\_user, u\_cohort\_2\_user, u\_department\_user, u\_faculty\_user, u\_matcher\_program\_user, u\_program\_user, u\_service\_request\_user, u\_student\_faculty\_user

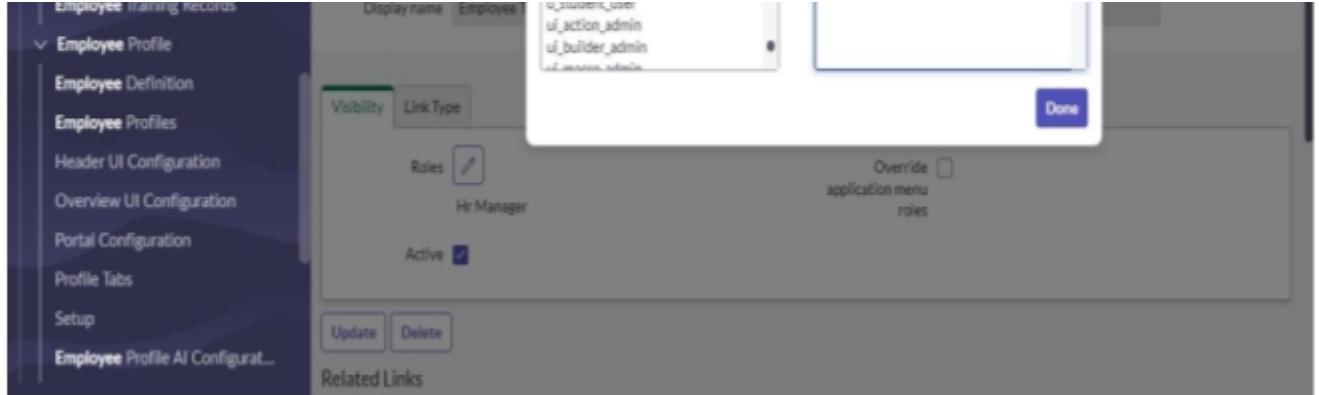
Selected: Hr Manager, u\_employee\_training\_records\_user

Done

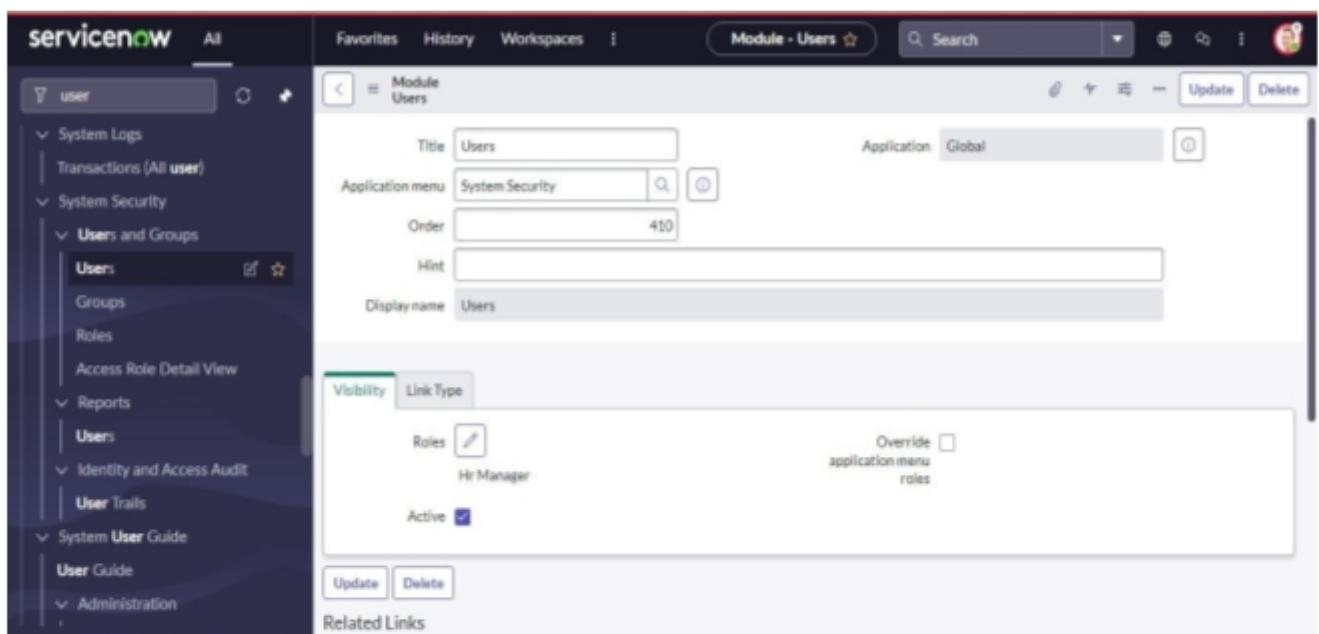
Employee Module - Employee Training Records Search

Available: u\_department\_user, u\_faculty\_user, u\_matcher\_program\_user, u\_program\_user, u\_service\_request\_user, u\_student\_faculty\_user

Selected: Hr Manager, u\_employee\_training\_records\_user



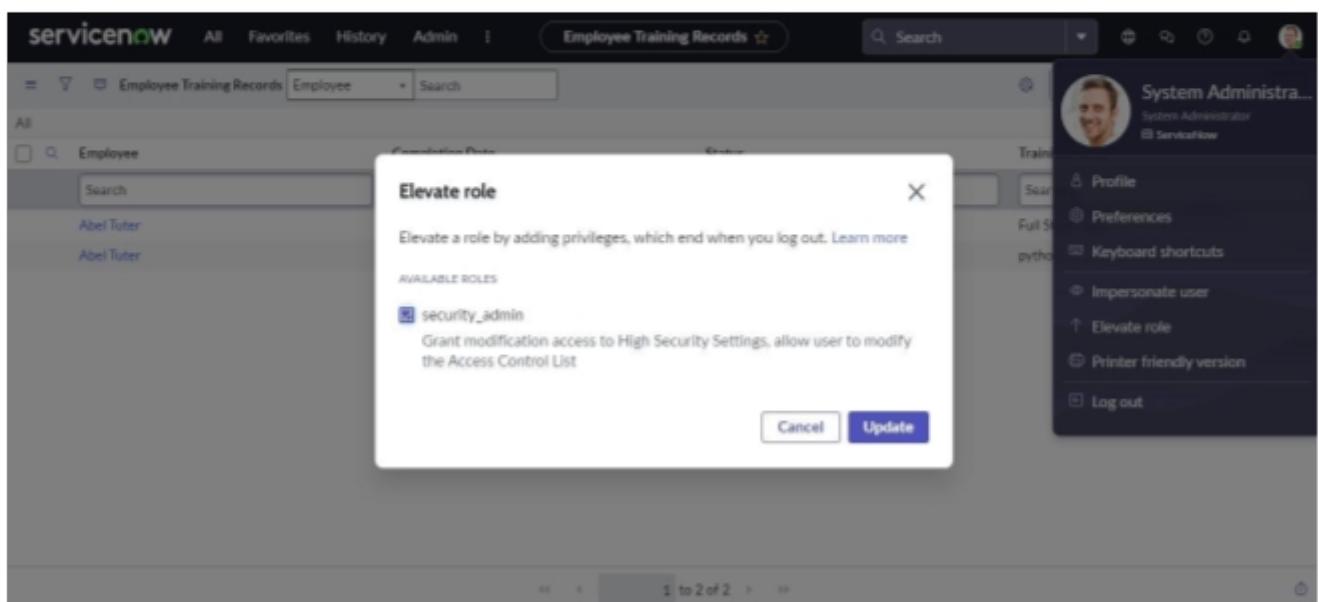
Add the HR Manager Role to the sys\_user(table)



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

Employee Training Records			
	Employee	Completion Date	Status
	Abel Tuter	2025-06-20	Inprogress
	Abel Tuter	2025-06-21	Inprogress

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



The screenshot shows the ServiceNow Access Control - `u_employee_training_records` rule configuration. The "Conditions" section is expanded, showing the following text: "Access Control Rules have two decision types, and these types will behave differently depending on conditions." It lists two types: "1. Allow Access: Allows access to a resource if all conditions are met." and "2. Deny Access: Denies access to a resource unless all conditions are met." There is a "More Info" link below this text. The "Requires role" section shows a list of roles: `u_employee_training_records_user` and `Hr Manager`. A note at the bottom says "Insert a new row...". A bullet point on the left indicates: "• Give HR Manager Role to the ACL".

This screenshot is identical to the previous one, but it shows the `Hr Manager` role has been successfully added to the "Requires role" list. The "Insert a new row..." note is still present at the bottom of the "Conditions" section.

Role

- u\_employee\_training\_records\_user
- Hr Manager
- Insert a new row...

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

Access Control - u\_employee\_trainin... star

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: 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 & Functional Testing Phase

- Impersonate the sys\_user and Search Employee Training Records • Now you can see and edit the Fields

Employee Training Records star

Employee | Search | Actions on selected rows... | New

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

Waiting for dev220503.service-now.com...

Employee Training Records - Create ... star

New record

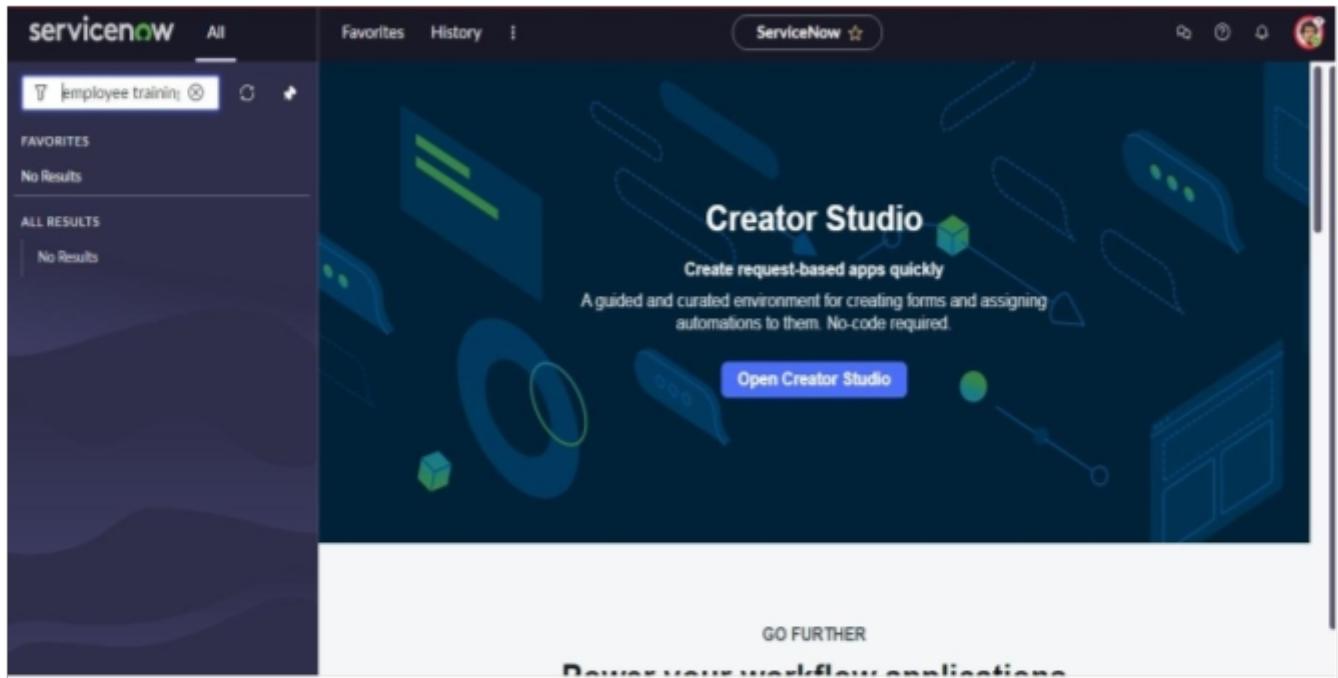
Training Name:  Status:

Completion Date:  Employee:

Department:

Submit

- 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.