

# **ServiceNow project Submission**

**Submitted by**

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# Automating Data Population In ServiceNow: Streamlining Program Management

## Project Overview:

As an IT administrator at a company using ServiceNow, you have been tasked with setting up a data lookup mechanism. This mechanism will help automatically populate certain fields in a custom table called "Program" based on predefined values in another table called "testing lookups". The "Program" table includes fields for technology, tracker, and trainer. The "testing lookups" table contains the same fields and will provide the values used for the lookup.

## Objectives :

### Automated Data Entry and Updates

- Objective: Automate the process of entering or updating records in ServiceNow, such as incidents, changes, service requests, or program-related tasks, based on predefined rules.
- Benefit: This reduces the need for manual data input and ensures that records are always up-to-date, saving time for the team and preventing human error.

### 2. Integration with External Data Sources

- Objective: Integrate ServiceNow with other platforms and systems, such as databases, APIs, or third-party applications, to automatically populate data into the system.
- Benefit: Seamlessly sync data from various sources (e.g., CRM, HR systems, IT tools) to ServiceNow, ensuring that the program management team has a complete view of all relevant information.

### 3. Data Validation and Consistency Checks

- Objective: Implement automated validation rules to ensure data integrity and consistency before populating into ServiceNow.
- Benefit: This ensures that only accurate and valid data is entered into the system, minimizing the chances of data-related issues affecting program management.

## Key Features and Concepts Used :

Knowledge on: Applications, Tables, Fields.

Knowledge on: Data lookup Definitions.

## Detailed Steps to Solution :

### Implementation

#### Step 1 : Creating Custom Table

1. Open “Tables” >> New.
2. Give the label name as “ program ”.
3. Click on Submit.

Table New record

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: Program

\* Name: u\_program

Extends table: [Search]

Application: Global

Create module: ☒

Create mobile module: ☒

Add module to menu: -- Create new --

New menu name: Program

Columns Controls Application Access

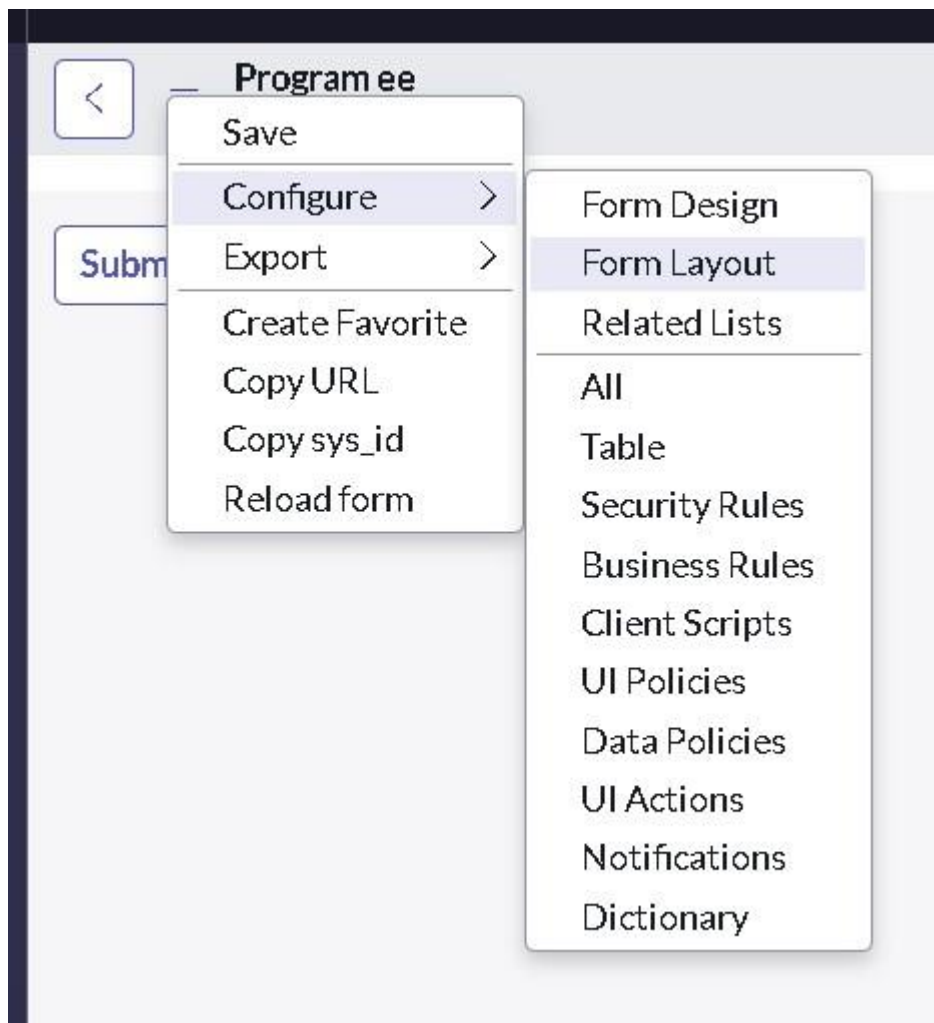
Table Columns for text Search

Dictionary Entries

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

Submit Cancel

4. Click on new to open record, click on the Additional Actions and go to configure >> select Form Layout.



5. Create fields as
  - a. Name : Technology
  - b. Type : choice
  
6. Click on Add
7. And follow the same instructions 8. For two more fields are
  - a. Tracker
  - b. Trainer
9. Add them and click on save.

program  
New record

technology -- None--

tracker -- None--

tranier -- None--

Submit

10. Now right click on “ technology ” field click on Configure Choices.
11. Enter the item as “ Salesforce ” and click on Add. 12. Add two more items
  - a. ServiceNow
  - b. Testing
13. Click on save.

< Configuring technology Choices

**Tailoring:** u\_program.u\_technology  
program

Available

Selected

salesforce  
serviceNow  
testing

Add  
Remove

Move up  
Move down

Save Cancel

Enter new item:  Add

14. Follow the same steps from 9 to 13 for remaining two fields.

15. Tracker values are:

- a. Admin
- b. Developer

16. Trainer values are:

- a. Rakesh
- b. Tarakesh
- c. Ajay
- d. Phani
- e. Shivam

17. Click on save.

**Step 2 :** Creating a custom matcher table.

- 1. Open “Tables” >> New.
- 2. Give the label name as “ testing lookup ”.
- 3. Add “ Matcher Field Definition ” in the Extends table field.
- 4. Click on Submit.

Table New record

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: testinglookup

\* Name: u\_testing\_lookup

Extends table: Matcher Field Definitions

Application: Global

Create module: ☒

Create mobile module: ☒

Add module to menu: -- Create new --

New menu name: testinglookup

Columns Controls Application Access

Table Columns for text Search

Dictionary Entries

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

Submit Cancel

- Follow the same steps from 4 to 17 from “ step - 1 ”.
- And add another field from the Form Layout that is “ order ”.
- Click on save.

### Step 3 : Create records in matcher table

- Follow the below figure to create a record.

testinglookup New record

technology: salesforce

Order: 100

tracker: admin

tranier: rakesh

Submit

- Follow the figure to create more records as shown in below figure.



testinglookups					Order	Search	Actions on selected rows...	New
All								
technology	tracker	tranier	Active	Order				
Search	Search	Search	Search	Search				
salesforce	admin	rakesh	true	100				
salesforce	developer	tarakesh	true	200				
serviceNow	admin	ajay	true	300				
serviceNow	developer	shivam	true	400				
testing	admin	shivam	true	500				
testing	developer	shivam	true	600				

#### Step 4 : Create Data Lookup Definition to automate the trainer

1. Search for Data Lookup Definition in All navigation.
2. Click on new.
3. Give name as “ program data lookup ”
4. Select the source table as “ program ”.
5. Select the matcher table as “ testing lookup ”.
6. Click on submit.

Data Lookup Definitions		New record		Submit	
* Name	program data lookup	Application	Global		
* Source Table	program [u_program]	Active	<input checked="" type="checkbox"/>		
* Matcher Table	testinglookup [u_testing]	Run on form change	<input checked="" type="checkbox"/>		
		Run on insert	<input checked="" type="checkbox"/>		
		Run on update	<input type="checkbox"/>		
Submit					

7. Again open the “ program data lookup ” record.
8. Scroll down under matcher field definitions and click on new.

9. Select the source table field : technology
10. And select the matcher table field : technology
11. Exact lookup match : checked.
12. Click on Submit.

Matcher Field Definitions  
New record

Data Lookup: program data lookup

Application: Global

\* Source table field: technology

\* Matcher table field: technology

Exact lookup match: ☒

Submit

13. And create another Matcher field definitions for another field : tracker
14. Click on Setter field definition and click on new
15. Select the source table field : trainer
16. And select the matcher table field : trainer
17. Always replace the field : checked.
18. Click on Submit.

Setter Field Definitions  
New record

Data Lookup: program data lookup

Application: Global

\* Source table field: trainer

\* Matcher table field: trainer

Always replace: ☒

Submit

19. Click on update.

**Data Lookup Definitions**  
program data lookup

\* Name:  Application:  ⓘ

\* Source Table:  Active: ☒

\* Matcher Table:  Run on form change: ☒

Run on insert: ☒ Run on update: ☐

**Matcher Field Definitions (2)** **Setter Field Definitions (1)**

for text Search ⓘ Actions on selected rows...

Data Lookup = program data lookup

	Source table field	Matcher table field	Exact lookup match
<input type="checkbox"/>	u_tracker	u_tracker	false
<input type="checkbox"/>	u_technology	u_technology	true

1 to 2 of 2

## Result

1. Go to the source table “ program ”.
2. Click on new .
3. Select any technology and tracker .
4. To check the trainer is automatically assigned to it.

**program**  
New record

technology:

tracker:

tranier:

## Testing and Validation :

### Automated Data Entry and Updates

- **Objective:** Automate the process of entering or updating records in ServiceNow, such as incidents, changes, service requests, or program-related tasks, based on predefined rules.

- **Benefit:** This reduces the need for manual data input and ensures that records are always up-to-date, saving time for the team and preventing human error.
2. **Integration with External Data Sources**
    - **Objective:** Integrate ServiceNow with other platforms and systems, such as databases, APIs, or third-party applications, to automatically populate data into the system.
    - **Benefit:** Seamlessly sync data from various sources (e.g., CRM, HR systems, IT tools) to ServiceNow, ensuring that the program management team has a complete view of all relevant information.
  3. **Data Validation and Consistency Checks**
    - **Objective:** Implement automated validation rules to ensure data integrity and consistency before populating into ServiceNow.
    - **Benefit:** This ensures that only accurate and valid data is entered into the system, minimizing the chances of data-related issues affecting program management.
  4. **Reporting and Dashboard Automation**
    - **Objective:** Automate the creation of reports and dashboards for program management teams, drawing from data automatically populated in ServiceNow.
    - **Benefit:** This provides real-time insights into key metrics, program status, and resource allocation, allowing managers to make informed decisions quickly.

The screenshot shows a ServiceNow form for creating a new record. The form is titled "program New record". It contains three dropdown menus: "technology" (selected: serviceNow), "tracker" (selected: admin), and "tranier" (selected: shivam). There is a "Submit" button at the bottom left of the form area and another "Submit" button in the top right corner of the form header.

**Key Scenario's addressed by Servicenow for implementation of project:**

**Creating a custom matcher table.**

1. Open "Tables" >> New.
2. Give the label name as " testing lookup ".

3. Add “ Matcher Field Definition ” in the Extends table field.

4. Click on Submit.

The screenshot shows the 'Table' configuration page in ServiceNow. The page title is 'Table' and the subtitle is 'New record'. There are 'Submit' and 'Cancel' buttons at the top right. A yellow banner at the top states: 'ServiceNow recommends creating custom tables in scoped applications. To learn more about creating scoped applications, click [here](#).' Below this, a blue box contains a description: '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](#)'.

The main configuration area includes the following fields:

- \* Label: testinglookup
- \* Name: u\_testinglookup
- Extends table: Matcher Field Definitions (with a search icon and an information icon)
- Application: Global (with an information icon)
- Create module: ☒
- Create mobile module: ☒
- Add module to menu: -- Create new -- (dropdown menu)
- New menu name: testinglookup

Below the configuration fields, there are three tabs: 'Columns', 'Controls', and 'Application Access'. The 'Columns' tab is selected. It shows a 'Table Columns' section with a dropdown set to 'for text' and a search bar. Below this is a 'Dictionary Entries' table with the following columns: Column label, Type, Reference, Max length, Default value, and Display. The table is currently empty, with a placeholder text 'Insert a new row...'.

At the bottom of the page, there are 'Submit' and 'Cancel' buttons.

5. Follow the same steps from 4 to 17 from “ step - 1 ”.

6. And add another field from the Form Layout that is “ order ”.

7. Click on save.

## **Conclusion :**

In conclusion, automating data population in ServiceNow is a powerful approach to enhance program management by increasing efficiency, ensuring data accuracy, and optimizing workflows. By leveraging automation, organizations can reduce the burden of manual data entry, minimize human error, and keep data synchronized across integrated systems. The integration and automation of data-related processes provide program managers with timely insights, enabling better decision-making and resource allocation. Thorough testing and validation are essential to the success of the automation. By employing a comprehensive testing strategy that includes unit, integration, performance, security, and user acceptance testing, organizations can ensure that the automation functions correctly and aligns with business requirements. Continuous monitoring and exception handling mechanisms further guarantee the reliability and scalability of the solution over time. Ultimately, this project not only improves the operational efficiency of program management but also empowers teams to focus on strategic tasks, contributing to the overall growth and success of the organization. The automated solution will serve as a foundation for future enhancements and innovations in data management within ServiceNow.