

Asset Management Portal

Project Report

1.INTRODUCTION

Asset Management:

Asset Management is a platform designed to help organizations track, manage, and optimize their IT assets throughout their lifecycle, from procurement to disposal. It provides a centralized system for managing hardware, software, and cloud assets, offering features like lifecycle management, cost tracking, compliance reporting, and automated workflows.

Importance:

1. Enhanced Visibility and Control.
- 2.Improved Asset Lifecycle Management.
- 3.Cost Optimization.
- 4.Enhanced Compliance and Security.
- 5.Improved Incident Management.

Project Overview:

A Project Overview for an Asset Management Portal in ServiceNow outlines the key goals, scope, benefits, and high-level structure of the project.Asset management is a systematic process of developing, operating, maintaining, upgrading, and disposing of assets in the most cost-effective manner.

Purpose:

1. Real time visibility into asset health and usage.
2. Reduce asset loss and misuse.
3. Increased operational efficiency.
4. Workflow automation.
5. Improve asset utilization.

2.IDEATION PHASE

Project Statement:

The Asset Management Portal will streamline the tracking, management, and allocation of both physical and digital assets across an organization. Employees will be able to request and receive assets through an intuitive portal, while administrators can manage the entire asset lifecycle, from procurement to disposal. The portal will also automate asset assignment, ensure accurate record-keeping, and generate real-time reports on asset utilization and condition. Alerts will be triggered for maintenance or replacement needs, ensuring optimal asset performance and reducing downtime. By centralizing asset management, the platform will improve operational efficiency, reduce asset loss, and support informed decision-making.

What kind of challenges will we face if we don't do an asset management project?

1. Lack of Asset Visibility.
2. Difficulty tracking what assets you own, where they are, and who is using them.
3. Risk of underutilized or unused assets going unnoticed.
4. Increased Operational Costs.
5. Increased Operational Costs.
6. Poor Risk Management.

Objective

Automate the tracking, allocation and management of physical and digital asset, ensuring real-time updates on asset status condition and availability. Provide actionable insights for asset maintenance and replacement needs and generate report to optimize asset utilization and decision-making

3.REQUIREMENT ANALYSIS

Solution Requirements: Functional And Non-Functional

Functional Requirements

S.No	Functional Requirements	Description
1	<ul style="list-style-type: none">● Create Table● Create Fields	<ul style="list-style-type: none">● Access table creation,create new table,fill the details and after save the table record then table is created.● Open table,go to the column section,scroll the table record and double click on insert a new row then you will add fields and after click on save
2	<ul style="list-style-type: none">● UI Actions	<ul style="list-style-type: none">● UI action is a way to add interactive elements like buttons, links, or context menu items to forms and lists
3	<ul style="list-style-type: none">● Scheduled Job	<ul style="list-style-type: none">● Scheduled Job, also known as a Scheduled Script Execution, is a tool for automating tasks.
4	<ul style="list-style-type: none">● Testing	<ul style="list-style-type: none">● Testing involves testing custom applications, configurations, integrations, and workflows within the ServiceNow platform.

Non-Functional Requirements

S.No	Non-Functional Requirements	Description
1	<ul style="list-style-type: none">Scalability	<ul style="list-style-type: none">This describes the system's ability to handle increasing loads and demands, whether it's more users, more data, or more transactions.
2	<ul style="list-style-type: none">Security	<ul style="list-style-type: none">This covers measures to protect sensitive data, prevent unauthorized access, and ensure data integrity.
3	<ul style="list-style-type: none">Performance	<ul style="list-style-type: none">This includes aspects like response times for pages and transactions, processing speed, and overall system responsiveness.
4	<ul style="list-style-type: none">Reliability	<ul style="list-style-type: none">This refers to the system's ability to consistently perform its intended functions without failure.
5	<ul style="list-style-type: none">Usability	<ul style="list-style-type: none">This covers the ease with which users can interact with and utilize the system. It includes aspects like user interface design, navigation, and overall user experience.

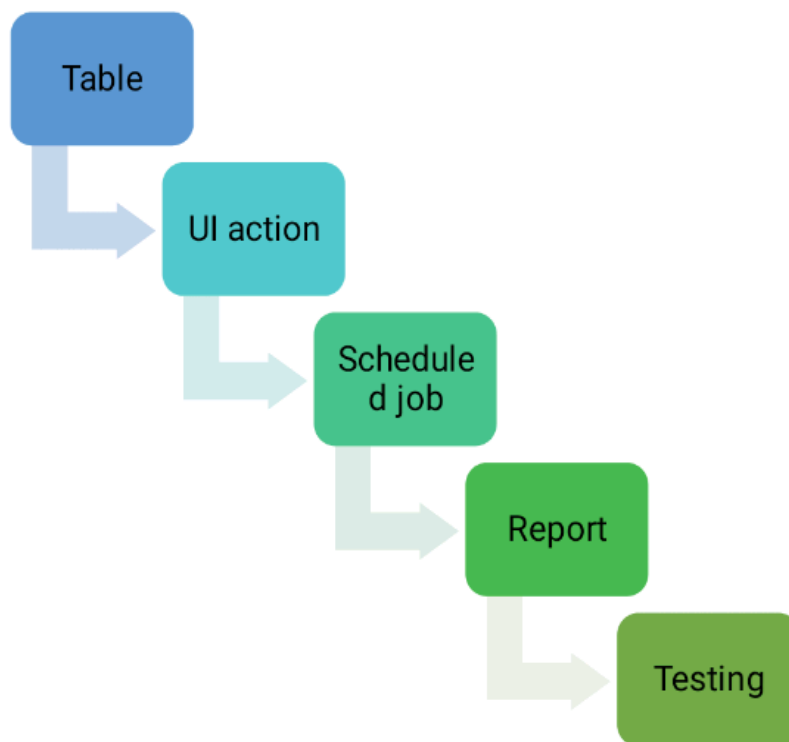
Data Flow Diagram:

A data flow diagram is a simple graphical tool used to show how data moves through a system. It illustrates the input, processing, storage and output of data using symbols like arrows, circles and rectangles.

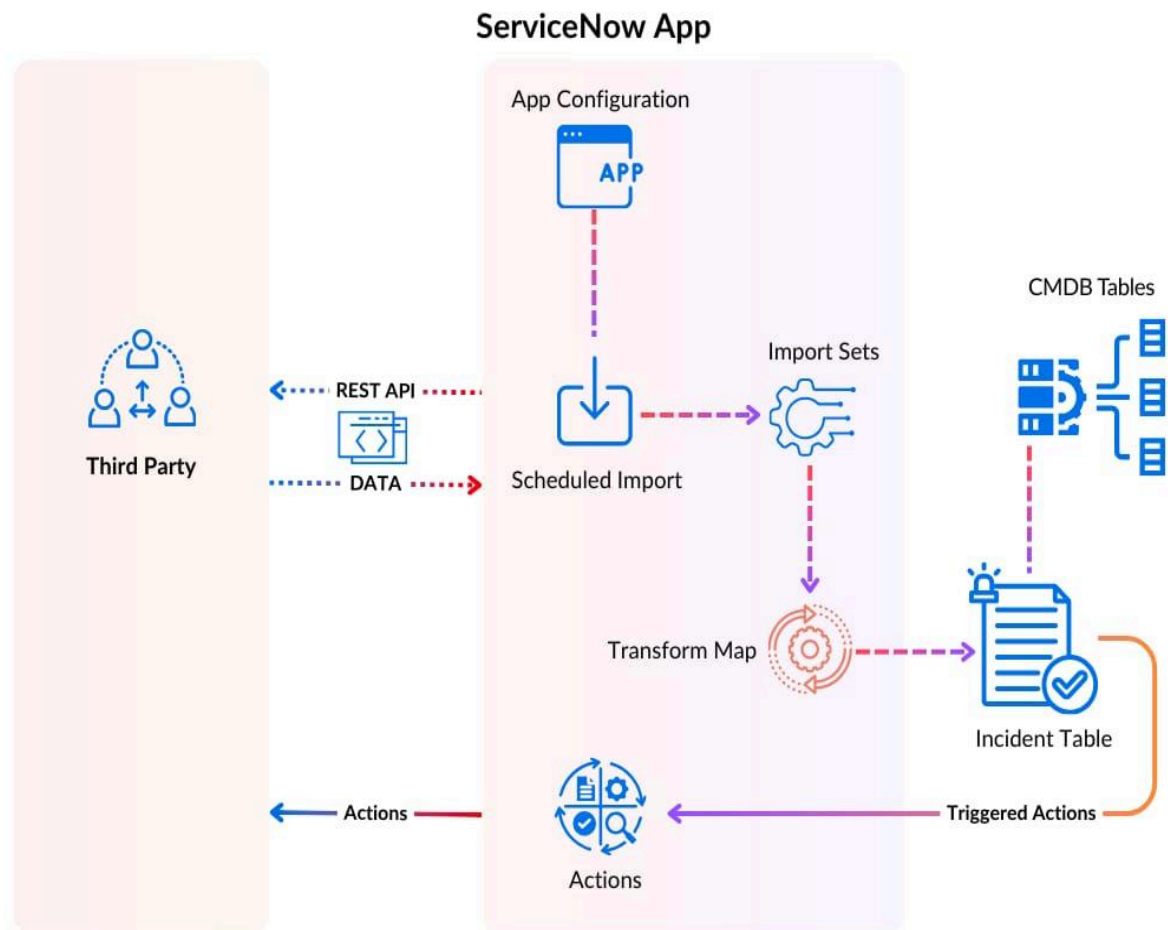
Uses

- Visualizes system processes and how data moves between them.
- Helps in understanding system structure clearly and quickly

Architecture of Servicenow



Technology Stack:



- Scheduled imports in service now are used to automate the process of importing data into the platform at specified intervals.
- Import sets are a feature used to bring data into the platform from external sources.
- A transform map defines how data from an import set is mapped and transformed into a target table.
- Incident table is a core table used to track and manage unplanned interruptions or degradations in IT service quality.

- CMDB(Configuration Management Database)utilizes several core tables to store and manage information about IT assets and their relationships.

4.PROJECT DESIGN

Proposed Solution:

S.No	Parameter	Description
1	Problem Statement	Organizations often face challenges in tracking,managing,and maintaining their physical and digital assets,leading to asset loss,inefficiency and inaccurate records.
2	Idea/Solution	The proposed solution is an asset management portal ,a centralized and automated web based platform that streamlines the tracking.
3	Novelty/Uniqueness	The asset management portal stands out with its automation of the entire asset lifecycle,including real-time tracking,self-service asset requests.
4	Social impact/Customer satisfaction	The asset management portal improves organizational transparency and accountability,reducing asset misuse and promoting responsible resource utilization
5	Business model	The asset management portal follows a software-as-a-service business model.
6	Scalability of the solution	The asset management portal is highly scalable,capable of handling increasing numbers of users.

5.PROJECT PLANNING & **SCHEDULING**

Asset Management Portal

Asset Management:

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Importance:

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- 4.Enhanced Compliance and Security.
- 5.Improved Incident Management.

Note: Request you to please click on "Tick mark ✓" after assigning the activities for each milestone.

Assign Roles & Responsibilities to Team

[→ Proceed to Workspace](#)

Table	▼	Create table	▼	* Muddada Anitha	✓	✗
Table	▼	Create Fields	▼	* Muddada Anitha	✓	✗
Create UI Actions	▼	UI Action 1	▼	* Pandiripalli Hemalatha	✓	✗
Create UI Actions	▼	UI Action 2	▼	* Pandiripalli Hemalatha	✓	✗
Create UI Actions	▼	UI Action 3	▼	* Pandiripalli Hemalatha	✓	✗
Scheduled Job	▼	Create Scheduled Jo	▼	* Paila Anusha	✓	✗
Report	▼	Create Report	▼	* Paila Anusha	✓	✗
Testing	▼	Testing UI action	▼	* Nammi Sowmya	✓	✗
Testing	▼	Testing Schduled Jol	▼	* Nammi Sowmya	✓	✗

+ ADD

Assigned task to the group members as shown in below

Functional requirements	User story	No of activity	Team members
Table	As an administrator, I want to create and manage a table to store asset information so that i can easily track,update and organize all asset in the system.	2	M.Anitha
UI Action	As a user ,I want a button to quickly assign or return an asset so that i can perform actions efficiently without navigating	3	P.Hemalatha
Scheduled Job	As an admin, I want scheduled jobs to run automatically at set times so that tasks like sending maintenance alerts	1	P.Anusha
Report	As a manager, I want to generate reports on asset usage and status so that i can make informed decisions and track performance.	1	P.Anusha
Testing	As a developer, I want to test all features like UI actions and scheduled jobs to ensure they work correctly	2	N.Sowmya

6.FUNCTIONAL AND PERFORMANCE TESTING

Milestone 1: Tables

Table is a structured container that holds records, similar to a database table. Each table represents a specific type of data, like users, incidents, or assets, and is composed of rows (records) and columns (fields).

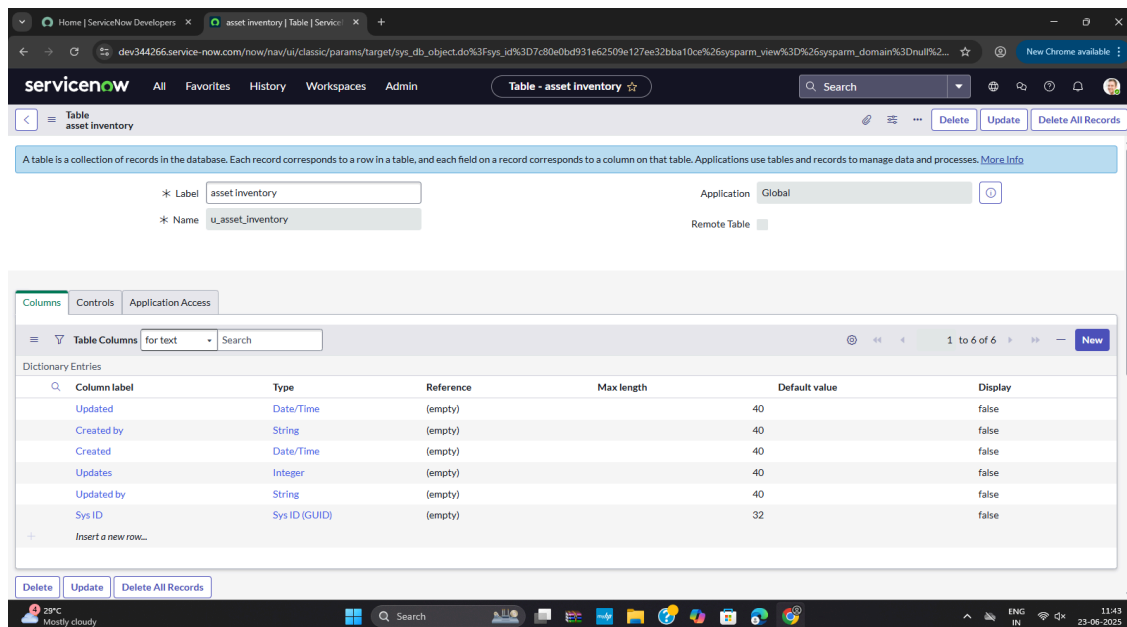
Use

Tables are fundamental for organizing and storing data. They are essentially database tables that hold records, similar to how a spreadsheet organizes information into rows and columns.

Activity 1: Create Table

Steps

- 1. Open service now.**
- 2. Click on All >> search for tables**
- 3. Open System definition >> tables**
- 4. Click on new**
- 5. Fill in the details as**
Name : asset inventory
- 6. Save the table**



Activity 2: Fields

Fields are individual data points within a record (like an incident or a problem) that store specific information. They are analogous to columns in a database table.

Use

Fields are used to store specific pieces of information within a record of a table. They act as containers for data, allowing users to input, view, and manage information relevant to the record.

Steps

1) After saving the table scroll down

2) Create fields

- Assigned to : string
- Status : choice
- Purchase date : date
- Warranty Expire : date
- Asset name : string

- Type : choice
- Number : String

3) Click on save

Column label	Type	Reference	Max length	Default value	Display
Asset name	String	(empty)	40		false
Assigned to	String	(empty)	40		false
Created	Date/Time	(empty)	40		false
Created by	String	(empty)	40		false
Number	String	(empty)	40		false
Purchase date	Date	(empty)	40		false
Status	Choice	(empty)	40		false
Sys ID	Sys ID (GUID)	(empty)	32		false
Type	Choice	(empty)	40		false
Updated	Date/Time	(empty)	40		false
Updated by	String	(empty)	40		false
Updates	Integer	(empty)	40		false
Warranty Expire	Date	(empty)	40		false

Milestone 2: UI Action

UI actions are custom actions that allow users to interact with records on forms and lists, appearing as buttons, links, or context menu items.

Use

UI actions help streamline workflows, automate tasks, and improve user efficiency by providing quick access to common functions.

Activity 1: UI Action 1

Steps

1. Navigate to System Definition >> UI action
2. Click on New

3. Fill in the details ;
 - a. Name : Mark As Lost
 - b. Table : Asset Inventory
 - c. Action name : mark_as_lost
 - d. Condition : current.u_status != 'Lost'
 - e. Script :

```
current.u_status = 'Lost';  
current.update();  
action.setRedirectURL(current);
```

4. Check the form button box
5. Click on save

The screenshot shows the ServiceNow UI Action configuration interface. The browser address bar displays a URL with a long alphanumeric string. The page title is 'UI Action - Mark As Lost'. The configuration fields are as follows:

- Name:** Mark As Lost
- Table:** asset_inventory[u_asset_inventory]
- Order:** 100
- Action name:** mark_as_lost
- Active:** ☒
- Show insert:** ☒
- Show update:** ☒
- Client:** ☐
- Overrides:** (empty field with search icon)
- Application:** Global
- Form button:** ☒
- Form context menu:** ☐
- Form link:** ☐
- Form style:** -- None --
- List banner button:** ☐
- List bottom button:** ☐
- List context menu:** ☐
- List choice:** ☐
- List link:** ☐
- List style:** -- None --
- Messages:** (empty text area)
- Comments:** (empty text area)
- Hint:** (empty text area)
- Condition:** current.u_status != 'lost'

The bottom of the screen shows a Windows taskbar with the date and time as 10:13 on 25-06-2025.

Activity 2: UI Action 2

Steps

4. Navigate to System Definition >> UI action
5. Click on New
6. Fill in the details ;

- a. Name : Mark As Repaired
 - b. Table : Asset Inventory
 - c. Action name : mark_as_Repaired
 - d. Condition : `current.u_status = 'Lost' || current.u_status=='Damaged'`
 - e. Script :


```
current.u_status = 'Availablet';
current.update();
action.setRedirectURL(current);
```
6. Check the form button box
 7. Click on save

The screenshot shows the ServiceNow UI Action configuration interface. The title bar indicates 'UI Action - Mark As Repaired'. The configuration fields are as follows:

- Name:** Mark As Repaired
- Table:** asset inventory[u_asset_inventory]
- Order:** 100
- Action name:** mark_as_repaired
- Active:** ☒
- Show insert:** ☒
- Show update:** ☒
- Client:** ☐
- Overrides:** (empty field with search icon)
- Application:** Global
- Form button:** ☒
- Form context menu:** ☐
- Form link:** ☐
- Form style:** -- None --
- List banner button:** ☐
- List bottom button:** ☐
- List context menu:** ☐
- List choice:** ☐
- List link:** ☐
- List style:** -- None --
- Messages:** (empty text area)
- Comments:** (empty text area)
- Hint:** (empty text area)
- Condition:** `current.u_status=='Damaged' || current.u_status=='Lost'`

At the bottom right, there are 'Update' and 'Delete' buttons. The Windows taskbar at the bottom shows the date as 25-06-2023 and time as 10:46.

Activity 3: UI Action 3

Steps

1. Navigate to System Definition >> UI action
2. Click on New
3. Fill in the details ;
 - a. Name : Mark As Damedged

- b. Table : Asset Inventory
- c. Action name : mark_as_damaged
- d. Condition : current.u_status != 'Damaged'
- e. Script :

```
current.u_status = 'Damaged';  
current.update();  
  
action.setRedirectURL(current);
```

- 4. Check the form button box
- 5. Click on save

The screenshot shows the ServiceNow UI Action configuration interface. The browser address bar indicates the URL is `dev214992.service-now.com/now/nav/ui/classic/params/target/sys_ui_action.do%3Fsys_id%3Da959661e539ae250165378e0a0490ed8%26sysparm_view%3D%26sysparm_domain%3Dnull%26sysparm_domain_sco...`. The page title is "UI Action - Mark As Damaged".

The configuration form includes the following fields and options:

- Name:** Mark As Damaged
- Table:** asset inventory (u_asset_inventory)
- Order:** 100
- Action name:** mark_as_damaged
- Active:** ☒
- Show insert:** ☒
- Show update:** ☒
- Client:** ☐
- Overrides:** (empty field with search icon)
- Application:** Global
- Form button:** ☒
- Form context menu:** ☐
- Form link:** ☐
- Form style:** -- None --
- List banner button:** ☐
- List bottom button:** ☐
- List context menu:** ☐
- List choice:** ☐
- List link:** ☐
- List style:** -- None --
- Messages:** (empty text area)
- Comments:** (empty text area)
- Hint:** (empty text area)
- Condition:** current.u_status != 'Damaged'

The bottom of the screen shows a Windows taskbar with the date 25-06-2023 and time 10:53.

Milestone 3: Scheduled Job

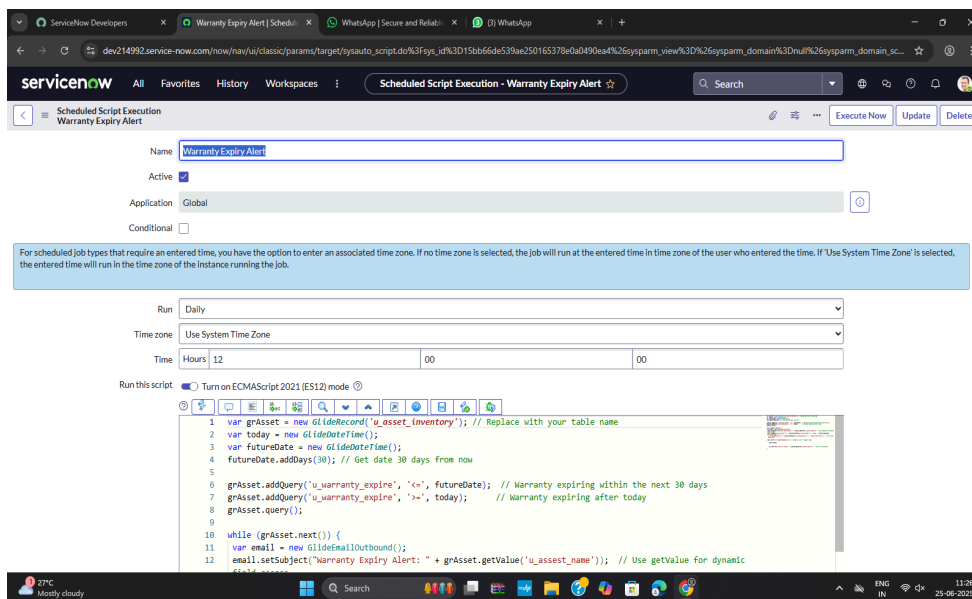
Scheduled job is a pre-defined task that executes automatically at a specified time or on a recurring schedule. These jobs automate various tasks, such as generating and distributing reports, creating and scheduling records, or running scripts.

Use

Scheduled jobs are automated tasks that execute at a specified time or on a recurring schedule. They are used to perform various operations, including running scripts, generating reports, and creating records.

Step

1. Navigate to System Definition >> Scheduled Job
2. Click on New
3. Name : Warranty Expiry Alert ,
4. Run : Daily
5. Time : 12:00
6. Write the script
7. And click on save



Milestone 4: Report

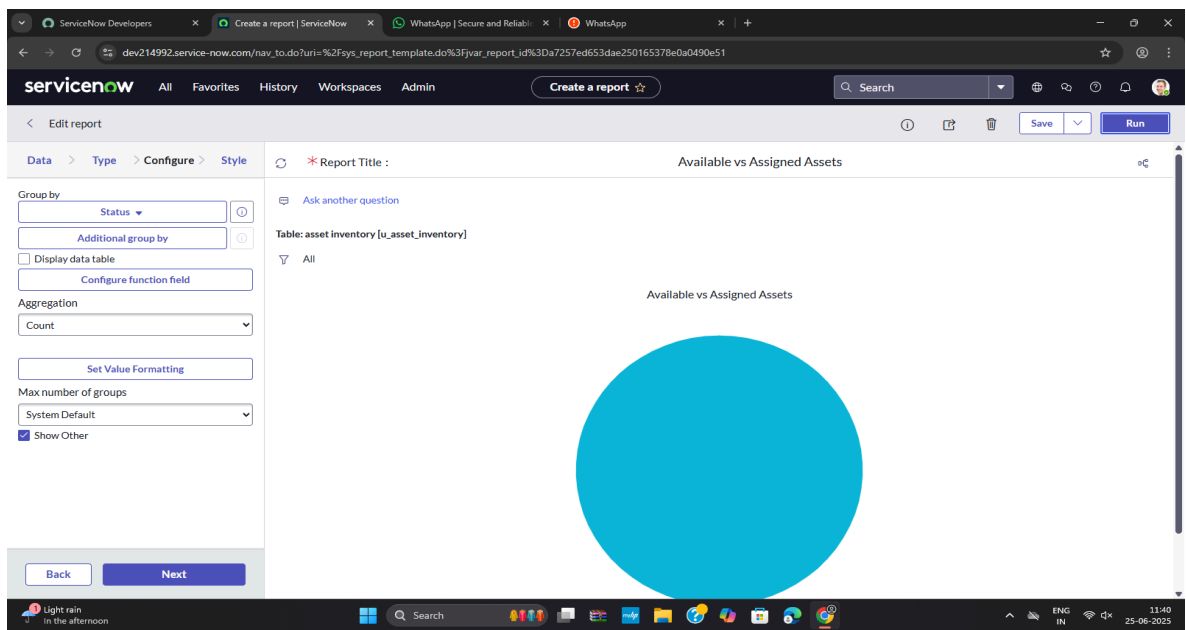
Reports allow users to analyze and visualize data from their instance. They can be used to identify trends, monitor performance, track progress, and more. Reports can be created, viewed, and run through the "Reports" module in the application navigator.

Use

Reports are used to extract, visualize, and analyze data from your instance. They allow users to gain insights, monitor performance, track trends, and make data-driven decisions.

Steps

1. Navigate To Reports
2. Click on Create New
3. Report Name : Available vs assigned assets , Source Type : Table , Table : Asset Inventory
4. Type : Pie Chart
5. Group By : Status , Aggregation : Count
6. Click on save
7. And then click on Run



Milestone 5: Testing

Testing involves ensuring the proper functionality and performance of the ServiceNow platform, including its applications, configurations, integrations and workflows.

Use

Testing ensures the quality, reliability, and security of applications built on the platform. It involves validating custom applications, configurations, integrations, and workflows before they are released to production.

Activity 1: Testing UI Action

Steps

- 1. Go to Asset Inventory table**
- 2. Click on New**
- 3. Fill in the details**
 - a) Asset name : Laptop**
 - b) Type : laptop**
 - c) Assigned to : Abel Tutor**
 - d) Status : Available**
 - e) select some purchase and expiry date**
- 4. Click on submit**
- 5. Open the record again**
- 6. Click on mark as lost button and save**
- 7. Check the status is changed to lost.**

ServiceNow Developers | New Record | asset inventory | dev214992.service-now.com | WhatsApp | Secure and Reliab... | (4) WhatsApp

asset inventory - New Record

Number: AST001014

Purchase date: 2025-05-03

Assigned to: Abel Tutor

Status: available

Asset name: Laptop

Warranty Expire: 2025-06-15

Type: laptop

Submit Mark As Damaged Mark As Lost

ServiceNow Developers | AST001015 | asset inventory | dev214992.service-now.com | WhatsApp | Secure and Reliab... | (4) WhatsApp

asset inventory - AST001015

Number: AST001015

Purchase date: 2025-05-03

Assigned to: Abel Tutor

Status: Lost

Asset name: Laptop

Warranty Expire: 2025-06-15

Type: laptop

Update Mark As Damaged Mark As Lost Mark As Repaired Delete

ServiceNow Developers | asset inventories | ServiceNow | dev214992.service-now.com | WhatsApp | Secure and Reliab... | (4) WhatsApp

asset inventories

asset inventories | Status | Search

Actions on selected rows... | More

	Number	Asset name	Assigned to	Purchase date	Status	Type	Warranty Expire
<input type="checkbox"/>	AST001015	Laptop	Abel Tutor	2025-05-03	Lost	laptop	2025-06-15

1 to 1 of 1

Activity 2: Testing Scheduled Job

Steps

1. Navigate to background scripts
2. Write the Scheduled job script in the background scripts
3. Click on Run Script
4. Check the result

The screenshot displays the ServiceNow web interface. At the top, the browser address bar shows the URL: `dev214992.service-now.com/now/ui/classic/params/target/sys.scripts.modern.do`. The ServiceNow header includes the logo, navigation tabs (All, Favorites, History, Workspaces, Admin), a search bar, and a user profile icon.

Below the header, a warning message states: "Running freeform script can cause system disruption or loss of data."

The main content area is titled "Run script (JavaScript executed on server)". It contains a JavaScript script designed to send email alerts for assets with expiring warranties. The script includes the following logic:

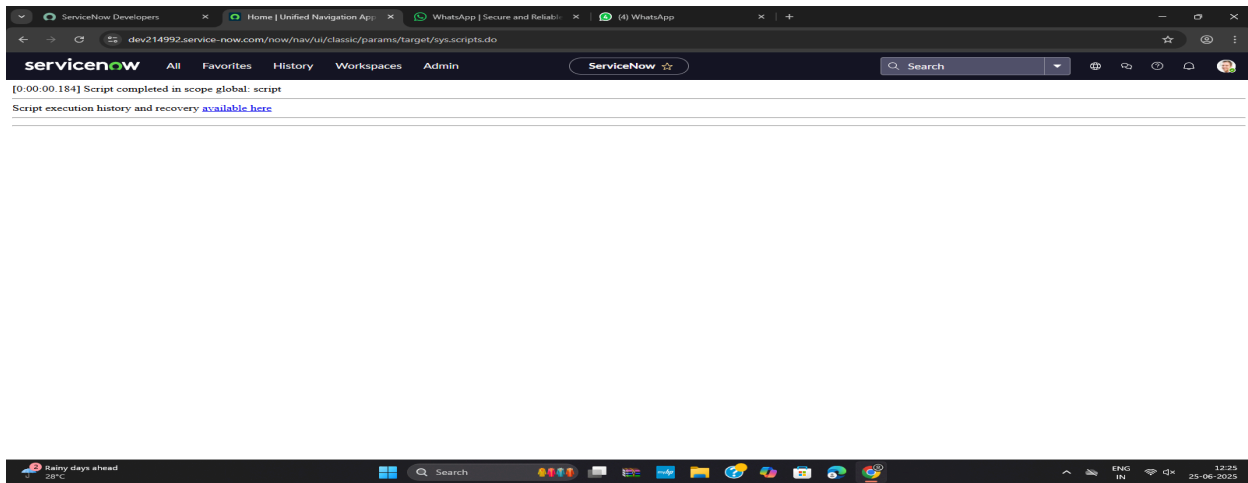
- Initialize `grAsset` with `new GlideRecord("u_assest_inventory")`. A comment indicates to replace this with the actual table name.
- Set `today` to `new GlideDateTime()`.
- Set `futureDate` to `new GlideDateTime()` and add 30 days to it using `futureDate.addDays(30)`.
- Use `grAsset.addQuery` to filter assets where the warranty expires within the next 30 days (`'<=', futureDate`).
- Use `grAsset.addQuery` to filter assets where the warranty expires after today (`'>', today`).
- Execute `grAsset.query()` to load the records.
- Iterate through the records using a `while (grAsset.next())` loop.
- For each record, create a new `GlideEmailOutbound` object.
- Set the email subject to "Warranty Expiry Alert: " followed by the asset name (`grAsset.getValue('u_assest_name')`).
- Set the email body to "The warranty for " followed by the asset name, the type (`grAsset.getValue('u_assest_type')`), and the expiry date (`grAsset.getValue('u_warranty_expiry')`).
- Set the email "to" field to `'it-support@company.com'`.
- Log the email details using `gs.info`.

Below the script editor, there are execution options:

- Run Script** button.
- In scope:** A dropdown menu currently set to `global`.
- Record for rollback:** A checked checkbox.
- Execute in sandbox?** An unchecked checkbox.
- Execute as scriptlet?** An unchecked checkbox.
- Cancel after 4 hours:** A checked checkbox.

At the bottom left, there is a link for "+ Instance Scripts".

The bottom of the screenshot shows the Windows taskbar with the date and time: "12:15 25-06-2025".



Advantages:

- 1.Easy to create and understand.
- 2.Full Integration with ITSM Processes.
- 3.Centralized Asset Visibility.
- 5.Automation of Asset Lifecycle.
- 6.CMDB Integration.

Dis Advantages:

- 1.High Cost.
- 2.Complex Implementation.
- 3.Dependence on Accurate Data.
- 4.Customization Risks.

CONCLUSION

The Asset Management Portal provides a comprehensive solution for tracking, managing, and optimizing physical and digital assets throughout their lifecycle. By leveraging automation and real-time data updates, the platform ensures efficient asset allocation, minimizes discrepancies, and enhances operational visibility. Automated workflows for asset tracking, maintenance alerts, and reporting enable organizations to make data-driven decisions, reduce asset downtime, and optimize resource utilization. This project demonstrates the power of ServiceNow's capabilities in integrating asset tracking, automation, and reporting tools to create a streamlined asset management system. By improving asset accountability and operational efficiency, the platform helps organizations maximize asset value, reduce costs, and enhance overall productivity.