

# **Project**

## **Prevent User Deletion if Assigned to Incident**

**Team ID: LTVIP2026TMIDS26598**

**Team Members: 04**

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### **Problem Statement:**

This project develops a server-side validation mechanism in ServiceNow to prevent accidental deletion of users who are assigned to active incidents. In IT Service Management systems, deleting a user record linked to incidents can cause workflow disruption, data inconsistency, and accountability loss. The solution implements a **Before Delete Business Rule** on the sys\_user table, which checks the incident table using GlideRecord. If related incidents exist, deletion is blocked with an appropriate error message. This project enhances data integrity, workflow continuity, and system reliability within ServiceNow-based IT environments.

### **Objective:**

The main objective of this project is to develop a centralized Incident Management System using ServiceNow that enables users to report incidents digitally and allows support teams to track, assign, prioritize, and resolve issues efficiently.

### **Skills:**

- ❖ ServiceNow Platform Knowledge
- ❖ ITIL Concepts (Incident Management)
- ❖ JavaScript (Client Scripts & Business Rules)
- ❖ Database Concepts
- ❖ Workflow Automation
- ❖ Problem-Solving
- ❖ Analytical Thinking
- ❖ Team Collaboration
- ❖ Project Documentation

# TASK INITIATION

## ▪ Module 1: User Creation

The screenshot shows the ServiceNow homepage with a dark blue header. The top navigation bar includes links for MyNow, Products, Industries, Learning, Support, Partners, and Company, along with a search icon, a globe icon, and a user profile icon. A green button labeled "Get Started" is located in the top right corner. Below the header, there is a large white rectangular box containing a green button labeled "Contact Sales" and a note stating "Form fields with an asterisk (\*) are required." To the right of this box, the text "Get the resources you need" is displayed in bold. Underneath, two sections are shown: "Put AI to work" featuring an AI icon and a description about generative AI; and "Find support" featuring a support icon and a description about technical support access. At the bottom left, a promotional banner says "Last chance—save \$200" with a green arrow button.

## Step 1: Click on My instance

The screenshot shows the ServiceNow Developer portal with a dark blue header. The top navigation bar includes links for Home, Learn, Reference, Guides, Connect, and a "Developer" link, along with a search icon, a globe icon, and a user profile icon. A green button labeled "Manage my instance" and a purple button labeled "Start building" are located in the top right corner. The main content area features a large green banner with the text "Unleash your app vision with Now Assist". Below the banner, a text input field contains the placeholder "Describe your app and our AI will guide you from concept to launch." with a note "For example, 'I want to create an app that helps me resolve incidents faster.'" and a green "Create" button. At the bottom, there are three categories: "Ticket Management", "Drilling and Work Management", and "Flight Management". A "Explore the App Gallery" section at the very bottom encourages users to discover ready-to-build app patterns and launch them instantly with Build Agent.

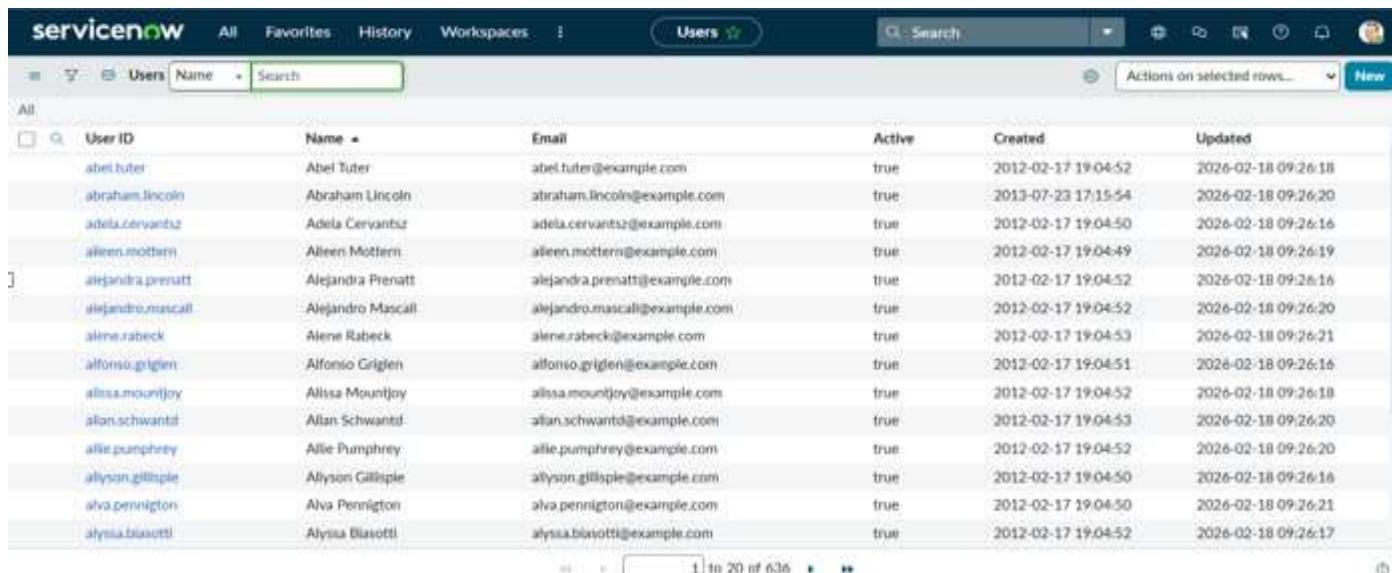
## Step 2: Click on Instance url

The screenshot shows the ServiceNow developer portal at [developer.servicenow.com/dev/do#/manage-instance](https://developer.servicenow.com/dev/do#/manage-instance). The main area is titled "Manage my instance (dev328278)". It displays instance status (Status: Online, Refresh), build agent status (Build Agent: initialized, ServiceNow Docker: initialized, App engine status: initialized), and current version (Zurich). To the right, there's a "Useful links" sidebar with links to PDI Guide, PDI FAQs, Managing your PDI, and a Developer advocate blog. Below the main area is a section for "Plugins for your instance (0)" with filters for "activation statuses" and "All demo data statuses".

## Step 3: Click on All>>Users (System Security)

The screenshot shows the ServiceNow system security interface. The left sidebar navigation tree is expanded to show "System Security > Users and Groups > Users". The main content area features a dark blue background with abstract shapes and a central circular graphic. At the bottom, there is a call-to-action banner with the text "GO FURTHER" and "Power your workflow applications".

## Step 4: click on New

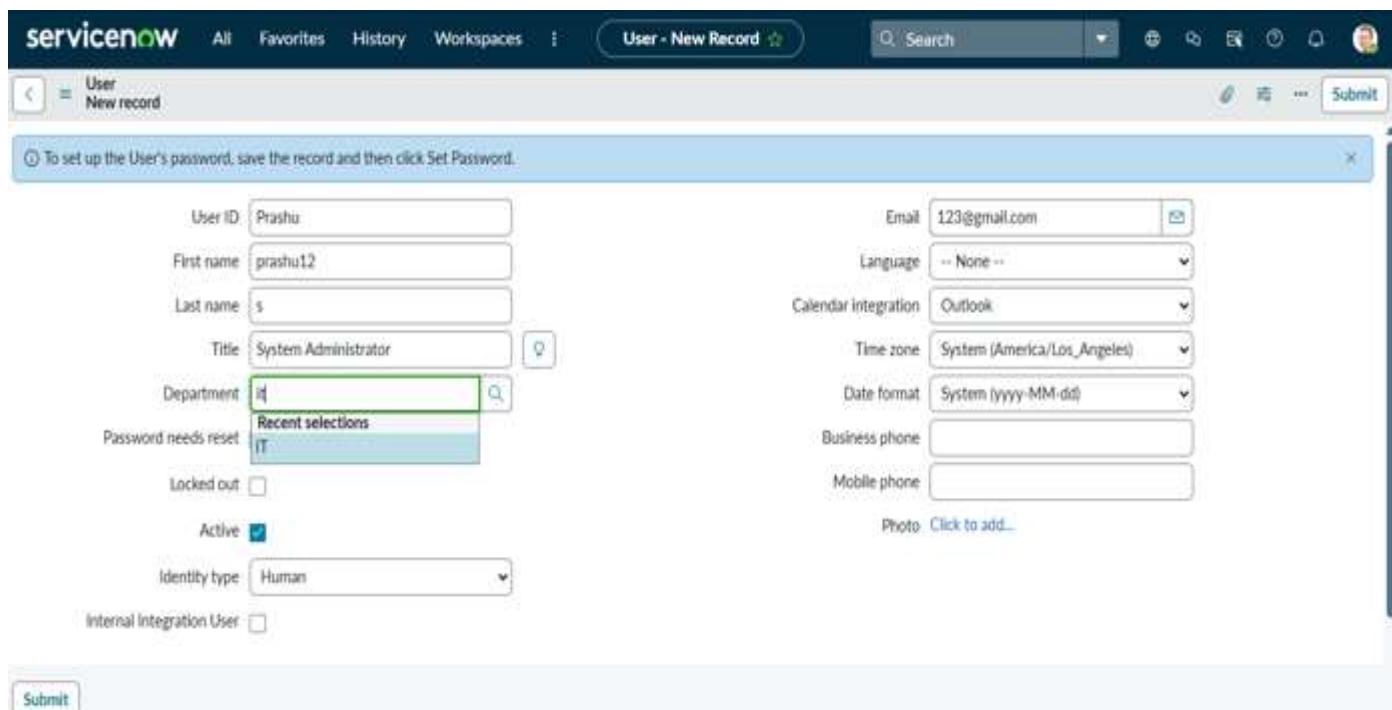


A screenshot of the ServiceNow user list grid. The top navigation bar includes 'servicenow', 'All', 'Favorites', 'History', 'Workspaces', 'Users', 'Search', and a user icon. A search bar at the top right contains 'Actions on selected rows...' and a 'New' button. The main grid has columns: 'User ID', 'Name', 'Email', 'Active', 'Created', and 'Updated'. The 'Name' column is currently sorted by name. The grid shows 636 records, with page 1 of 20 visible.

User ID	Name	Email	Active	Created	Updated
abel.tuter	Abel Tuter	abel.tuter@example.com	true	2012-02-17 19:04:52	2026-02-18 09:26:18
abraham.lincoln	Abraham Lincoln	abraham.lincoln@example.com	true	2013-07-23 17:15:54	2026-02-18 09:26:20
adela.cervantes2	Adela Cervantes2	adela.cervantes2@example.com	true	2012-02-17 19:04:50	2026-02-18 09:26:16
aileen.mottern	Aileen Mottern	aileen.mottern@example.com	true	2012-02-17 19:04:49	2026-02-18 09:26:19
alejandra.prenatt	Alejandra Prenatt	alejandra.prenatt@example.com	true	2012-02-17 19:04:52	2026-02-18 09:26:16
alejandro.mascall	Alejandro Mascall	alejandro.mascall@example.com	true	2012-02-17 19:04:52	2026-02-18 09:26:20
alene.rabeck	Alene Rabeck	alene.rabeck@example.com	true	2012-02-17 19:04:53	2026-02-18 09:26:21
alfonso.giglen	Alfonso Giglen	alfonso.giglen@example.com	true	2012-02-17 19:04:51	2026-02-18 09:26:16
alissa.mountjoy	Alissa Mountjoy	alissa.mountjoy@example.com	true	2012-02-17 19:04:52	2026-02-18 09:26:18
alan.schwartz	Alan Schwartz	alan.schwartz@example.com	true	2012-02-17 19:04:53	2026-02-18 09:26:20
allie.pumphrey	Allie Pumphrey	allie.pumphrey@example.com	true	2012-02-17 19:04:52	2026-02-18 09:26:20
allyson.gillispie	Allyson Gillispie	allyson.gillispie@example.com	true	2012-02-17 19:04:50	2026-02-18 09:26:16
alva.pennington	Alva Pennington	alva.pennington@example.com	true	2012-02-17 19:04:50	2026-02-18 09:26:21
alyssa.blasotti	Alyssa Blasotti	alyssa.blasotti@example.com	true	2012-02-17 19:04:52	2026-02-18 09:26:17

## Step 5: Create Two users

Enter the Details >> Click on Submit.



A screenshot of the 'User - New Record' creation form. The top navigation bar includes 'servicenow', 'All', 'Favorites', 'History', 'Workspaces', 'User - New Record', 'Search', and a user icon. A message at the top says: 'To set up the User's password, save the record and then click Set Password.' The form fields include:

- User ID: Prashu
- Email: 123@gmail.com
- First name: prashu12
- Language: -- None --
- Last name: s
- Calendar integration: Outlook
- Title: System Administrator
- Time zone: System (America/Los\_Angeles)
- Department: it
- Date format: System (yyyy-MM-dd)
- Password needs reset: Recent selections (IT)
- Business phone: (empty)
- Locked out:
- Mobile phone: (empty)
- Active:
- Photo: Click to add...
- Identity type: Human
- Internal Integration User:

At the bottom left is a 'Submit' button.

- **Module 2:** Assign incident to user

## Step 1: Navigate to the incident

All>>incident

The screenshot shows the ServiceNow search interface. The search bar at the top contains the text "incident". Below the search bar, there are sections for "FAVORITES" and "ALL RESULTS". Under "ALL RESULTS", there are two main categories: "Self-Service" and "Service Desk". Under "Self-Service", there is a single result labeled "Incidents". Under "Service Desk", there are three results: "Incidents opened on your behalf", "Incidents", and "Incident". The background features a dark blue theme with a circular graphic on the right side.

## Step 2: Click On Create New incident

The screenshot shows the "Incidents View: Self Service" page. The sidebar on the left has a search bar with "incident" typed in. Below the search bar, under the "Incidents" section, there is a button labeled "Create New". This button is highlighted with a green border, indicating it is selected or the next step to take. The main area of the screen displays a table with one row of data: "Opened" status, date "2019-07-22 14:04:57", and short description "ATF : Test1".

## Step 3: Enter the Details: caller,state,assigned to >> Click on submit

The screenshot shows the ServiceNow interface for creating a new incident. The 'Number' field is set to 'INC0010008'. The 'Caller' field contains 'Prashu12 k'. The 'Category' is 'Inquiry / Help' and 'Subcategory' is 'Email'. The 'State' dropdown is set to 'New', with 'In Progress' highlighted in blue. Other state options include 'New', 'On Hold', 'Resolved', 'Closed', and 'Canceled'. The 'Assignment group' and 'Assigned to' fields are also visible. At the bottom, there are 'Related Search Results', a search bar, and a 'Knowledge & Catalog (All)' dropdown.

## ▪ Module 3: Business Rule Creation

### Step 1: Go to System Definition>>Business Rule

The screenshot shows the ServiceNow 'Business Rules' list screen. A search results panel on the left shows 'business' as a search term with 'No Results' under 'FAVORITES' and 'ALL RESULTS' showing items like 'Business Applications', 'Activity Subscriptions', 'Administration', 'Business Rules', and 'Business Calendar'. The main table lists various business rules with columns for 'Table', 'Application', 'Order', and 'Updated'. The table includes rows for Activity, Activity Type, Activity Facet, Activity Context Type, Activity Group Type, Activity Type Template, Activity Context Group, and Activity Context.

Table	Application	Order	Updated
Activity [sn_actsub_activity]	Global	100	2017-02-01 17:17:01
Activity [sn_actsub_activity]	Global	100	2017-12-25 22:04:21
Activity Type [sn_actsub_activity_type]	Global	100	2019-08-30 05:09:44
Activity Facet [sn_actsub_facet]	Global	100	2020-03-17 02:51:53
Activity Context Type [sn_actsub_source_context_mapping]	Global	100	2020-03-17 02:52:43
Activity Group Type [sn_actsub_m2m_subobject_activitytype]	Global	100	2020-03-17 02:53:41
Activity Type Template [sn_actsub_activitytype_template]	Global	100	2020-02-23 01:28:55
Activity Context Group [sn_actsub_m2m_context_subobject]	Global	100	2020-03-17 02:55:02
Activity Context [sn_actsub_activity_context]	Global	100	2020-03-17 02:55:59

## Step 2: Click on New

The screenshot shows the ServiceNow Business Rules list view. The table has columns: Name, Active, Table, Application, Order, and Updated. There are search bars at the top of each column. The data includes:

Name	Active	Table	Application	Order	Updated
Display Fulfill UI and Quotas	true	Chat Setup [sys_csi_live_agent_setup]	Global	100	2020-03-23 00:00:32
GTD Tour Name and Page Name Validation	true	Guided Tour [sys_embedded_tour_guide]	Global	100	2020-07-27 22:40:07
ID-20 split for the usage field	true	MR Labelled Data [int_labelled_data]	Global	100	2021-10-13 09:48:24
Able to disable parameterized testing	true	Test [sys_uitest]	Global	100	2018-06-29 10:33:57
Abort CMDB Policy Type deletion	true	CMDB Policy Type [cmdb_policy_type]	Global	100	2021-10-28 18:24:30
Abort action if no license type	true	Software Model [cmdb_software_product_model]	Global	100	2012-04-03 19:05:58
Abort Activation/Deactivation of topics	true	Topic [topic]	Global	100	2020-05-26 16:58:14
Abort adding more than one taxonomy	true	Portal Taxonomy [cmn_sp_portal_taxonomy]	Global	100	2021-03-29 01:40:35
Abort addition of parent	true	Asset [alm_asset]	Global	100	2023-10-04 03:19:41
Abort change on pmed2 legacy properties	true	System Property [sys_properties]	Global	100	2025-04-03 12:59:23
About this page on wiki   Help   Recent changes   Log in   Logout					

## Step 3: Creating business rule

Enter details>>Name: Prevent User Deletion if assigned an incident,  
Table: Select sys\_user, Active: checked

The screenshot shows the ServiceNow Business Rule - New Record configuration page. The form fields are:

- Name: Prevent User Deletion if Assigned to an
- Table: Contained Role [sys\_user\_role\_contains]
- Application: Global
- Active: checked
- Advanced: unchecked

Below the form, there are sections for "When to run" and "Actions". The "When to run" section has tabs for "When to run" and "Actions". The "Actions" tab is selected, showing a table for specifying when the rule should run (Insert or Update) and filter conditions.

## **Step 7: Advanced:checked>>When:Before>>Delete checked**

**Code script:**

```
(function executeRule(current, previous /null when async/) {  
  
var incGr = new GlideRecord('incident');  
  
incGr.addQuery('assigned_to', current.sys_id);  
  
incGr.setLimit(1); // Just need to check existence  
  
// incGr.addQuery('active', true); we can use the above or this  
line of code to check where the user is assigned with any incident  
  
incGr.query();  
  
if (incGr.next()) {  
  
    gs.addErrorMessage('This user cannot be deleted because they  
are assigned to one or more incidents.');//  
  
    current.setAbortAction(true);  
  
}
```

// Add your code here

})(current, previous);

>>Click on submit

The screenshot shows the ServiceNow interface for creating a new business rule. The title bar says "Business Rule - New Record". The main area contains a code editor with the following Java code:

```
9 // Incr.addQuery('active', true); we can use the above or this line of code to check where the user is
10 assigned with any incident
11
12 Incr.query();
13
14 if (Incr.next()) {
15     gs.addErrorMessage('This user cannot be deleted because they are assigned to one or more incidents.');
16     current.setAbortAction(true);
17 }
18
19 // Add your code here
20
21 }}(current, previous);
22
23
24
25
```

At the bottom left is a "Submit" button.

## Module 4: Test deletion

Attempt to delete assignment user

Step 1: Go to user record >> Try to delete

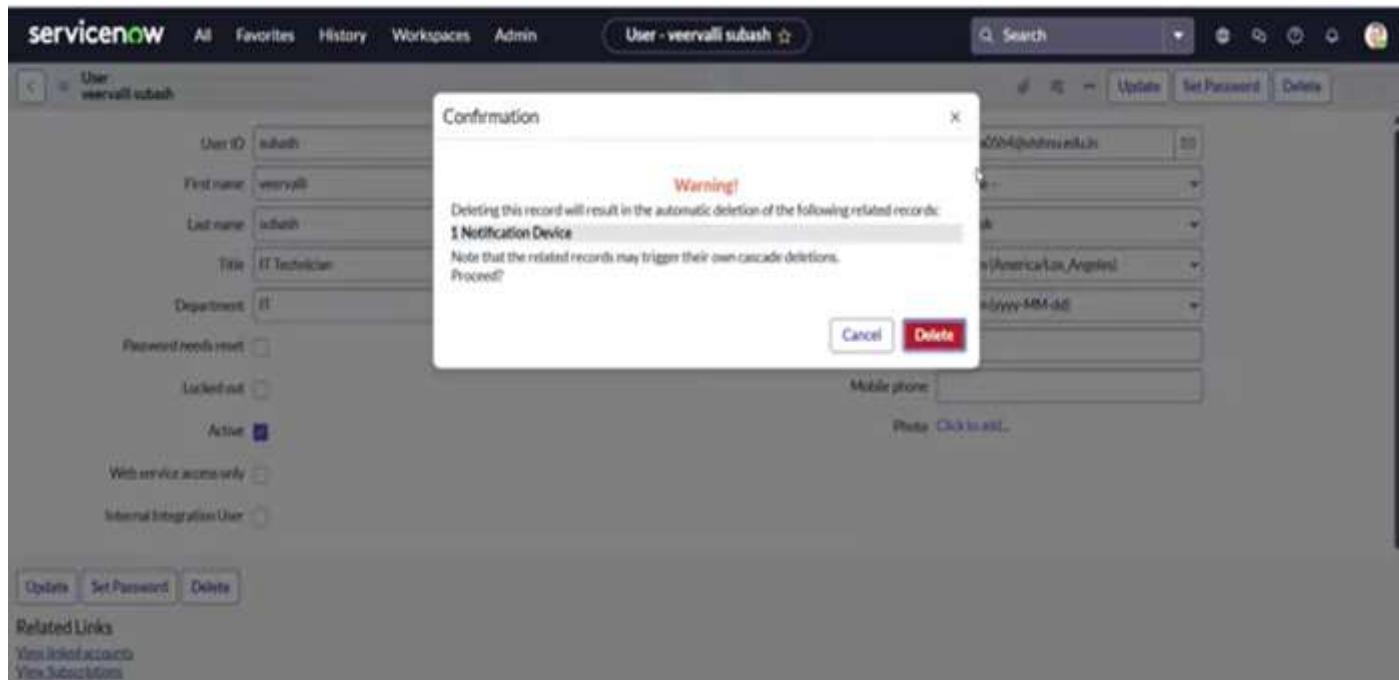
The screenshot shows the ServiceNow "Users" list page. The top navigation bar includes "Admin". The main table displays user information:

User ID	Name	Email	Active	Created	Updated
subash	subash	subash@subash.com	True	2023-06-28 10:29:00	2023-06-28 10:29:00
subash	subash	subash@subash.com	True	2023-06-28 10:29:00	2023-06-28 10:29:00

## Step 2: Click on Delete



## Step 2: Verify the delete is blocked with an error message



## Module 5: Test with unassigned user

### Step 1: Attempt to delete unassigned user.

The screenshot shows the ServiceNow interface with the 'Users' module selected. A search bar at the top has 'Name' entered and a 'Search' button highlighted with a blue border. Below the search bar, a breadcrumb path 'All > Name >= Jyoshna' is visible. The main area displays a table with columns: User ID, Name, Email, Active, Created, and Updated. One row is shown for 'Jyoshna123' with values: Jyoshna K, Jyoshna@gmail.com, true, 2026-02-11 10:02:37, and 2026-02-11 10:22:00. The 'Actions on selected rows...' dropdown menu is open, showing options like 'Edit', 'Delete', and 'New'.

### Step 2: Click on delete >> Delete should Succeed.

The screenshot shows the ServiceNow interface with the 'User - Jyoshna K' record open. On the right, a 'Confirmation' dialog box is displayed with a red 'Warning!' message: 'Deleting this record will result in the automatic deletion of the following related records: 1 Notification Device, 1 Notification Messages'. It also notes, 'Note that the related records may trigger their own cascade deletions.' At the bottom of the dialog are 'Cancel' and 'Delete' buttons. The background shows the user's details: User ID (Jyoshna123), First name (Jyoshna), Last name (K), Title (empty), Department (IT), Password (empty), and checkboxes for 'Password needs reset' and 'Locked out'. The 'Actions' menu is also visible.

## **Conclusion:**

The project “Prevent User Deletion if Assigned to Incident” successfully demonstrates how ServiceNow can be used to enforce data integrity and prevent critical system errors. In many organizations, deleting a user who is already assigned to active or historical incidents can lead to data inconsistencies, reporting issues, and loss of accountability. Through the implementation of a Before Delete Business Rule and server-side validation using GlideRecord, this project ensures that users linked to incidents cannot be deleted accidentally. The system displays a proper error message and restricts the action, thereby maintaining referential integrity within the Incident Management module. This solution enhances system reliability, improves administrative control, and protects organizational data from unintended modifications. Overall, the project highlights the importance of implementing validation mechanisms in IT Service Management platforms like ServiceNow to ensure secure and efficient operations.