Automated Network Request Management in ServiceNow

Project Description:

This project aims to design and implement a streamlined, automated solution for managing network-related service requests within ServiceNow. It enables end users to submit requests for network services through a user-friendly self-service portal.

The system leverages ServiceNow's workflow engine, catalog items, and approval processes to ensure requests are properly captured, validated, and routed for fulfillment. Upon submission, requests trigger automated notifications, task assignments, and—where applicable—integration with network automation tools or scripts to fulfill standard requests without manual intervention.

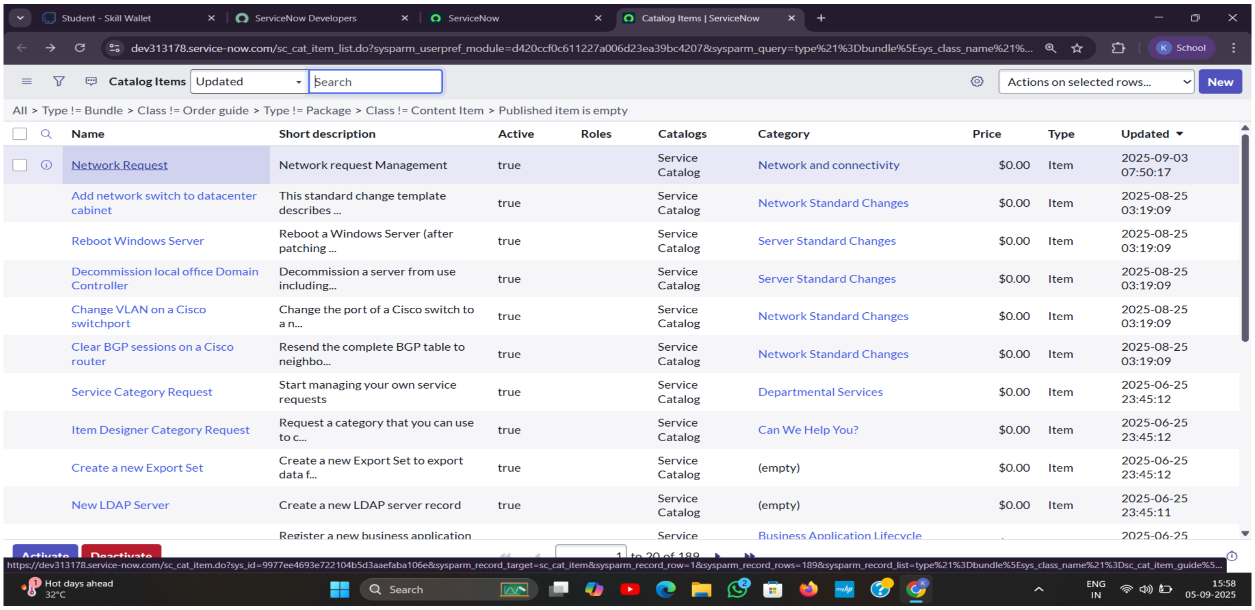
Key Features:

- Custom service catalog for common network requests
- Dynamic forms to capture relevant request details
- Automated approval workflows based on request type and sensitivity
- Integration with infrastructure management or orchestration tools (optional)
- Real-time status updates and notifications to requesters and technicians

Service Catalog Creation

Creation of Servicde Catalog

1. Navigate to Application navigator
2. Click on All >> search for Service Catalog
3. Under Service Catalog>> Maintain items
4. Click on New
5. Fill the details >> Name– Network Request
6. Select Catalog>> Service Catalog
7. Select Category>> Network
8. Fill the Short Description as Network request Management
9. Click on Save.

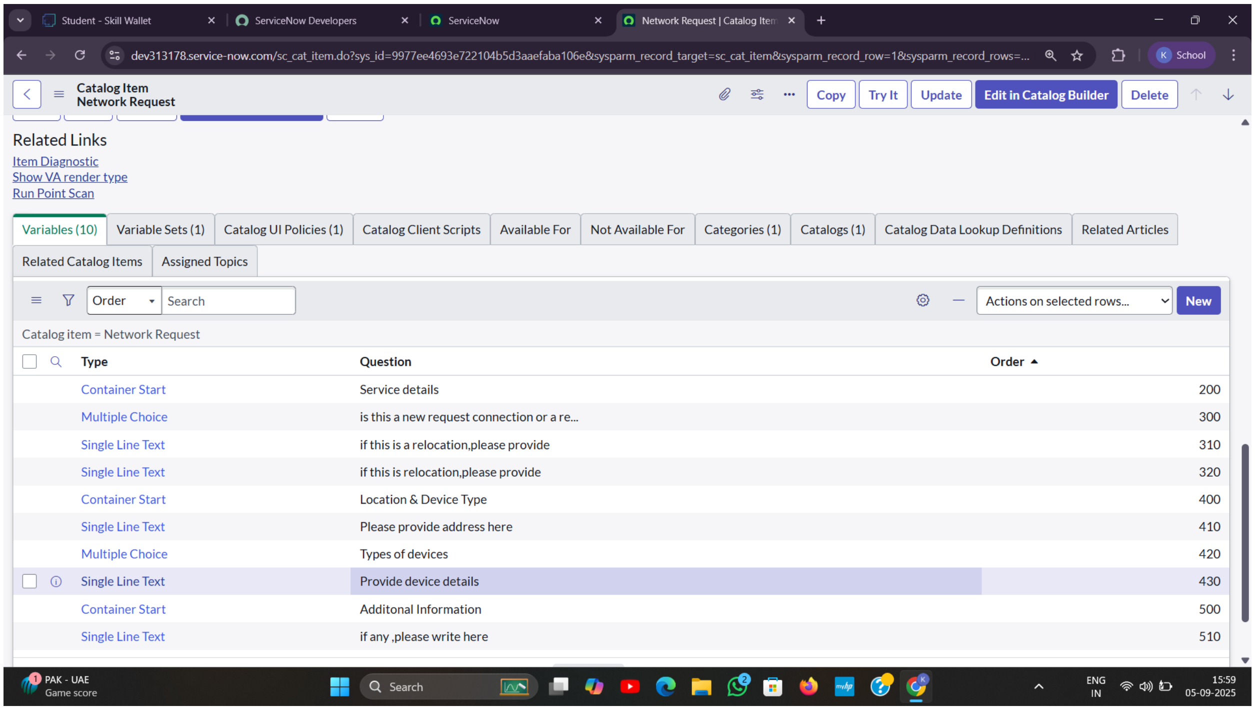


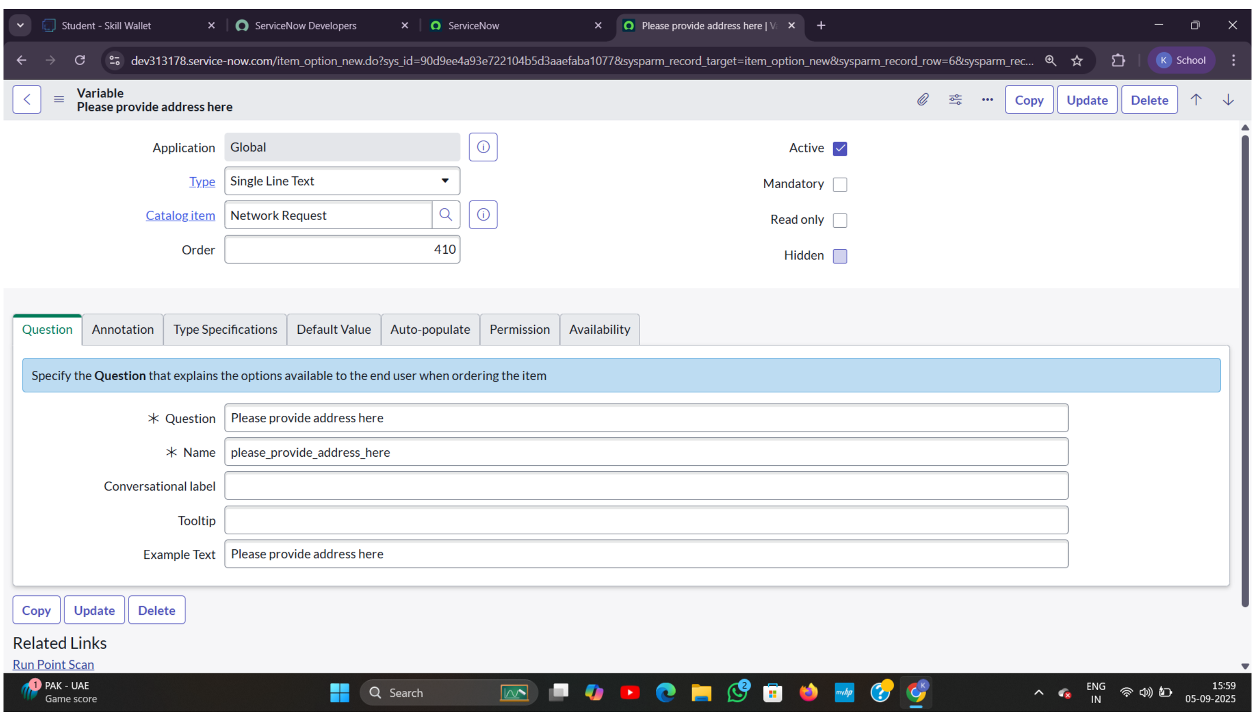
Variables Configuration

Open the catalog item just created. Scroll down to the Variables related list and click New to create form fields.

1. Select Variables type as Single, Multi line text, reference, choices etc as per requirement 2
. Catalog item– Network Request
3. Order–100,200,300,,,,
4. Question– provide the variable label
5. Name–provide the variables name(used for scripting)

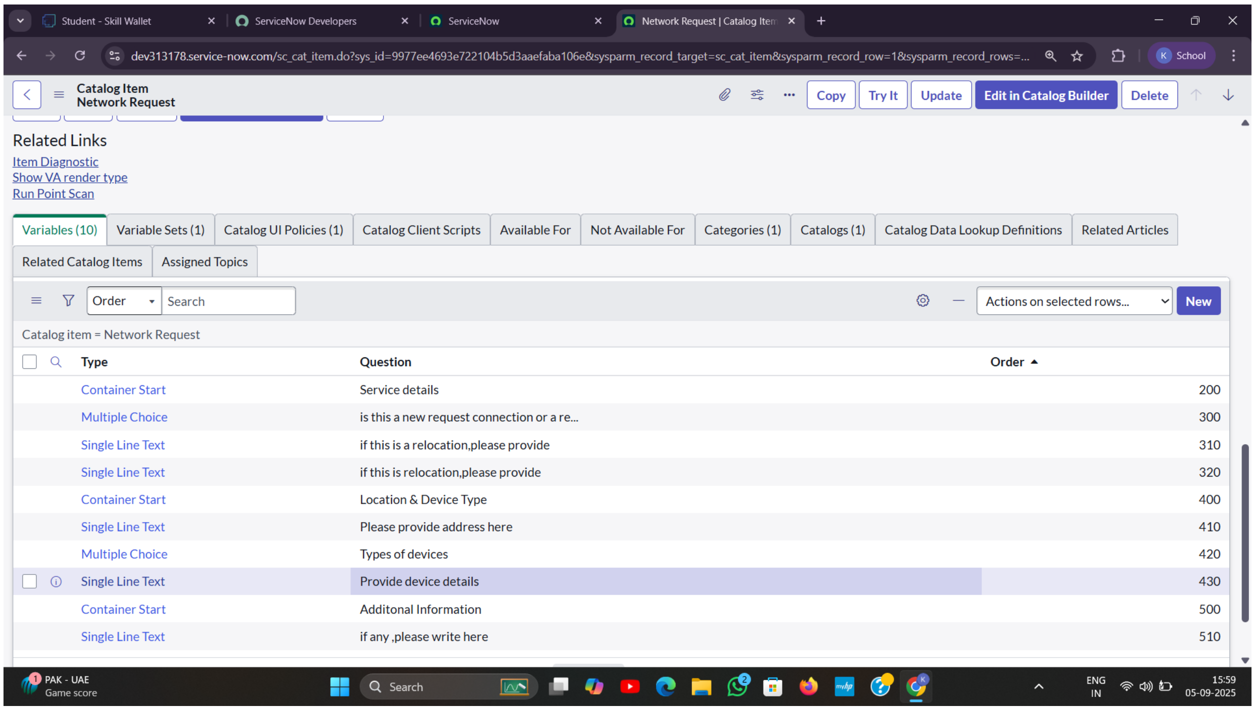
6. Tooltip– this will appear when cursor overed on the field
7. Example text – this will suggest what we need to enter on the field.
8. Mandatory, Read-Only– need to configure on demand
9. Auto populate– need to select dependent variable, apply dot walking to get selected value.
10. Click on Save or Submit.





Variables Types

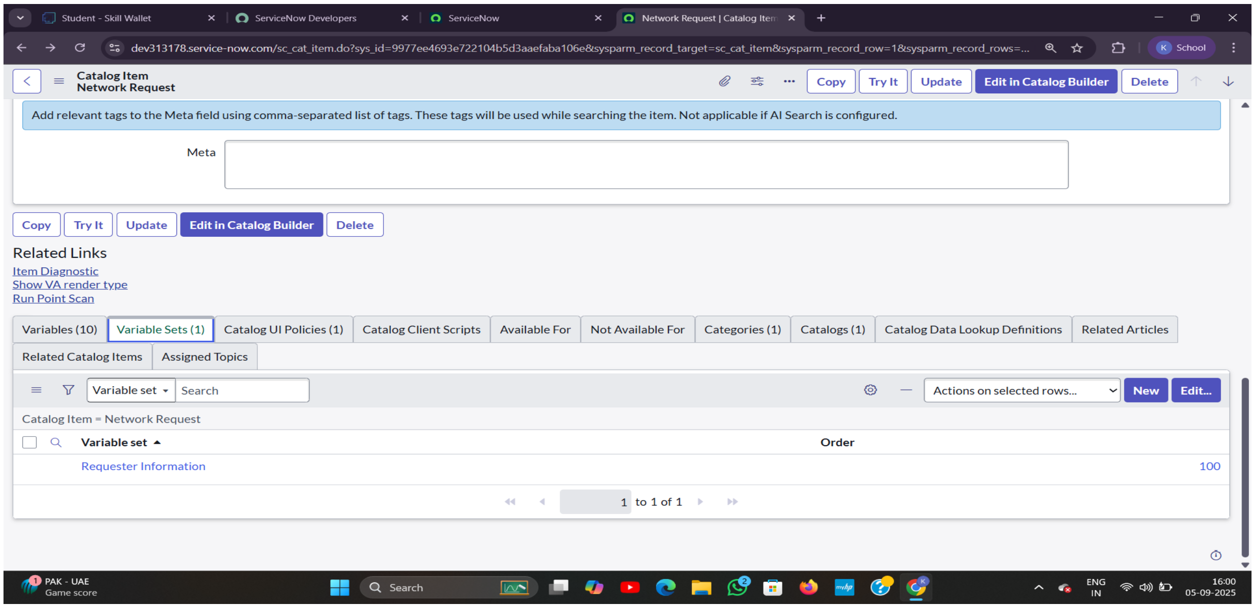
1. Is this a New connection or Relocation? >> Choice >> New/ Relocation/None
2. If this is a relocation, Please provide your relocated address here>>String
3. Types of devices>> Choice>> Laptop/Mobiles/Others
4. Please provide address here>>String
5. Provide device details here>> String
6. If anything else, please specify>> String

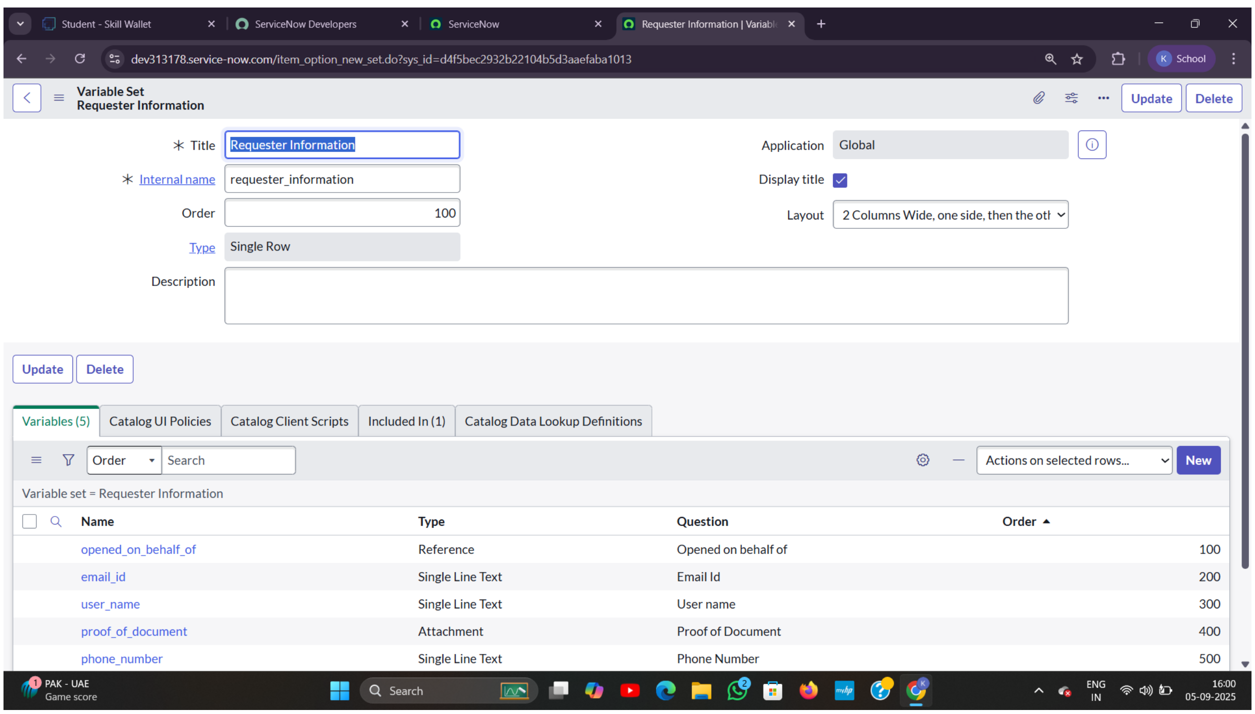


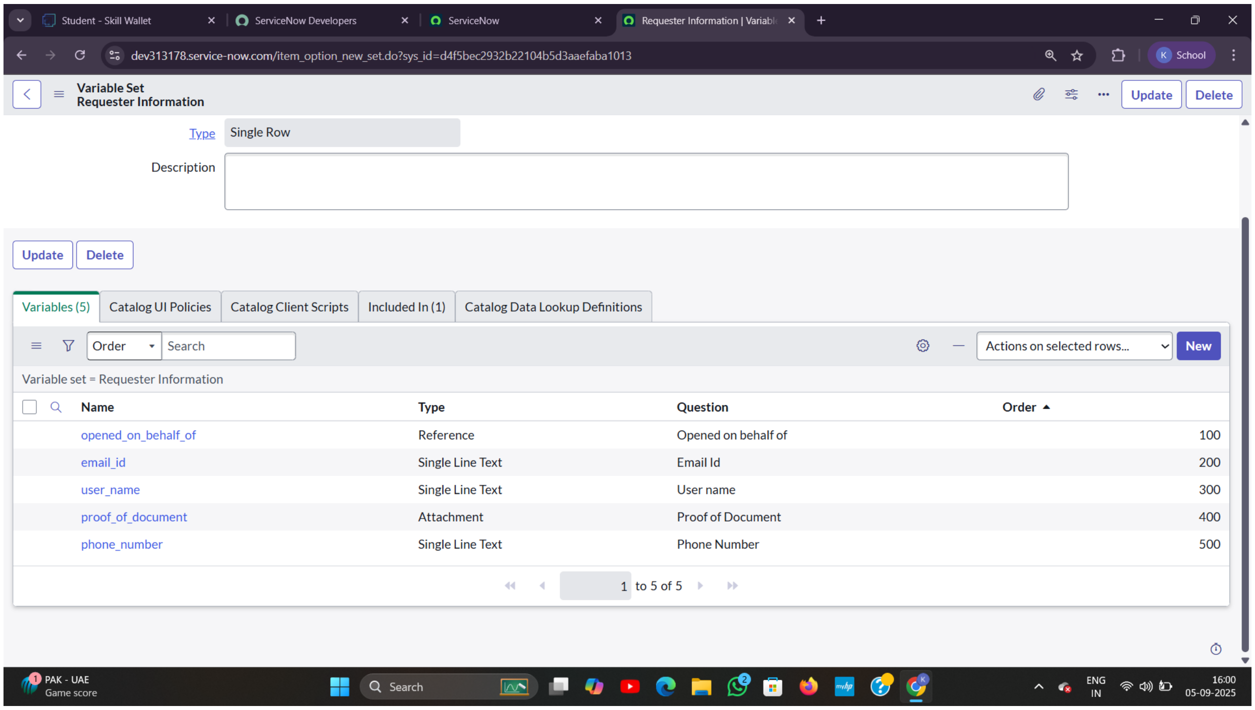
Variable Set Configuration

Variables Types

1. Opened on behalf of >> Reference>> reference to user table
2. Email Id >> Single line text >> Auto populate by Opened on behalf of variable.
3. User name >>Single line text >> Auto populate by Opened on behalf of variable.
4. Phone Number >>Single line text >> Auto populate by Opened on behalf of variable.
5. Proof of Document >> Attachment


Student - Skill Wallet
ServiceNow Developers
ServiceNow
Network Request | Catalog Item
dev313178.service-now.com/sc_cat_item.do?sys_id=9977ee4693e722104b5d3aaefaba106e&sysparm_record_target=sc_cat_item&sysparm_record_row=1&sysparm_record_rows=...
Catalog Item
Network Request
Copy
Try It
Update
Edit in Catalog Builder
Delete
Add relevant tags to the Meta field using comma-separated list of tags. These tags will be used while searching the item. Not applicable if AI Search is configured.
Meta
Related Links
Item Diagnostic
Show VA render type
Run Point Scan
Variables (10)
Variable Sets (1)
Catalog UI Policies (1)
Catalog Client Scripts
Available For
Not Available For
Categories (1)
Catalogs (1)
Catalog Data Lookup Definitions
Related Articles
Related Catalog Items
Assigned Topics
Variable set
Search
Actions on selected rows...
New
Edit...
Catalog Item = Network Request
Variable set
Order
Requester Information
100
1 to 1 of 1
PAK - UAE
Game score
Search
ENG
IN
16:00
05-09-2025


Student - Skill Wallet
ServiceNow Developers
ServiceNow
Requester Information | Variable
dev313178.service-now.com/item_option_new_set.do?sys_id=d4f5bec2932b22104b5d3aaefaba1013
Variable Set
Requester Information
Update
Delete
Title
Requester Information
Internal name
requester_information
Order
100
Type
Single Row
Description
Application
Global
Display title
Layout
2 Columns Wide, one side, then the oth
Update
Delete
Variables (5)
Catalog UI Policies
Catalog Client Scripts
Included In (1)
Catalog Data Lookup Definitions
Order
Search
Actions on selected rows...
New
Variable set = Requester Information
Name
Type
Question
Order
opened_on_behalf_of
Reference
Opened on behalf of
100
email_id
Single Line Text
Email Id
200
user_name
Single Line Text
User name
300
proof_of_document
Attachment
Proof of Document
400
phone_number
Single Line Text
Phone Number
500
PAK - UAE
Game score
Search
ENG
IN
16:00
05-09-2025

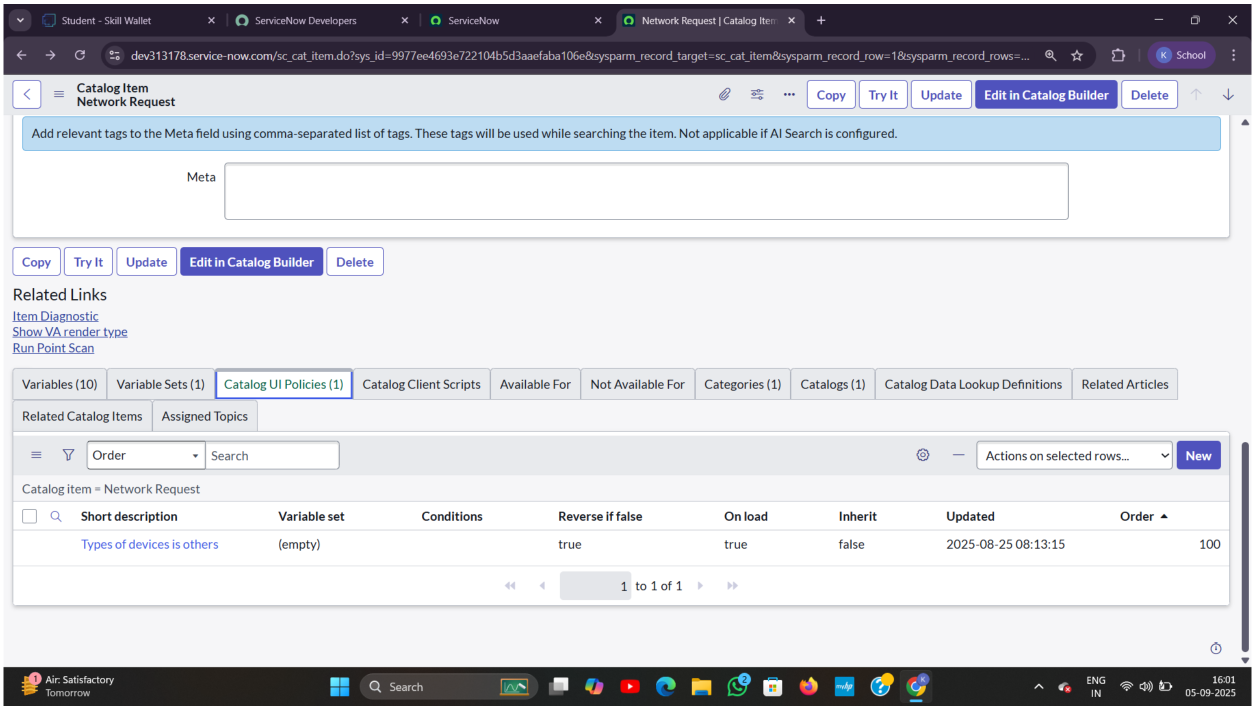


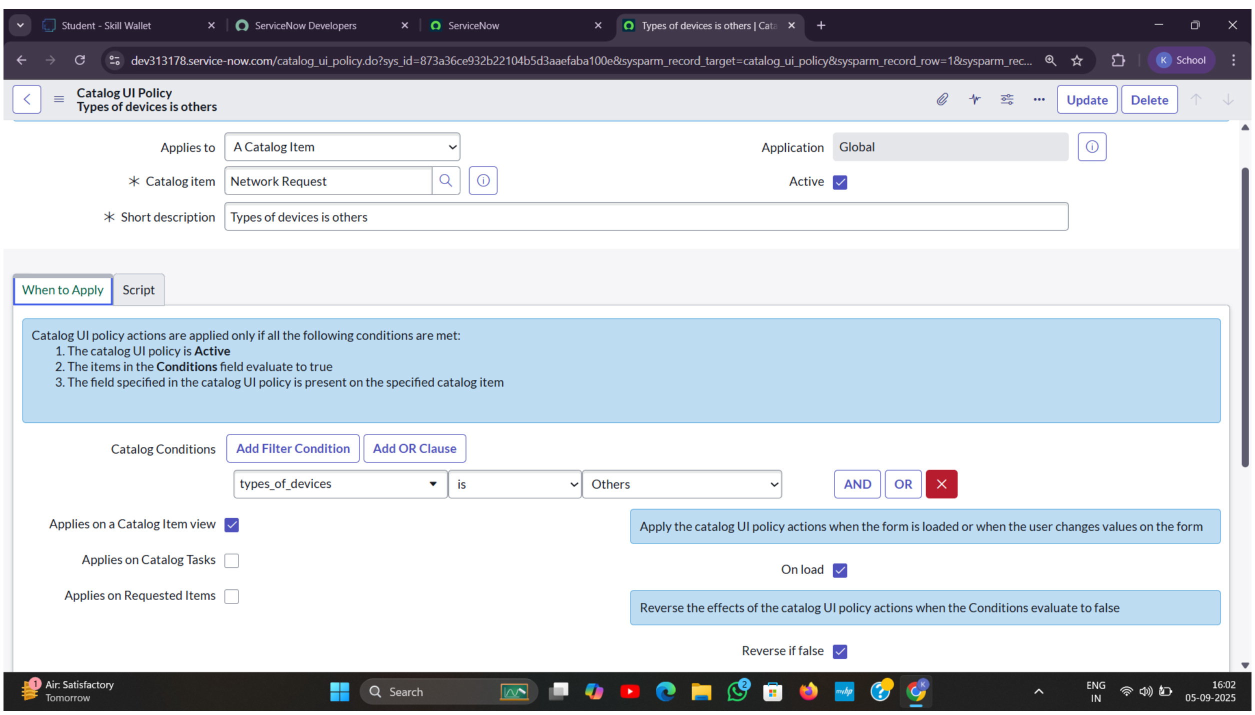
Catalog UI Policy Configuration

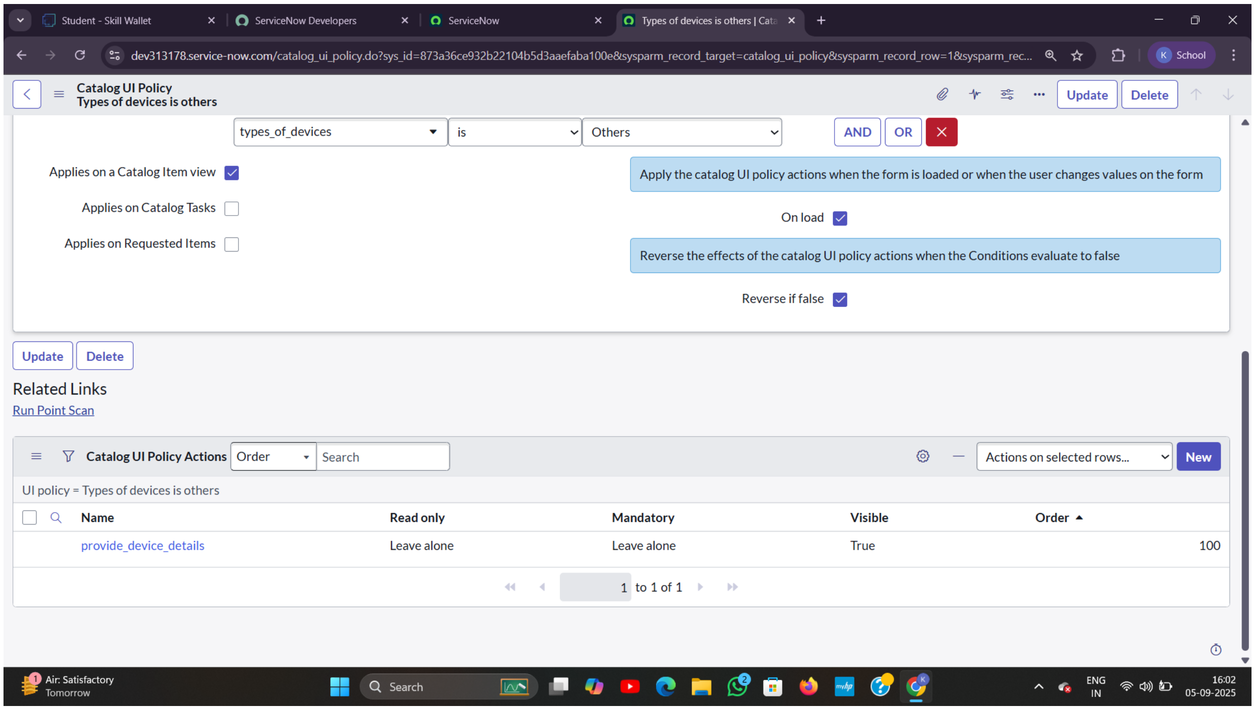
Scenario: If user selects types of devices is Others, then Please specify field should populate.

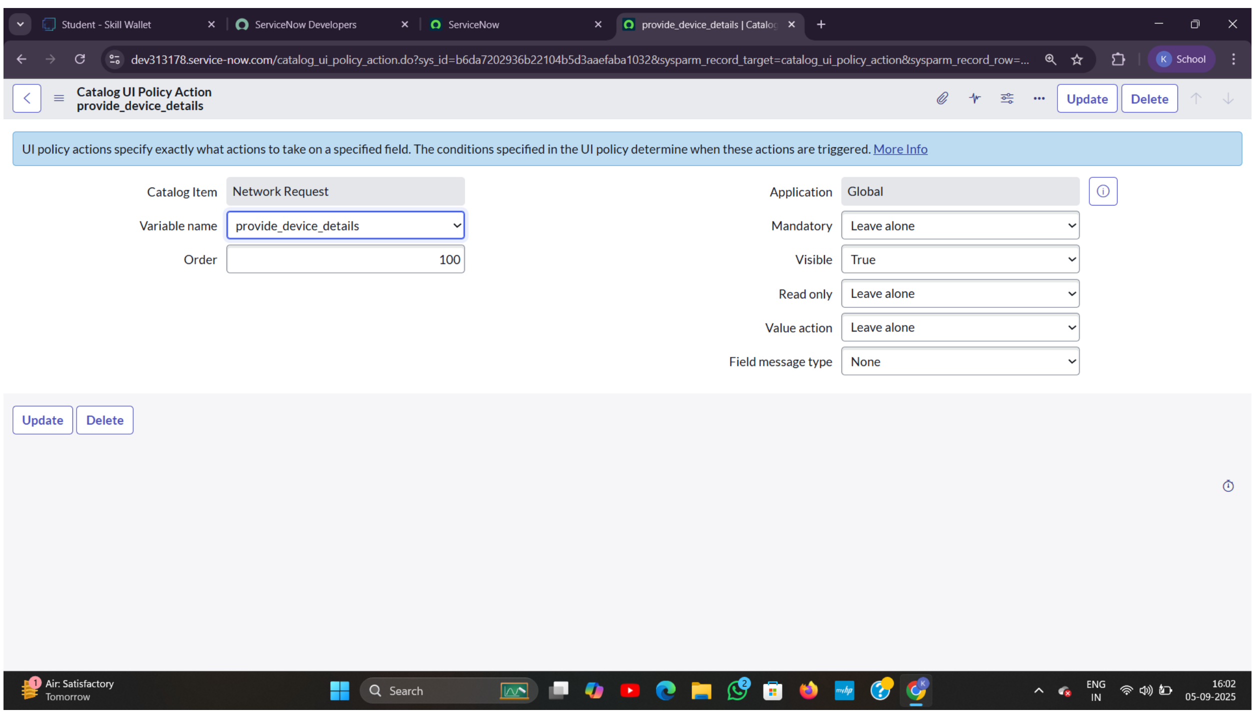
Procedure:

1. Navigate to catalog items
2. Open Network Request item
3. In related list, we have Catalog UI policy
4. Click on New button to configure New UI policy
5. Select Applies to as Catalog item
6. Select catalog item as Network Request
7. Provide short description, if required
8. Apply condition>> types of devices is others
9. Click on save, after saving the form will get UI policy actions in the related list
10. Click on New button to configure new UI Policy action, and Select the variable which we want to display on condition
11. Make Visible True as per our requirement
12. Update the UI Policy and Test the same on Catalog form.


Student - Skill Wallet
ServiceNow Developers
ServiceNow
Network Request | Catalog Item
dev313178.service-now.com/sc_cat_item.do?sys_id=9977ee4693e722104b5d3aaefaba106e&sysparm_record_target=sc_cat_item&sysparm_record_row=1&sysparm_record_rows=...
School
Catalog Item
Network Request
Copy
Try It
Update
Edit in Catalog Builder
Delete
Add relevant tags to the Meta field using comma-separated list of tags. These tags will be used while searching the item. Not applicable if AI Search is configured.
Meta
Copy
Try It
Update
Edit in Catalog Builder
Delete
Related Links
Item Diagnostic
Show VA render type
Run Point Scan
Variables (10)
Variable Sets (1)
Catalog UI Policies (1)
Catalog Client Scripts
Available For
Not Available For
Categories (1)
Catalogs (1)
Catalog Data Lookup Definitions
Related Articles
Related Catalog Items
Assigned Topics
Order
Search
Actions on selected rows...
New
Catalog item = Network Request
Short description
Variable set
Conditions
Reverse if false
On load
Inherit
Updated
Order
Types of devices is others
(empty)
true
true
false
2025-08-25 08:13:15
100
1 to 1 of 1
Air: Satisfactory
Tomorrow
Search
ENG
IN
16:01
05-09-2025


Student - Skill Wallet
ServiceNow Developers
ServiceNow
Types of devices is others | Cata
dev313178.service-now.com/catalog_ui_policy.do?sys_id=873a36ce932b22104b5d3aaefaba100e&sysparm_record_target=catalog_ui_policy&sysparm_record_row=1&sysparm_rec...
School
Catalog UI Policy
Types of devices is others
Update
Delete
Applies to
A Catalog Item
Application
Global
Catalog item
Network Request
Active
Short description
Types of devices is others
When to Apply
Script
Catalog UI policy actions are applied only if all the following conditions are met:
1. The catalog UI policy is Active
2. The items in the Conditions field evaluate to true
3. The field specified in the catalog UI policy is present on the specified catalog item
Catalog Conditions
Add Filter Condition
Add OR Clause
types_of_devices
is
Others
AND
OR
Applies on a Catalog Item view
Apply the catalog UI policy actions when the form is loaded or when the user changes values on the form
Applies on Catalog Tasks
On load
Applies on Requested Items
Reverse the effects of the catalog UI policy actions when the Conditions evaluate to false
Reverse if false
Air: Satisfactory
Tomorrow
Search
ENG
IN
16:02
05-09-2025



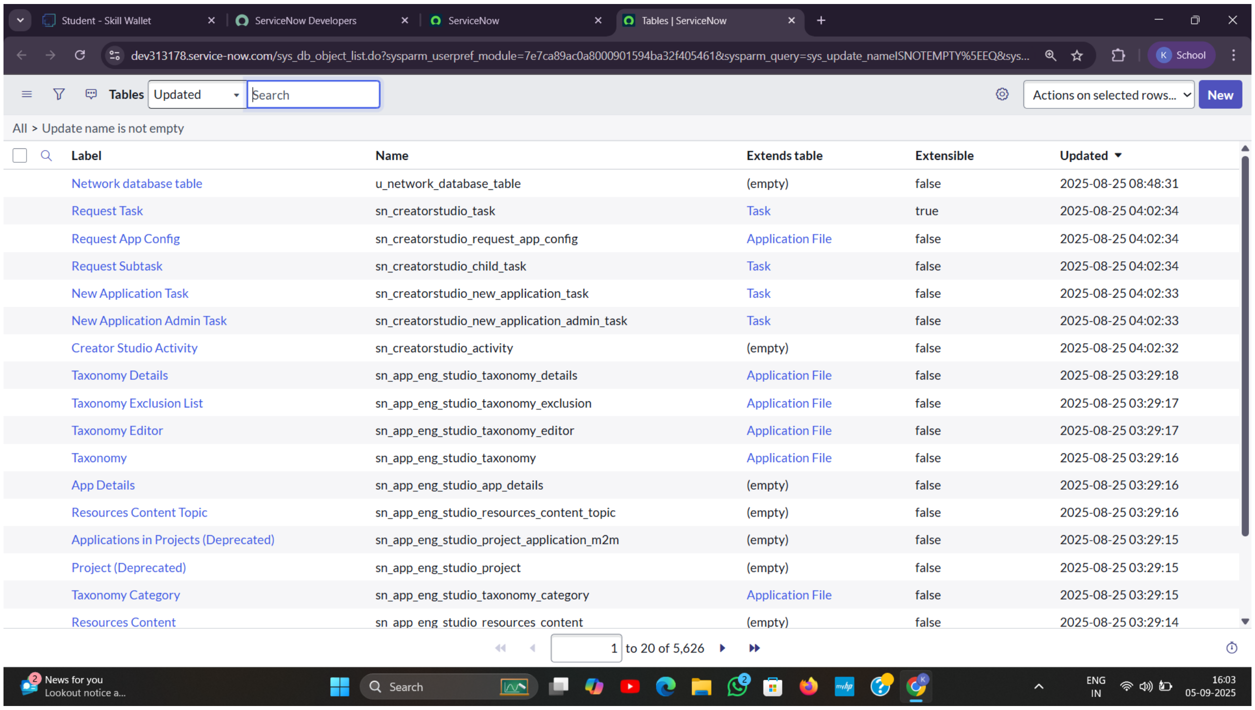


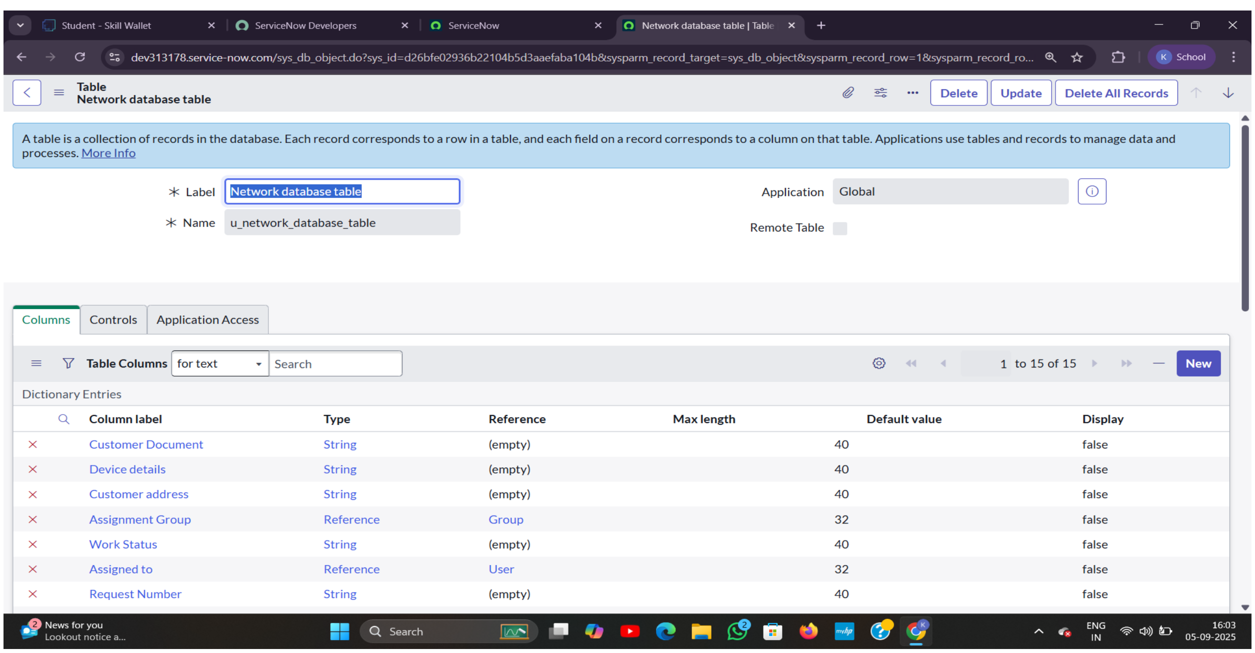
Creation of Table

Creation of Table

Navigate to: System Definition > Tables.

· Click New to create a new table.
· Fill in Table Information: · ·
· Name: Name of the table ------
Label: Backend name of the table------
Auto-generate schema: Leave it checked if you'd like ServiceNow to auto-generate schema fields. · Click Submit to create the table.





Creation of fields

In ServiceNow, fields are created at the table level. To create a field, you first need to identify the table where the field will reside.

1. In the Application Navigator (left-side panel), type Tables in the search bar.

2. Under System Definition, click Tables. This will take you to a list of all tables in the system.

Select the Table to Add the Field ·

From the list of tables, search for and select the table you want to add a field to. For example, if you want to add a field to the Network database table:

1. Type "Network database" in the search box or scroll through the list.

2. Click on the Network database table name. You'll now see a list of all fields (columns) associated with the Network database table.

Open the Table's Columns

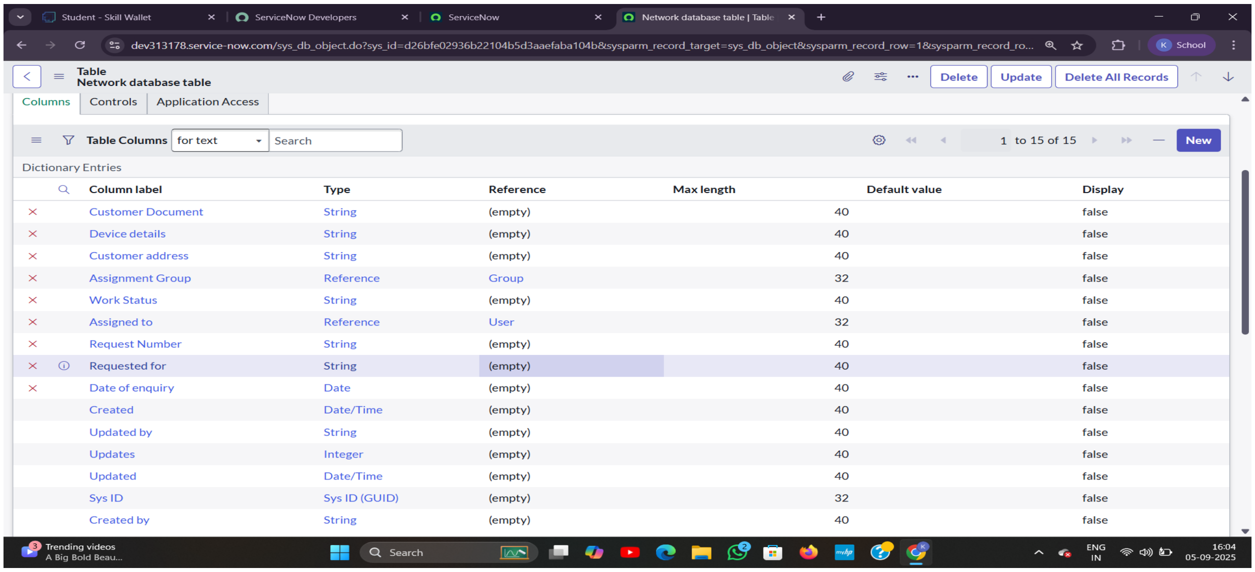
· · After selecting the table, you'll be brought to a view that lists all the columns (fields) that c urrently exist on that table

. To create a new field (column), go to the Columns tab (this is where all fields for the selected table are listed)

. Create a New Field

1. In the Columns tab, click the New button located at the top-right corner of the page to create a new field.

2. You'll now be prompted with a form where you need to define the new field. The following fields need to be filled out:



Define Field Properties

Fill in the following details for your new field:

1. Column Label (Field Label) · · Description: This is the name that will be displayed on the forms, lists, and records.

Example: Customer Name

2. Column Name · · · ·

Description: This is the internal name of the field and is auto-generated based on the column label. It should be unique for each field. Do not manually edit this unless necessary.

Example: customer_name

Description: The type of field determines the kind of data it will store. You need to choose the correct type based on the data you want to store (e.g., text, number, date, etc.). Some of the most common types include:

String: For short text values (e.g., name, description).

Integer: For numbers without decimals (e.g., age, number of items).

Choice: A dropdown list of options.

Reference: A field that links to another table (e.g., linking to a User table). Boolean: A true/false checkbox.

Date: For a date picker field.

Date/Time: For both date and time.

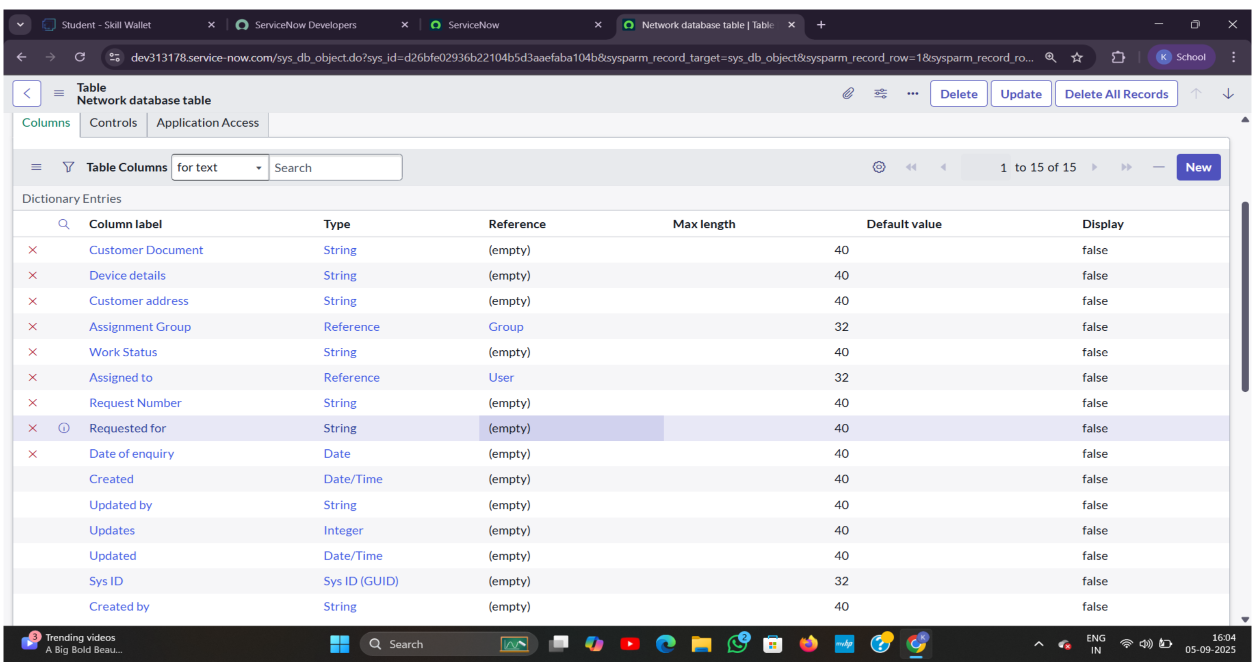
Example: String, Choice, Reference

3. Max Length (Optional) ·

Description: If you are creating a string-type field, you can specify the maximum length of the text allowed.

Example: 255 characters (default length for a string field).

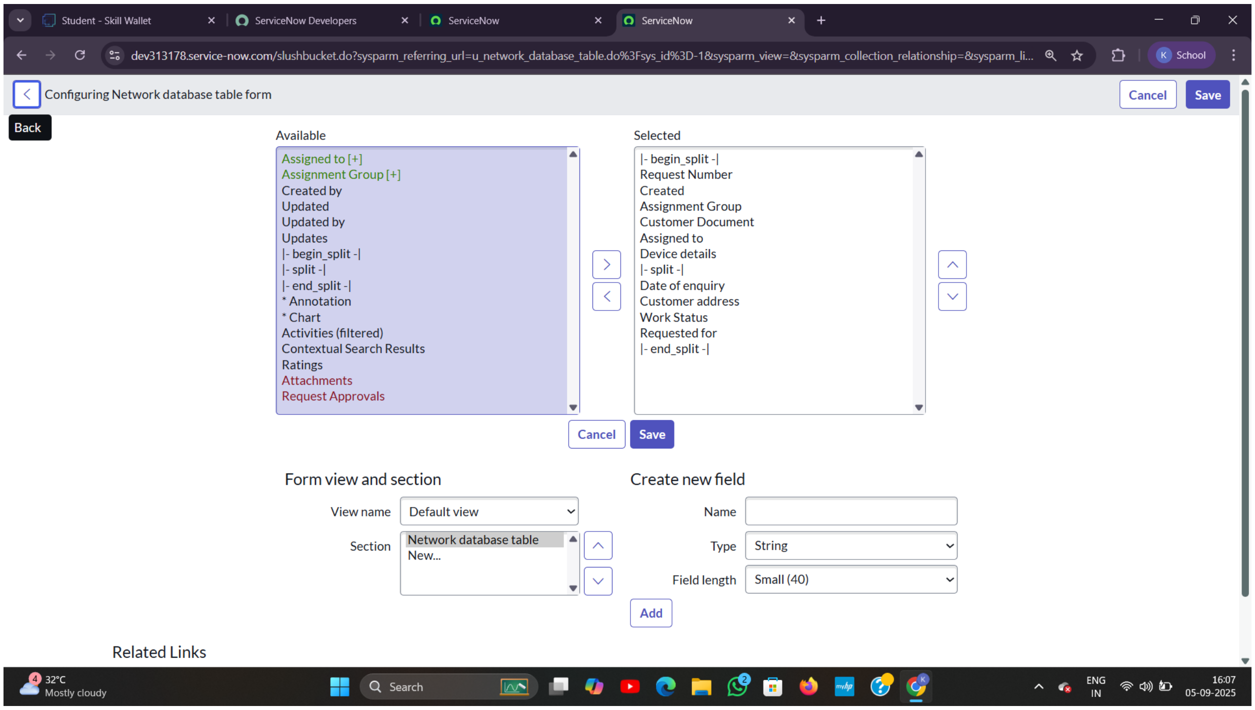
4. Mandatory ·
Description: Check this box if the field should be required when creating or updating records. ·
Example: For a "Customer Name" field, this might be required.
5. Default Value (Optional) · · Description: You can set a default value for the field if desired. This value will appear automatically when creating a new record.
Example: Set the default value to "New Customer" for a "Customer Name" field.
6. Read-Only · ·
Description: Check this box if the field should be read-only (users cannot modify its value). This is commonly used for calculated or system-generated fields.
Example: "Created Date" or "Record Number".
7: Save the Field
· Once you've configured all the necessary field properties, click Submit or Save to create the field.
· After saving, ServiceNow will create the new field and add it to the list of columns for the selected table.

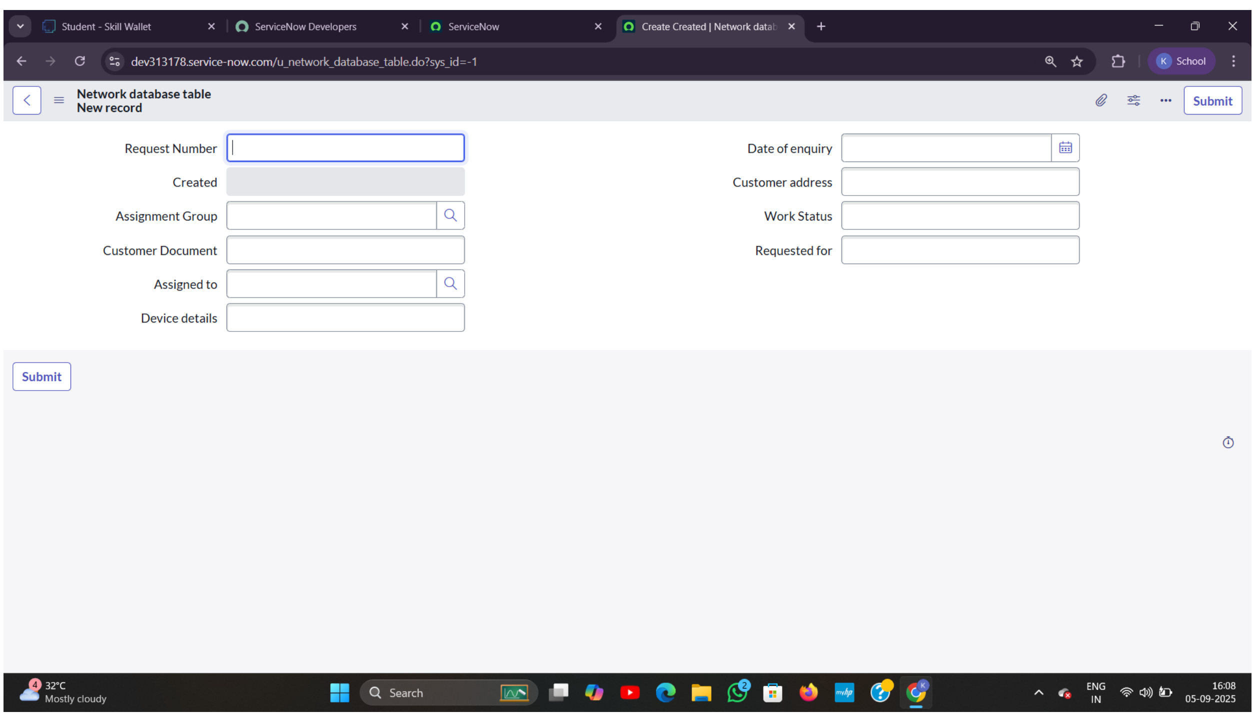


Add the Field to a Form (Optional)

After creating the field, you may want to add it to a form so that users can view or update it. 1
. To do this, navigate to System UI > Forms in the application navigator.
2. Select the form you want to modify (e.g., Incident form).

3. Open the Form Designer (click on the "Design" icon).
4. From the Field Navigator on the left side, search for the new field you created.
5. Drag the field onto the form layout where you want it to appear.
6. Click Save or Publish to apply the changes.





Test the New Field

Go to a record in the table where the field was added (e.g., create a new incident or record).

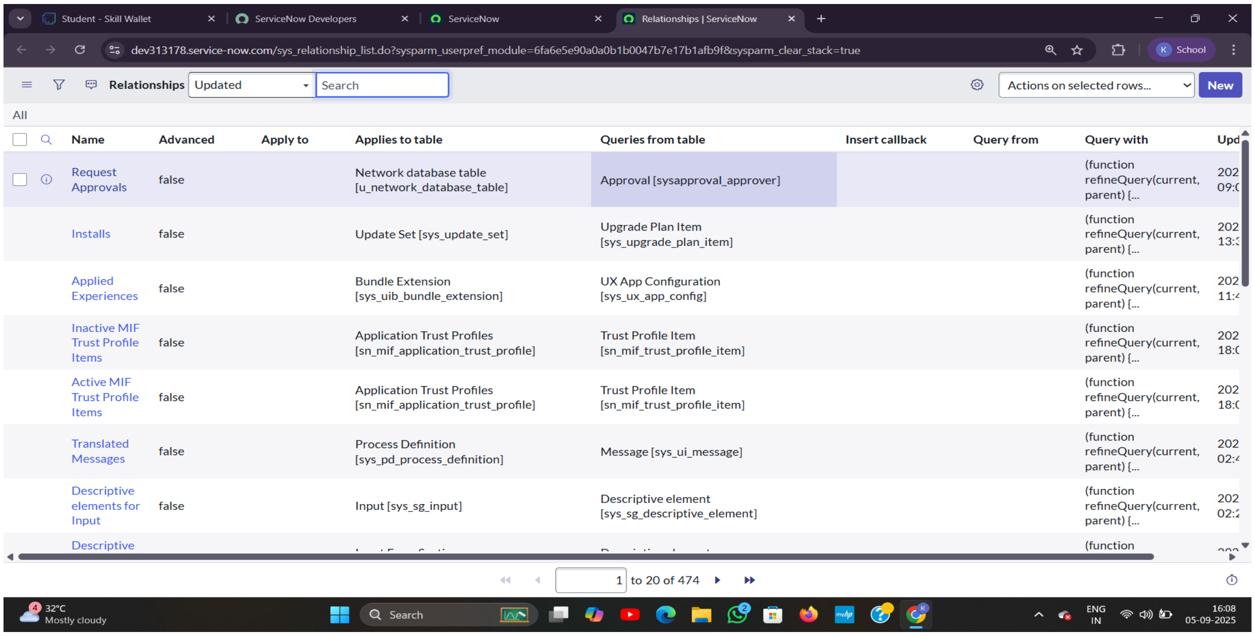
Check if the new field appears on the form.

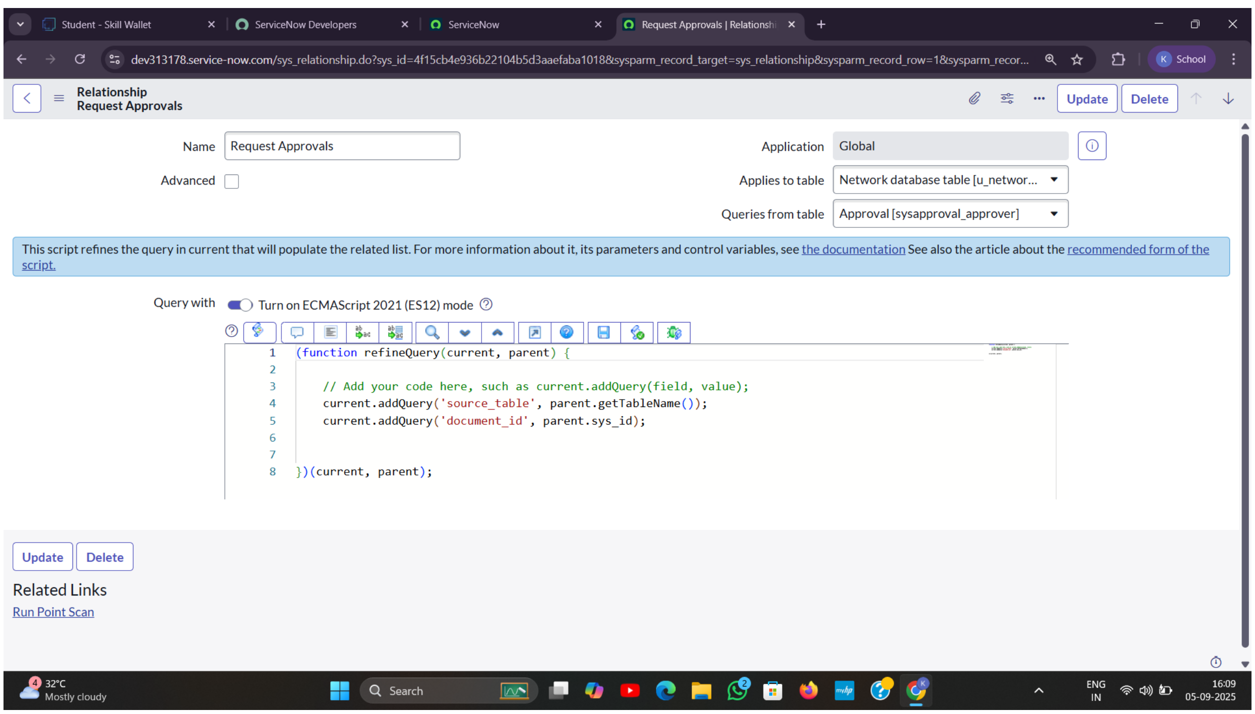
Verify the field behaves as expected (e.g., required, read-only, etc.).
Key Field Types in ServiceNow:
String: Short text input (e.g., a name, description).
Integer: Whole numbers.
Choice: Dropdown list with predefined options.
Reference: A reference field to another table (e.g., referencing an User table).
Date: A date picker.
Date/Time: A combination of date and time.
Boolean: Checkbox (True/False).
Currency: Currency field with monetary values.
Additional Tips:
Field Data Types: Make sure you choose the correct field type based on the type of data you want to store (e.g., Text, Integer, Date).
UI Policies/Client Scripts: These can be used to make fields visible, read-only, or mandatory based on certain conditions.
Naming Conventions: Follow proper naming conventions for field labels and column names to maintain consistency.

Request Approvals Creation(Related List)

Creation of Related List

Navigate to System Definition > Relationships.
Click New to create a new relationship.
Fill in the following details:
Name: Approval Request
Applies to Table : Network Database table.
Queries from Table : Sysapprovals table. · o
Active: Make sure it's set to True.
Save the relationship.





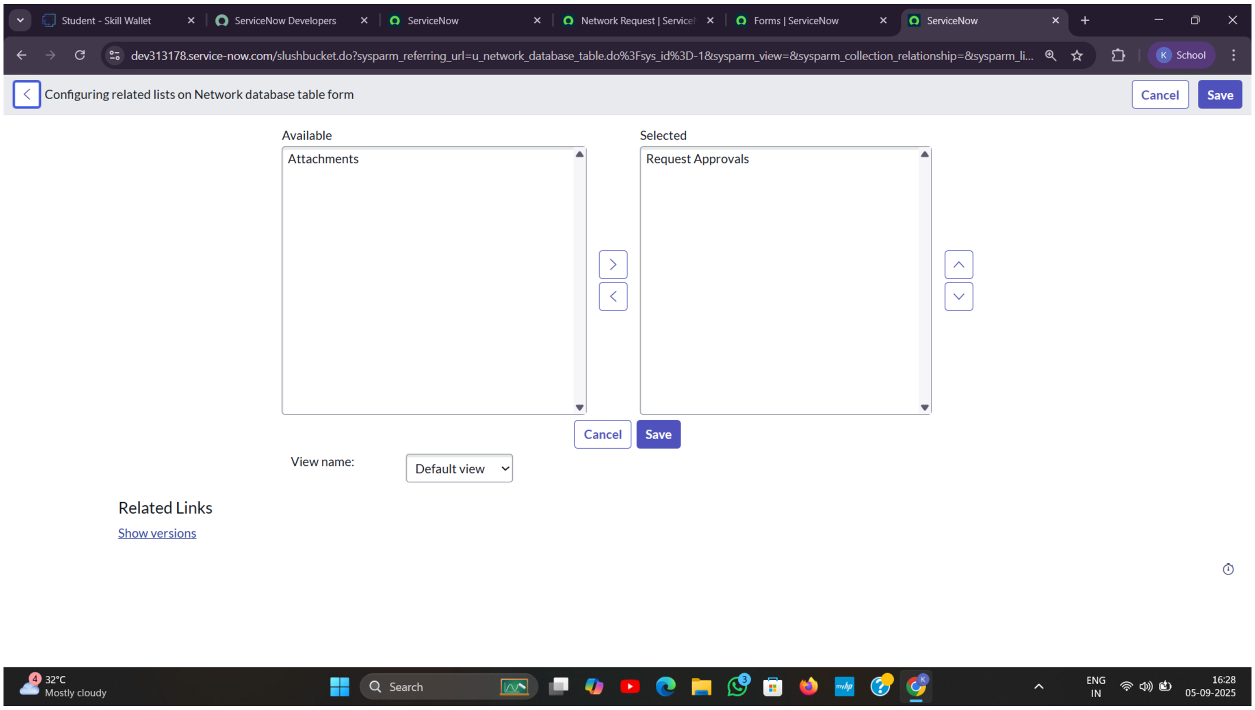
Adding Related List to the Table

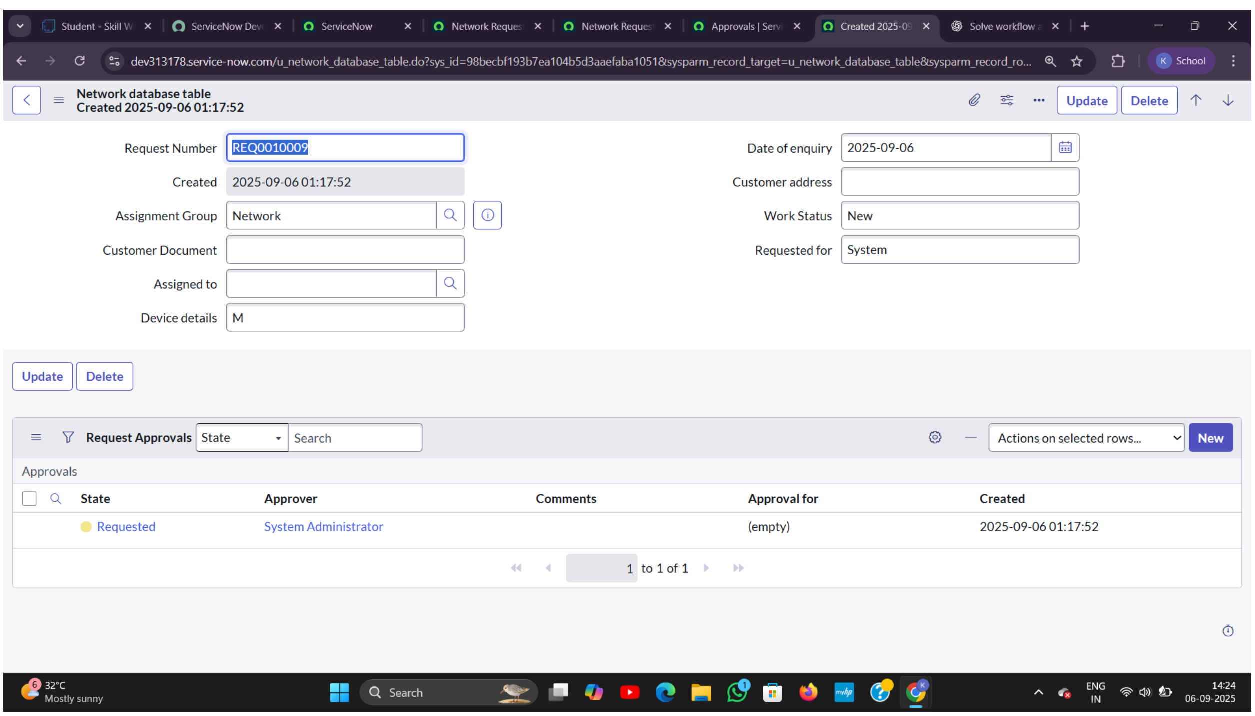
You can create a Related List on a form to display the related records. This helps in easily viewing the relationships between records.

Navigate to Form Designer for the table where you want to show related records.

Add a Related List widget to the form.

Select the Related List you want to show



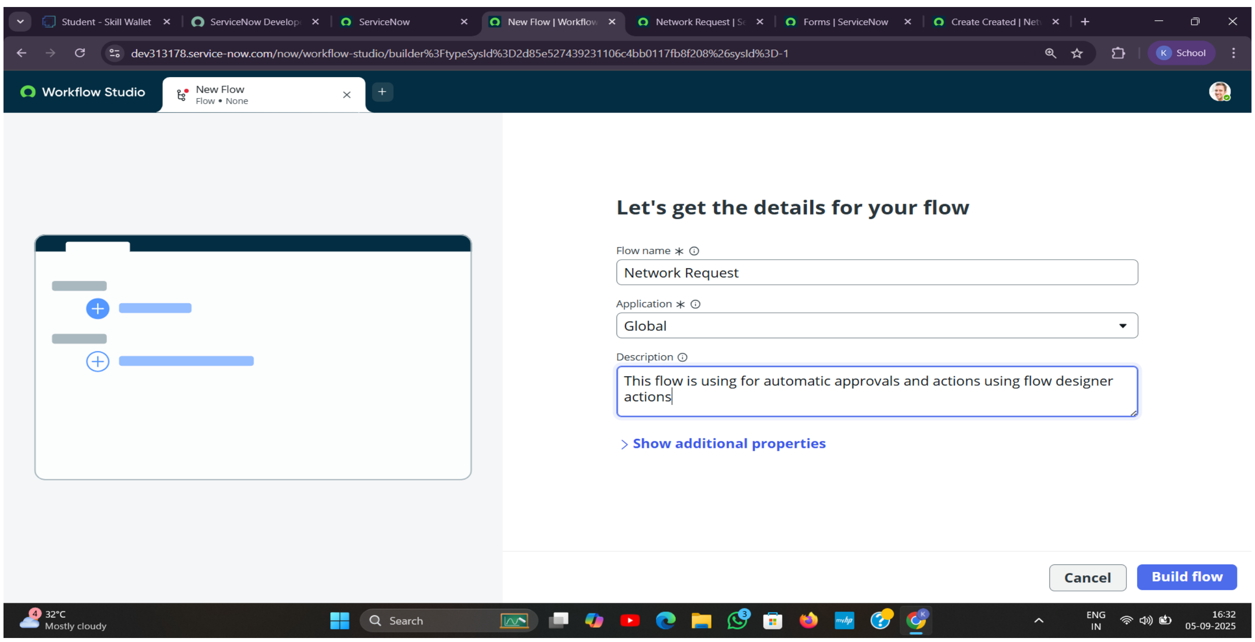


Creation & Implementation of flows, Actions in Flow

Designer

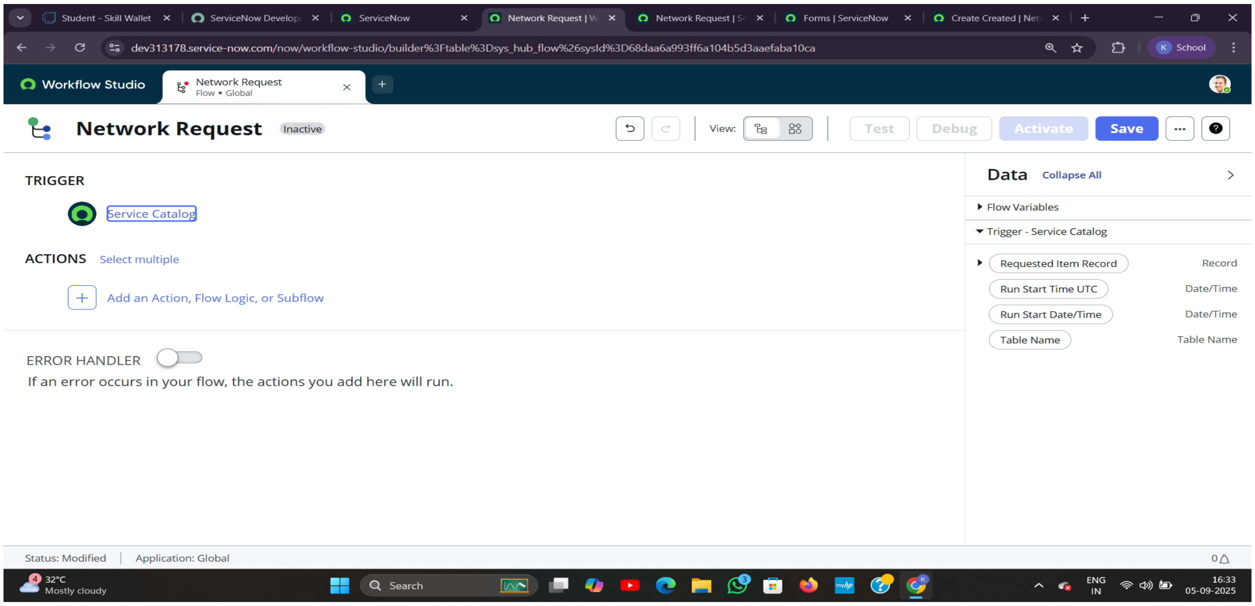
Creation of Flow

1. Navigate to Flow designer home page
2. Click on New to create a new flow
3. Provide flow name as Network Request
4. Provide description of flow
5. Click on Build flow.



Configuring Trigger

1. Click on (+) Icon to Configure the Trigger
2. Select Trigger as Application >> Service catalog
3. Click on Done.

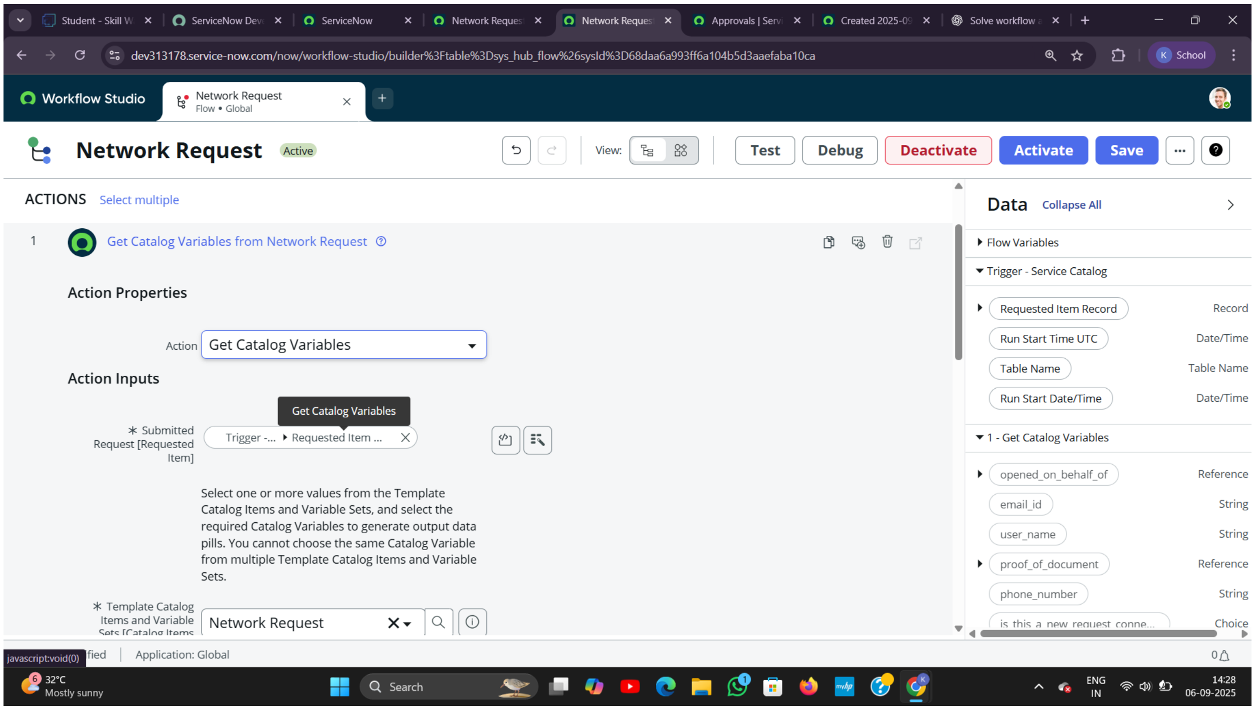


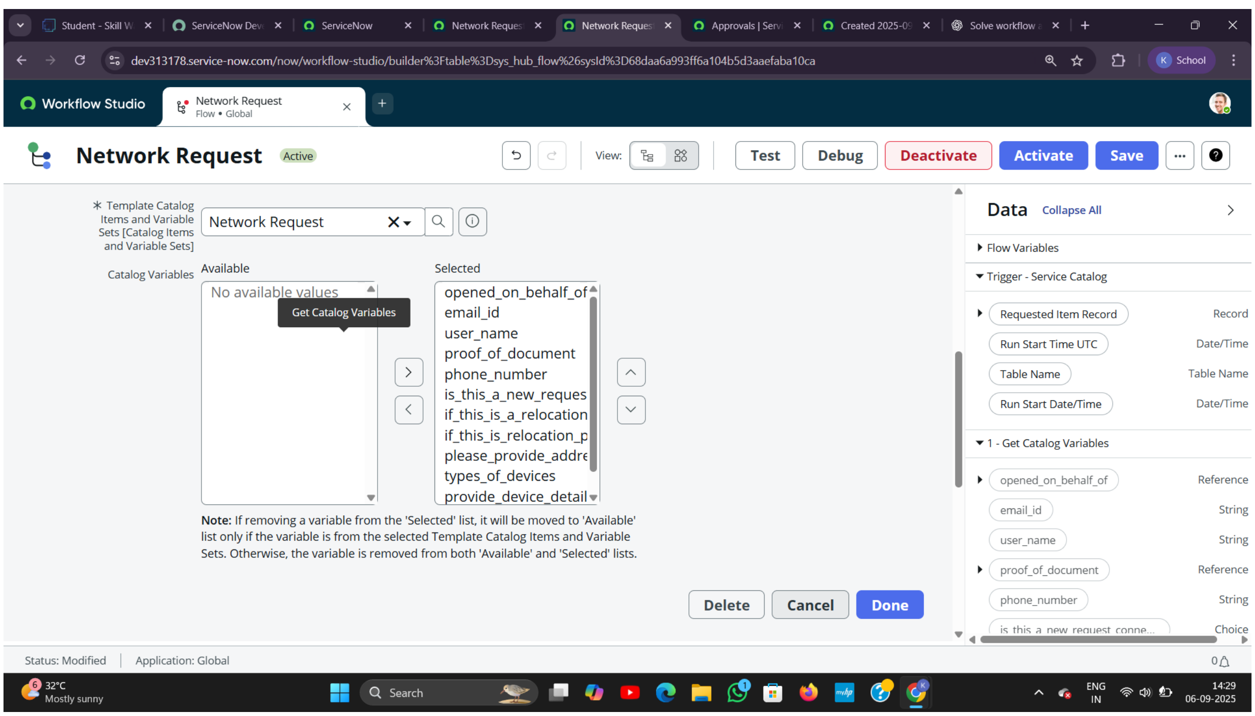
Configuring Actions

Click on Actions button to configure new action

1. Get Catalog Variables
 Click on Action, search for Get Catalog Variables
 Select Get Catalog Variables □ Action Inputs>> Trigger>>service catalog>>Requested Item
 Template catalog items >> Select table >> Network Request
 Select the Required Variables and Move to the selected area.
 Click on done

2. Create Record
 Select action as Create Record
 Select table as Network Database
 Click on Add fields button to configure the fields
 Configure the Required fields as shown in the below picture
 Click on done





3. Send Email

Select action as Send Email

Select target record >> Create record>> network database table

Table will be selected automatically

Cofigure To, CC, BCC as per our requirements(select static/dynamic)

Provide Subject & Body as shown in the below picture

Click on done

4. Ask for approvals

Select action as Ask for Approval

Select target record >> Create record>> network database table

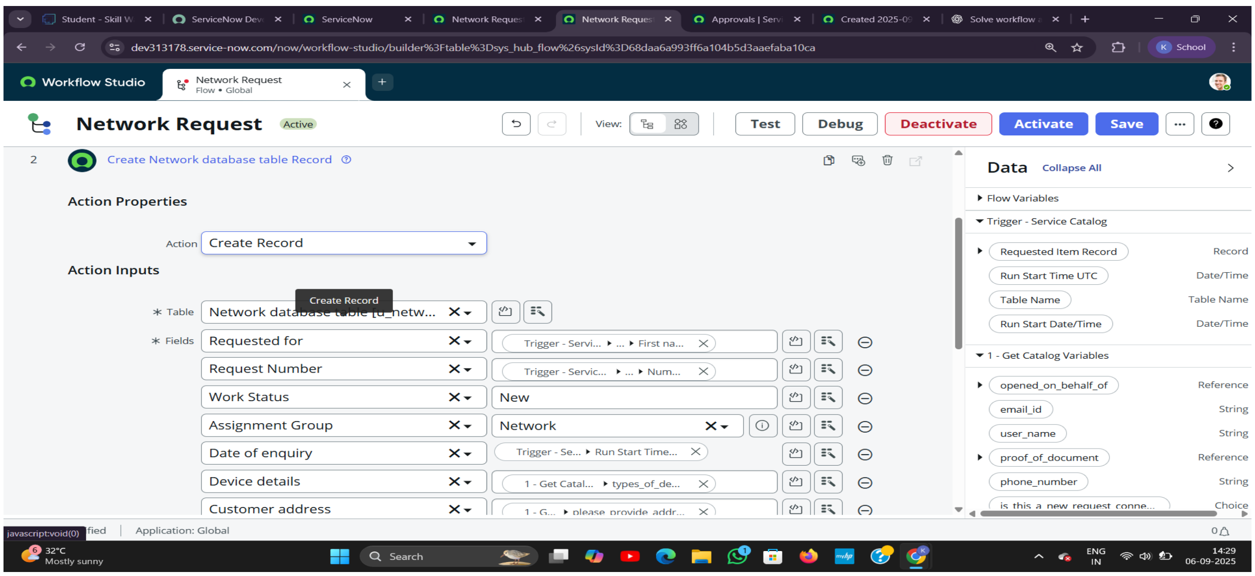
Provide Approval Reason>> Waiting for approval

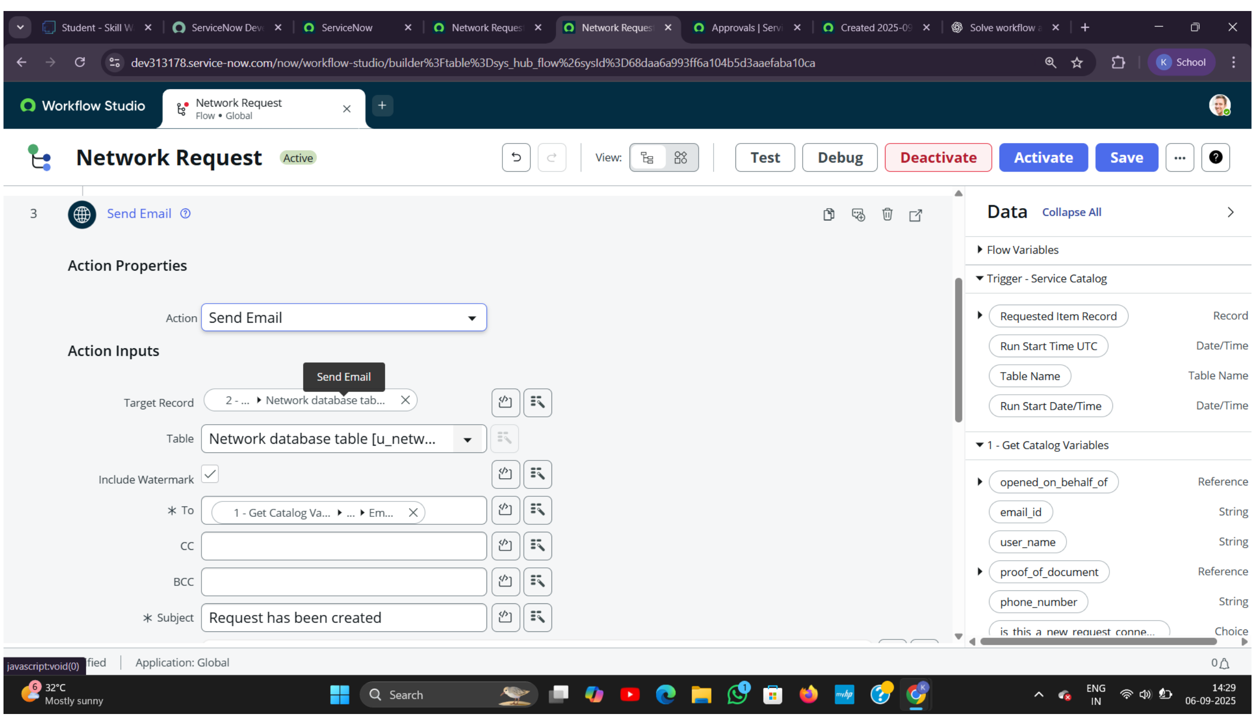
Configure approval rules>> Approve, reject, approve/reject

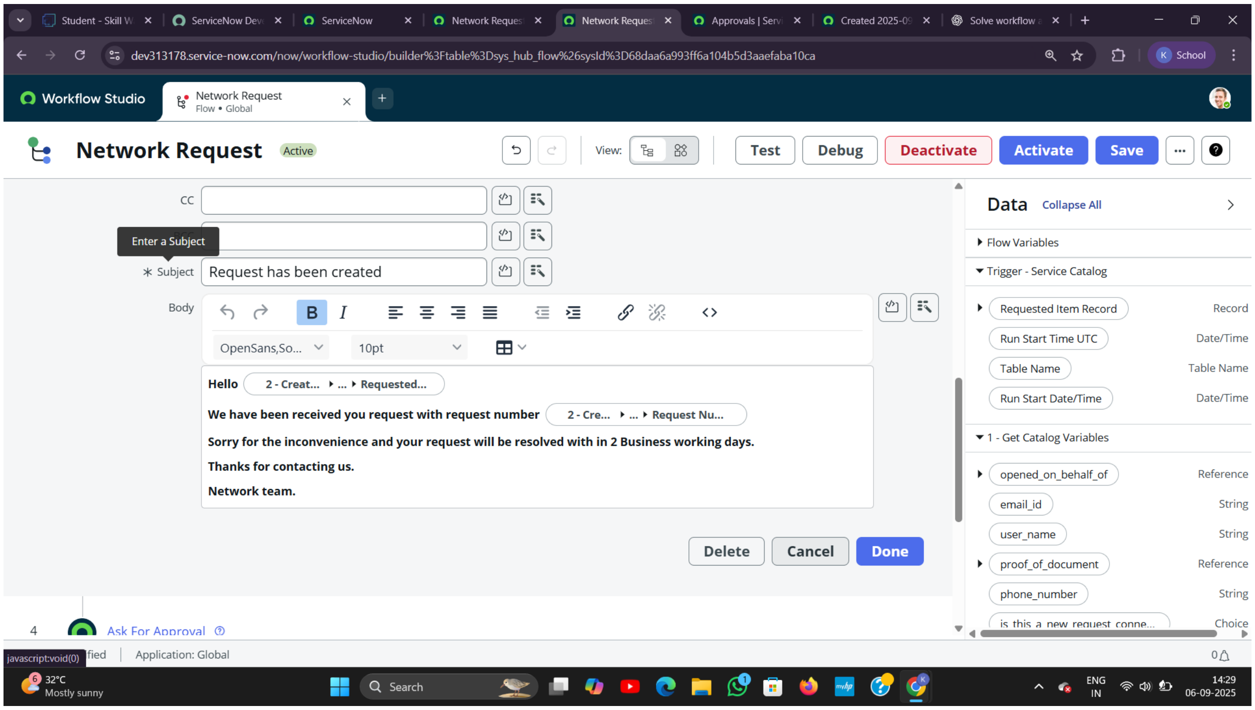
Select approvals as Anyone approves, everyone approves etc.

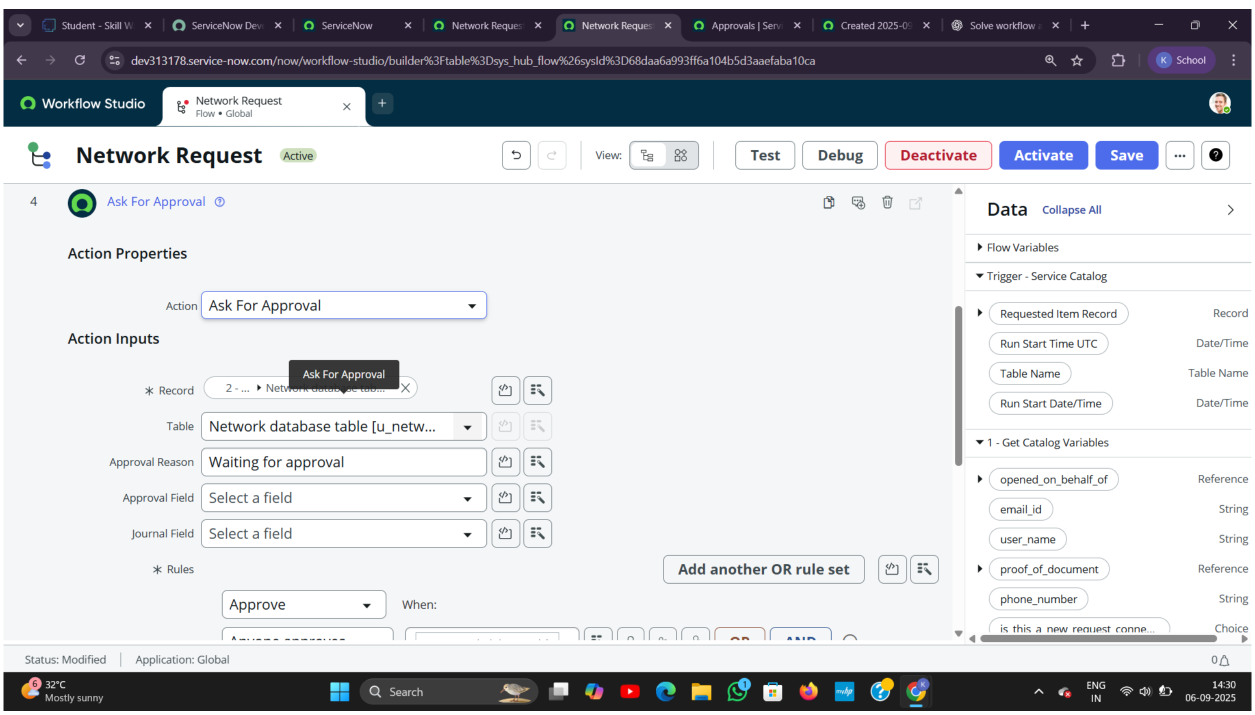
We can select approvals like static/dynamic as shown below

Click on done

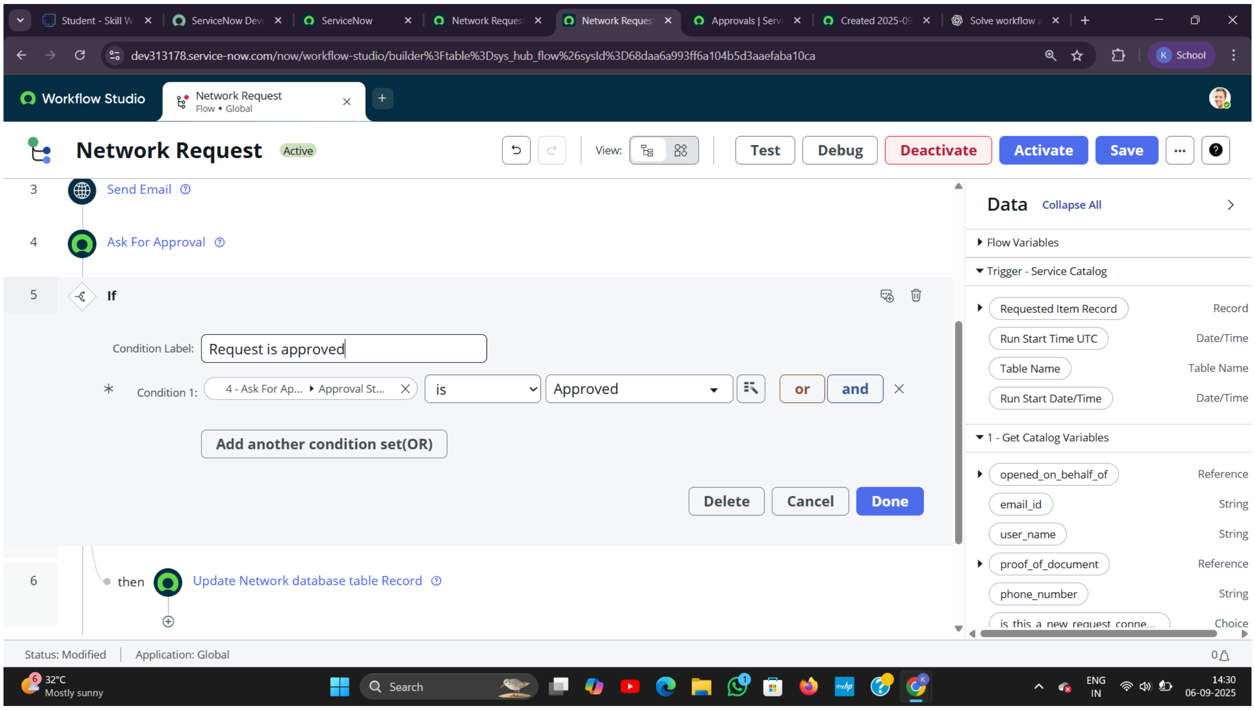


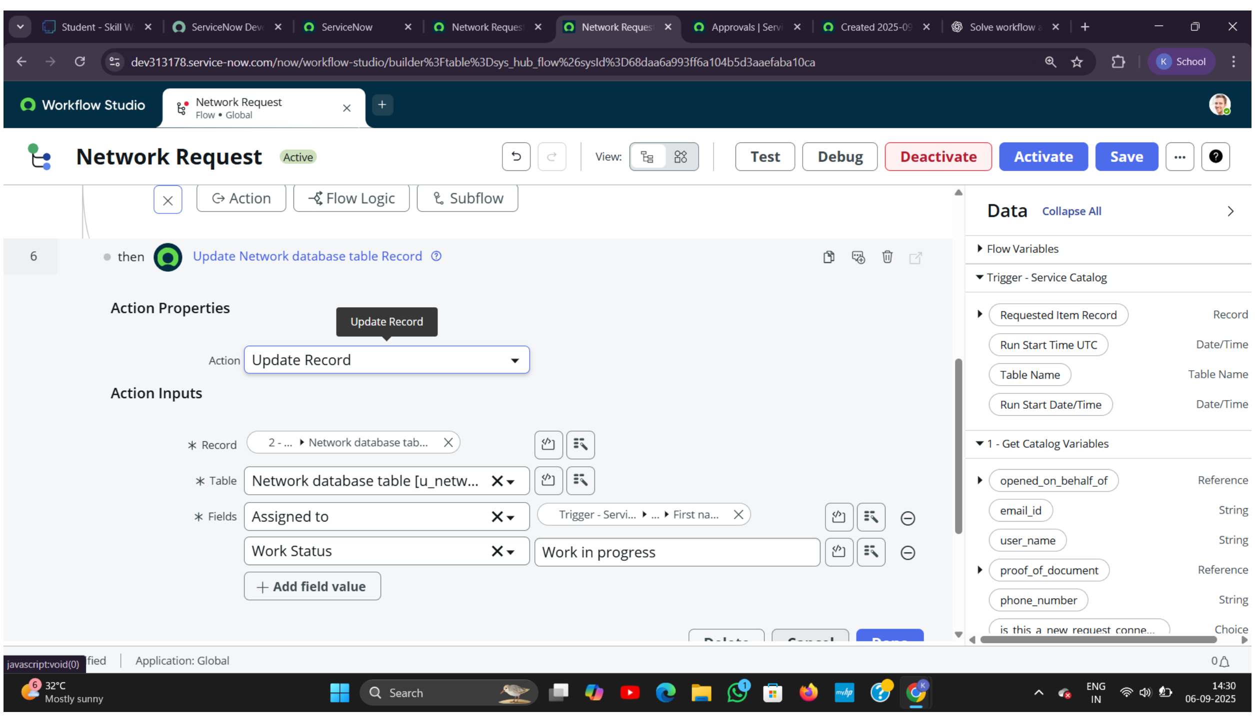




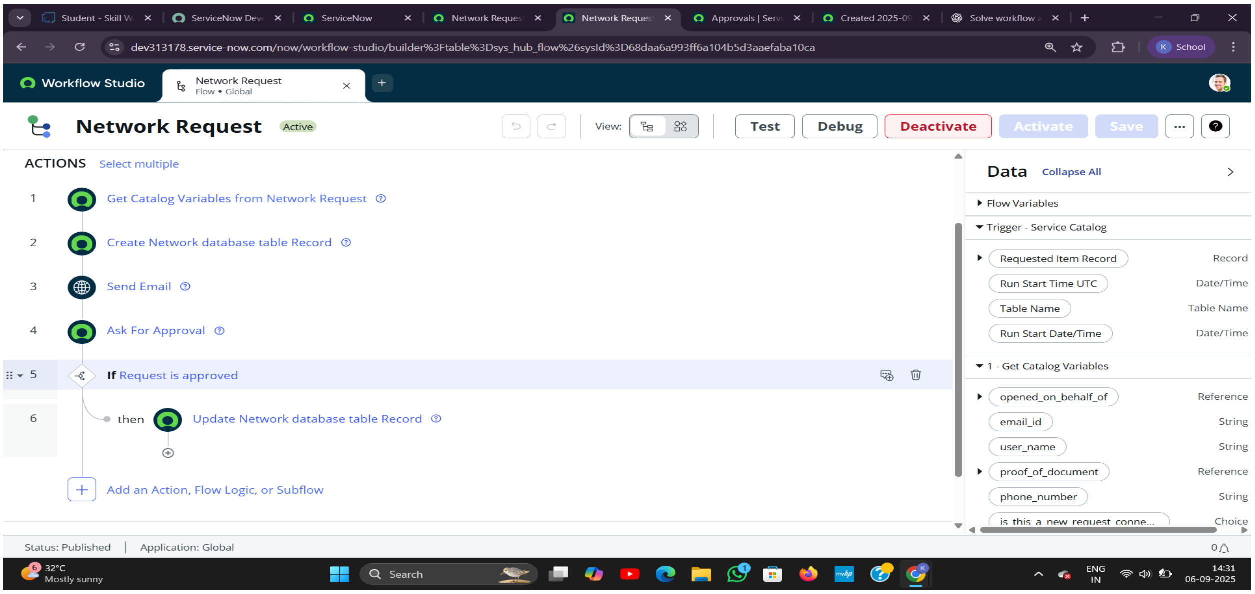


5. Flow Logic
Select action as flow logic and Select If condition
Apply condition >> Ask for approvals state is Approved/Rejected as per requirement
Click on done

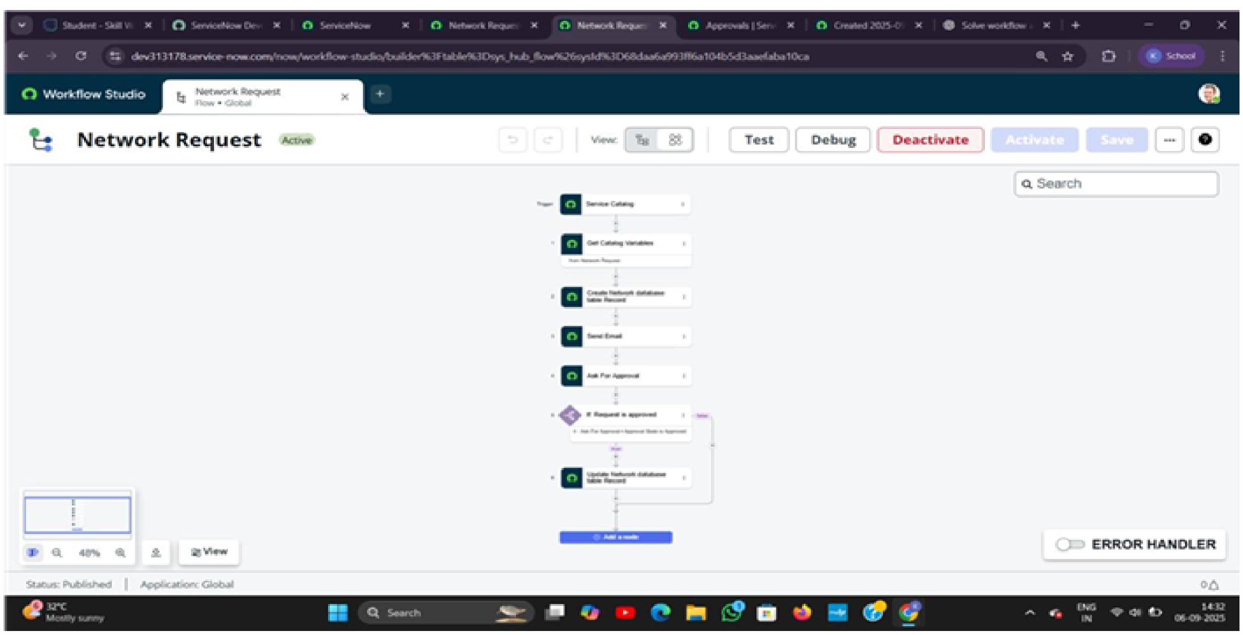

dev313178.service-now.com/now/workflow-studio/builder%3Ftable%3Dsys_hub_flow%26sysId%3D68daa6a993ff6a104b5d3aaefaba10ca
Workflow Studio
Network Request
Flow • Global
Network Request
Active
Test
Debug
Deactivate
Activate
Save
3 Send Email
4 Ask For Approval
5 If
Condition Label: Request is approved
Condition 1: 4 - Ask For Ap... ▸ Approval St... is Approved
or
and
Add another condition set(OR)
Delete
Cancel
Done
6 then Update Network database table Record
Data Collapse All
Flow Variables
Trigger - Service Catalog
Requested Item Record Record
Run Start Time UTC Date/Time
Table Name Table Name
Run Start Date/Time Date/Time
1 - Get Catalog Variables
opened_on_behalf_of Reference
email_id String
user_name String
proof_of_document Reference
phone_number String
is_this_a_new_request_conne... Choice
Status: Modified
Application: Global


dev313178.service-now.com/now/workflow-studio/builder%3Ftable%3Dsys_hub_flow%26sysId%3D68daa6a993ff6a104b5d3aaefaba10ca
Workflow Studio
Network Request
Flow • Global
Network Request
Active
Test
Debug
Deactivate
Activate
Save
Action
Flow Logic
Subflow
6 then Update Network database table Record
Action Properties
Update Record
Action Update Record
Action Inputs
Record 2 - ... ▸ Network database tab...
Table Network database table [u_netw...
Fields Assigned to Trigger - Servi... ▸ ... ▸ First na...
Work Status Work in progress
Add field value
Data Collapse All
Flow Variables
Trigger - Service Catalog
Requested Item Record Record
Run Start Time UTC Date/Time
Table Name Table Name
Run Start Date/Time Date/Time
1 - Get Catalog Variables
opened_on_behalf_of Reference
email_id String
user_name String
proof_of_document Reference
phone_number String
is_this_a_new_request_conne... Choice
Application: Global

6.Update Record
Select action as Update Record
Select record as >> create record>> network database
Table will be selected automatically
Configure the fields as per requirement, as shown in below
Click on done

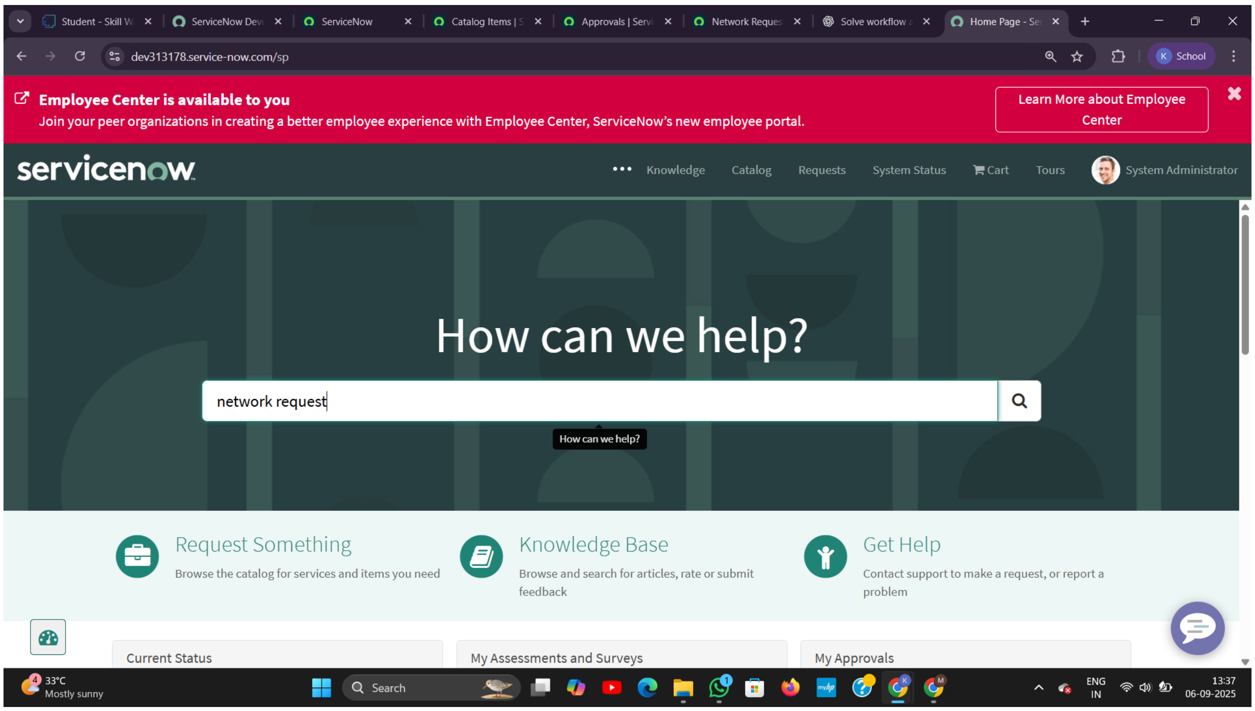


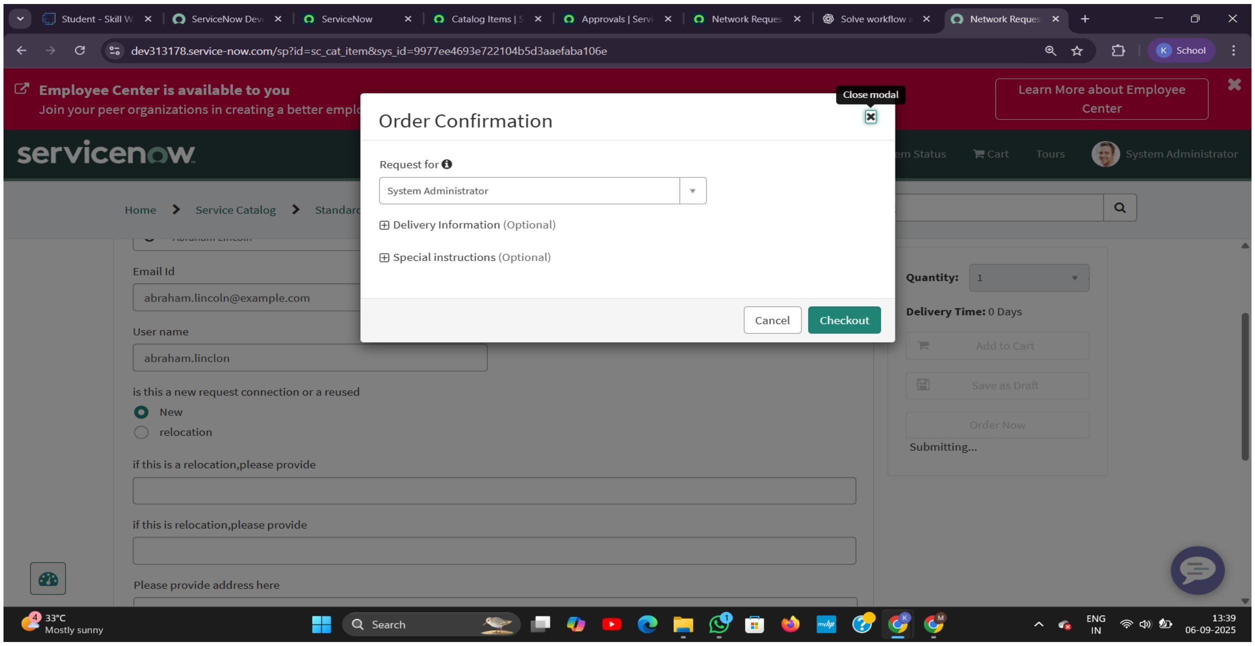
Flow Chart



Final Testing in End User portal & Instance

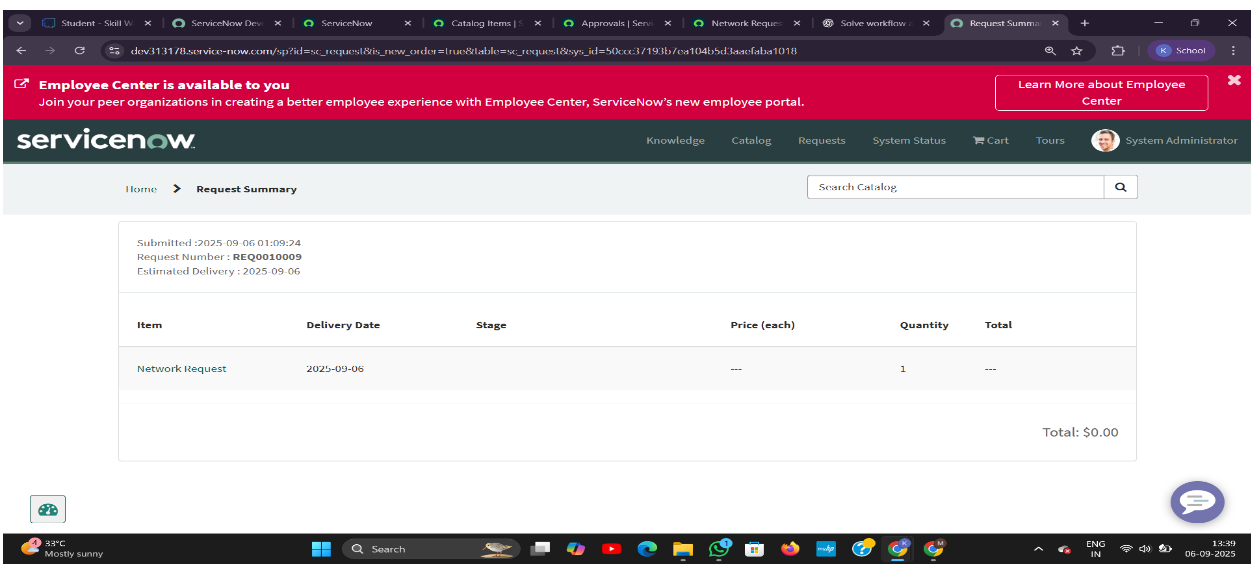
Testing in Service Portal(End User)





Procedure:

1. Login to ServiceNow PDI
2. Copy the Instance domain ex: https://dev190678.service-now.com.
3. Paste the URL in the Next tab and add Prefix SP to the URL. https://dev190678.service-now.com/sp.
4. Search for Network Requests.
5. Fill the required details and click on submit
6. New Requests will be generated with request numbers and users will get particular emails on the same.



Testing Emails

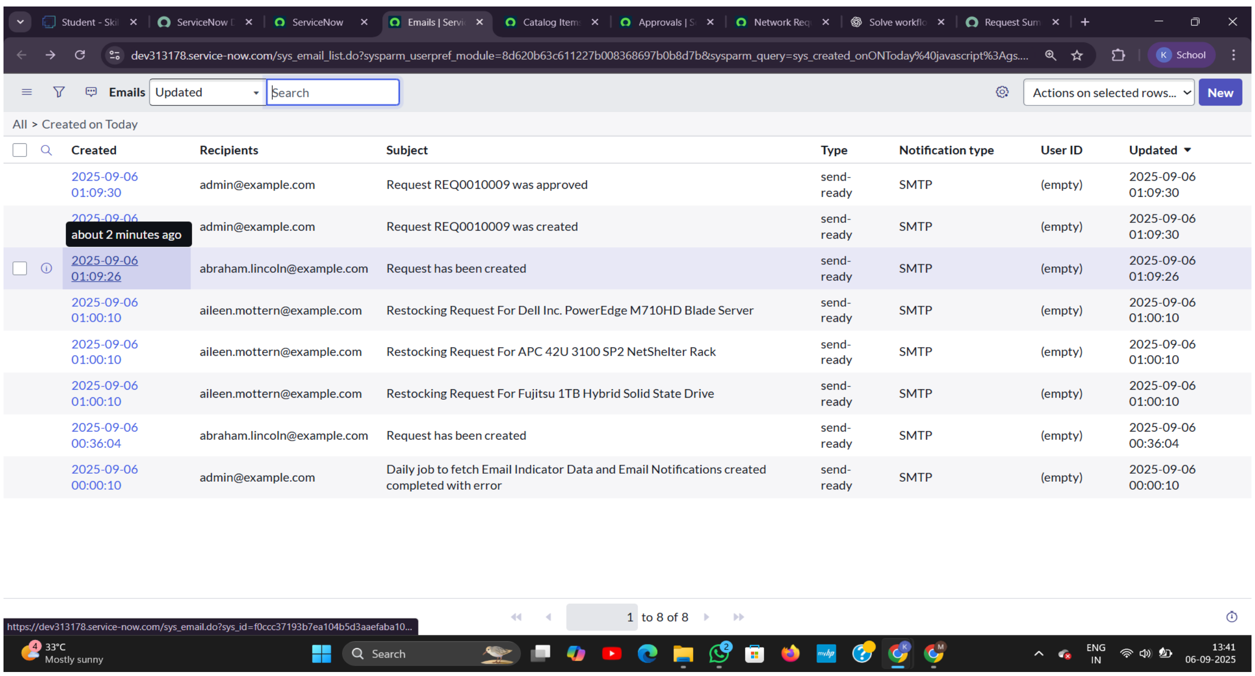
Procedure:

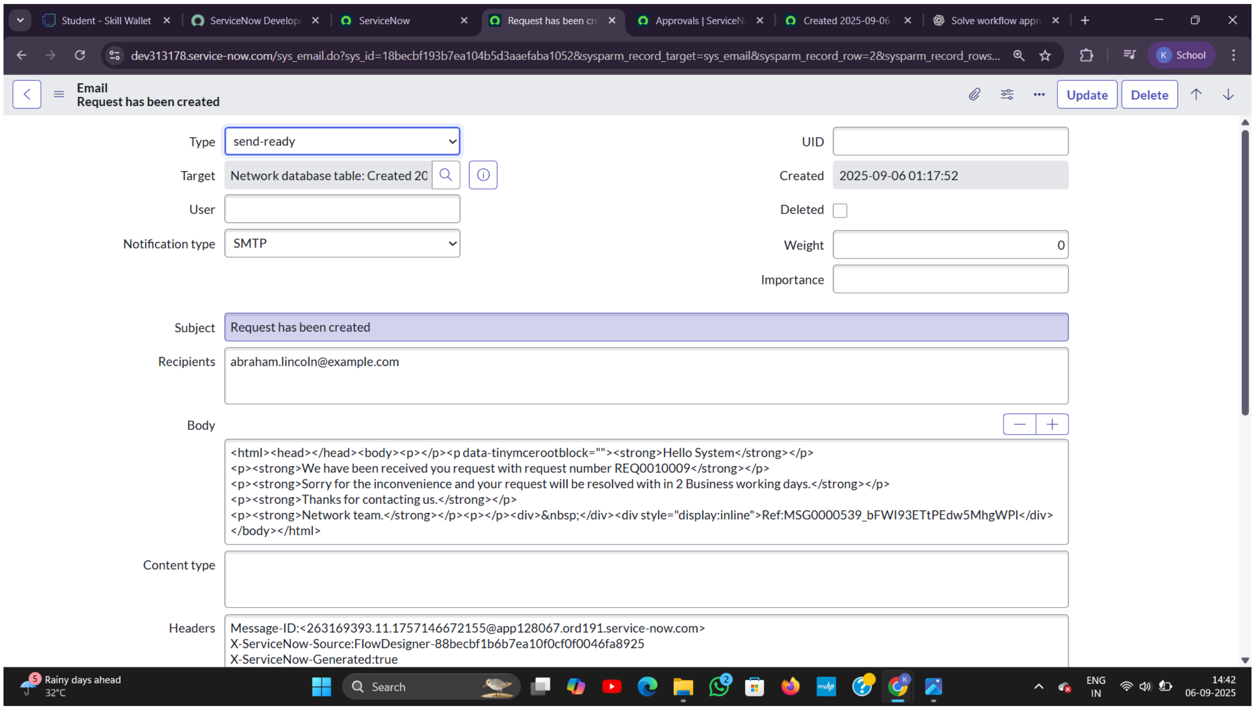
1. Login to ServiceNow PDI

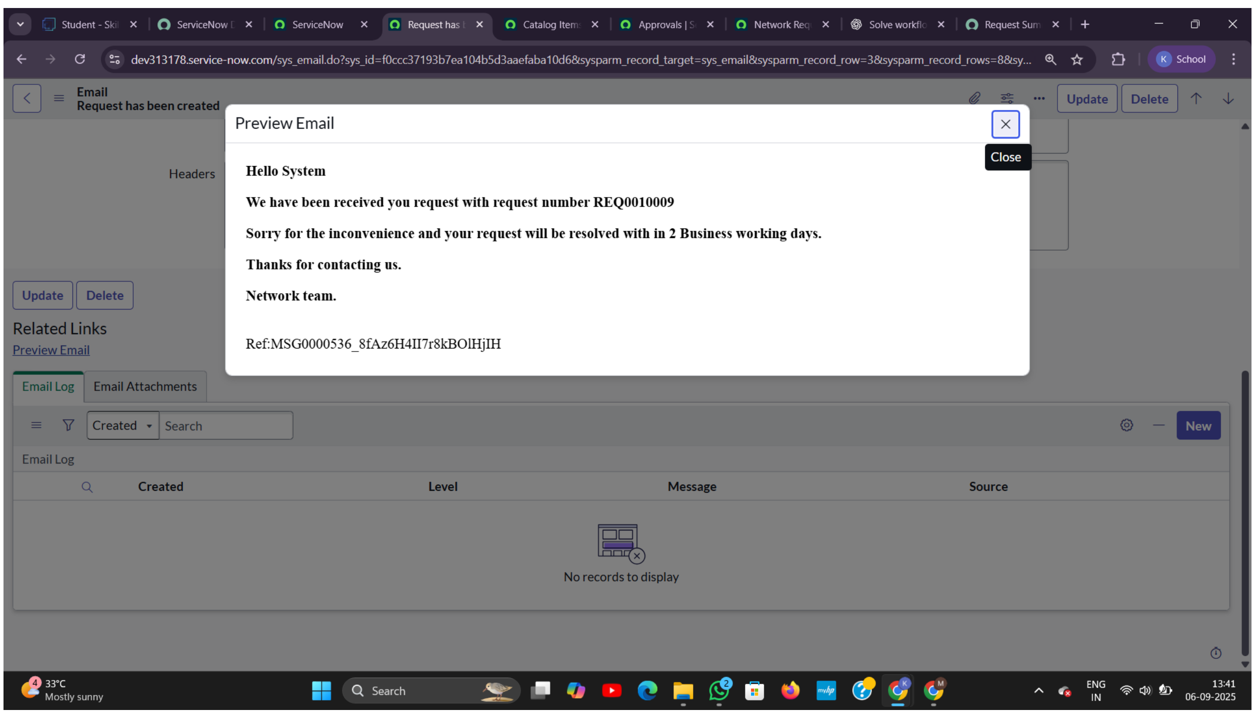
2. System logs>> emails

3. Apply filter>> created on today

4. Search with To, BCC, CC, Subject to get to know what are the emails triggered on the particular request.





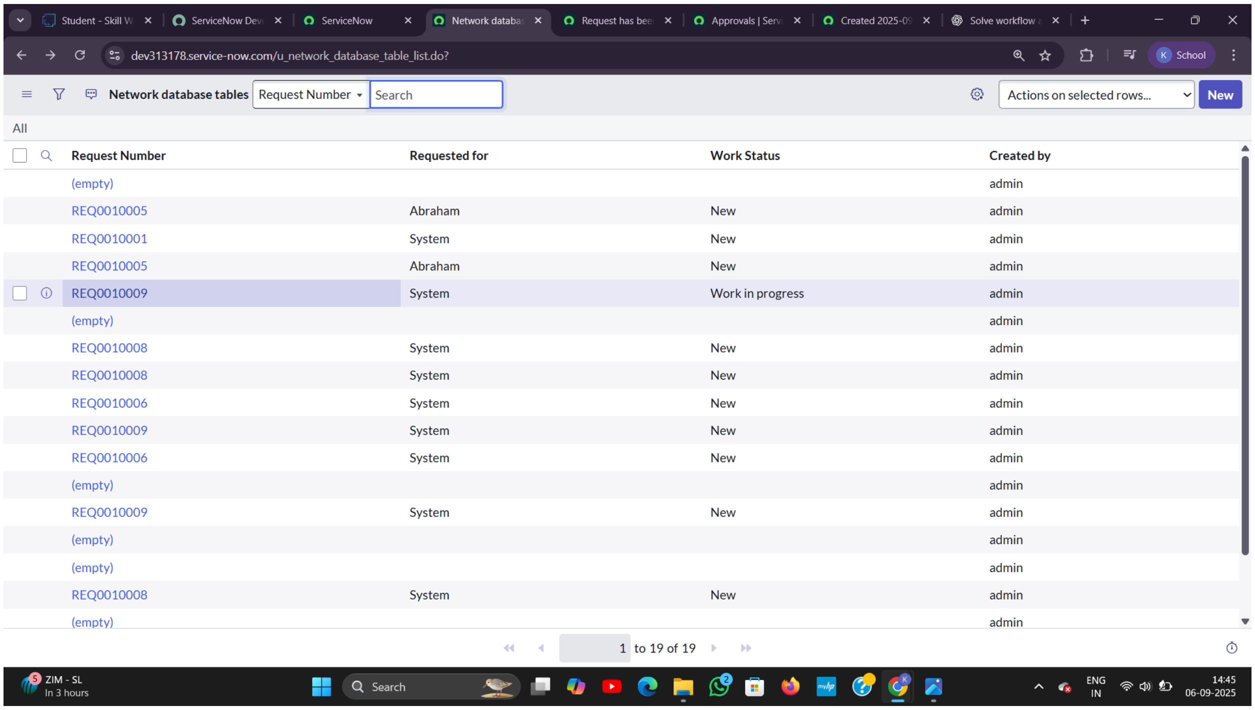


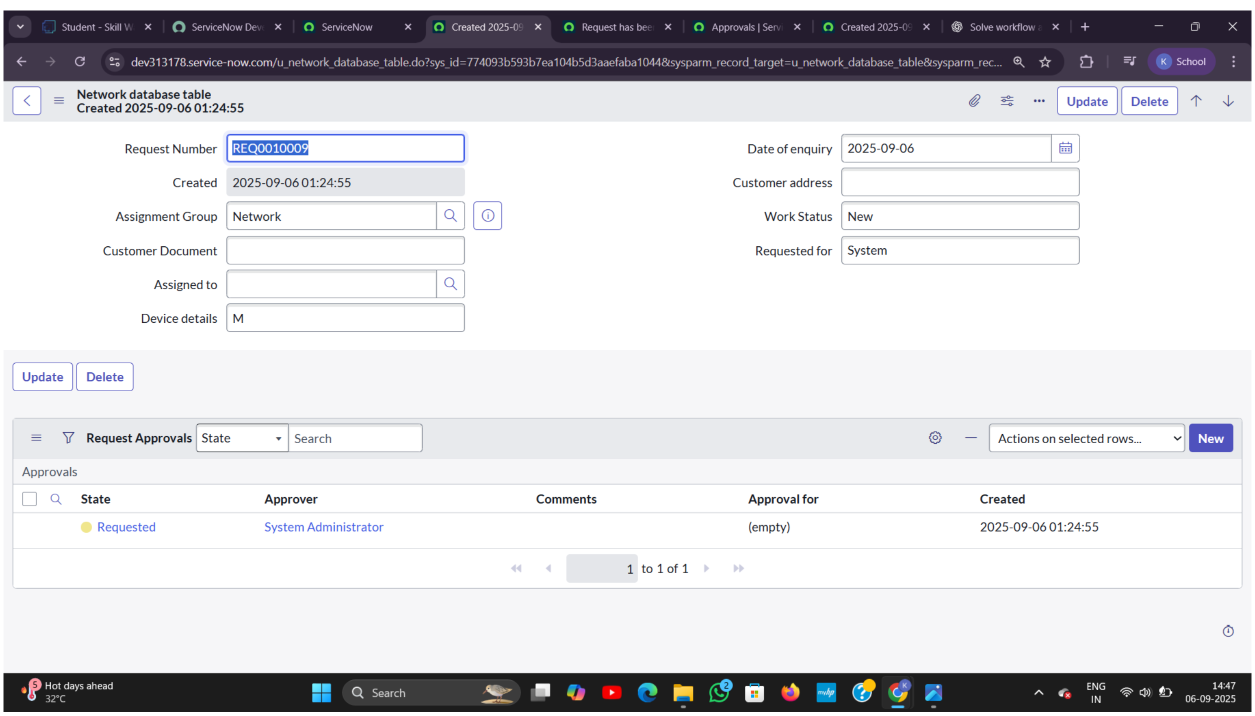
Testing with Custom Tables

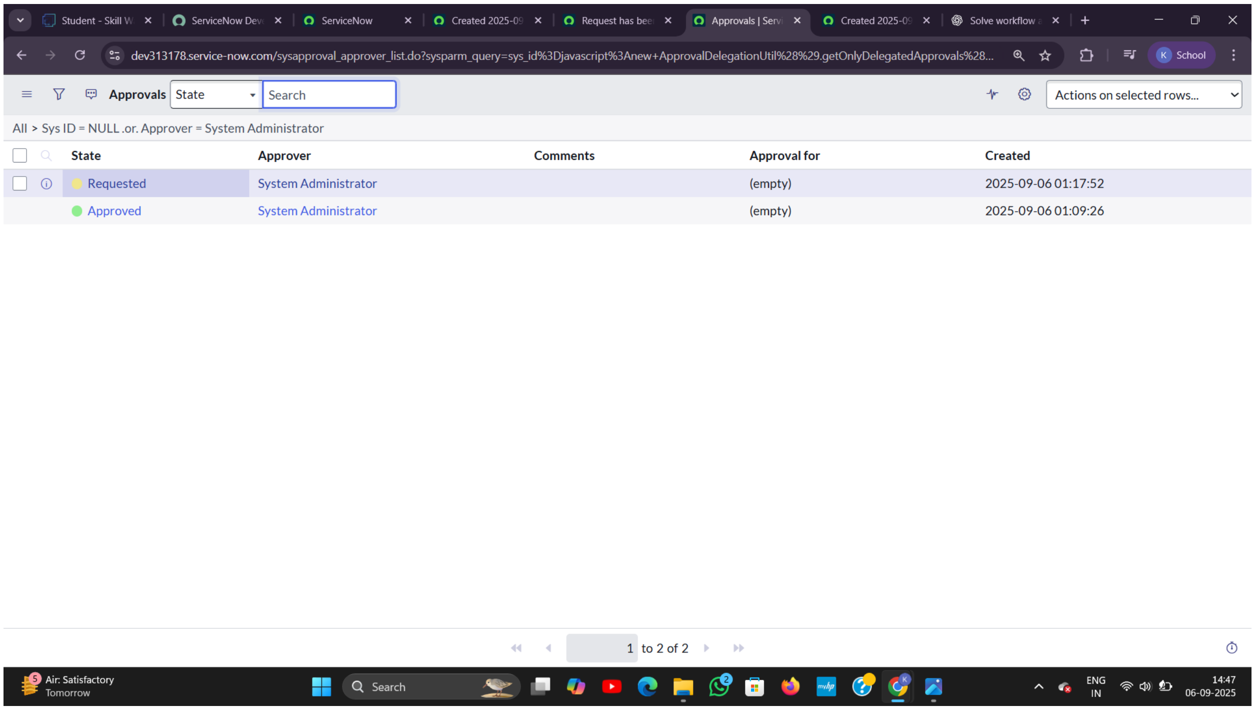
Procedure:

1. Login to ServiceNow PDI

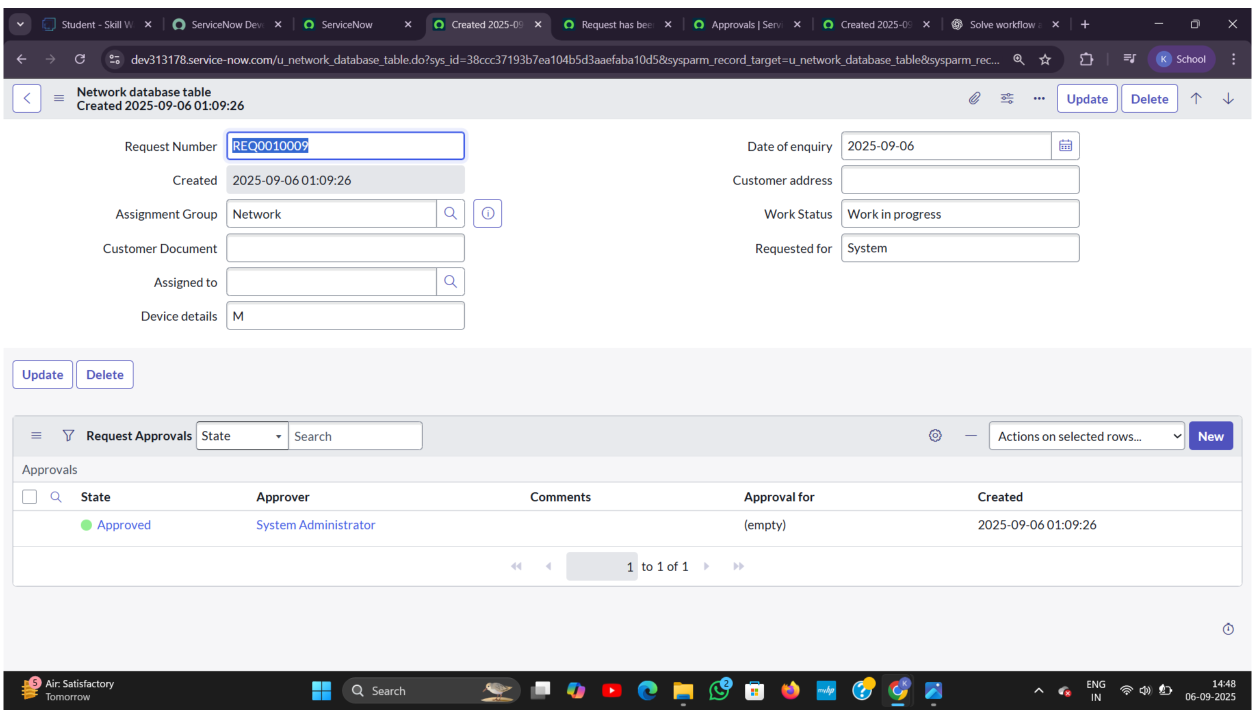
2. System definition >> Tables>> Network database/Network Task
3. After request is generated, Database and task tables fields are automatically filled by the flow designer configurations
4. Observe the Approvals requests and Changing of States of tables carefully







dev313178.service-now.com/sysapproval_approver_list.do?sysparm_query=sys_id%3Djavascript%3Anew+ApprovalDelegationUtil%28%29.getOnlyDelegatedApprovals%28...
Approvals
State
Search
Actions on selected rows...
All > Sys ID = NULL .or. Approver = System Administrator
State
Approver
Comments
Approval for
Created
Requested
System Administrator
(empty)
2025-09-06 01:17:52
Approved
System Administrator
(empty)
2025-09-06 01:09:26
1 to 2 of 2



dev313178.service-now.com/u_network_database_table.do?sys_id=38ccc37193b7ea104b5d3aaefaba10d5&sysparm_record_target=u_network_database_table&sysparm_rec...
Network database table
Created 2025-09-06 01:09:26
Update
Delete
Request Number
REQ0010009
Created
2025-09-06 01:09:26
Assignment Group
Network
Customer Document
Assigned to
Device details
M
Date of enquiry
2025-09-06
Customer address
Work Status
Work in progress
Requested for
System
Update
Delete
Request Approvals
State
Search
Actions on selected rows...
New
Approvals
State
Approver
Comments
Approval for
Created
Approved
System Administrator
(empty)
2025-09-06 01:09:26
1 to 1 of 1