TrackMyIssue

University IT Issues Tracking System using ServiceNow

ABSTRACT:

This mini project focuses on implementing a basic IT Service Management (ITSM) system using the ServiceNow platform. The aim is to simulate a real-time campus IT helpdesk environment where students and staff can raise technical issues, and the IT team can manage, track, and resolve them efficiently. The project demonstrates the core functionalities of ServiceNow, including user account creation, custom forms and tables, incident management, problem identification, and change management. It also includes generating useful reports, building dashboards for quick analysis, and using visual task boards for better workflow tracking. This hands-on approach enhances understanding of ITSM processes and showcases how ServiceNow can streamline service operations in educational or organizational settings.

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OBJECTIVE

To design and implement a simplified IT service management solution using ServiceNow that demonstrates core ITSM functionalities such as user creation, form and table setup, incident management, problem and change management, report generation, dashboards, and visual task boards. This mini project aims to provide hands-on experience with ServiceNow's key features in a campus-based scenario, allowing users to simulate real-world IT support operations in an educational environment.

In Short:

"To build a simplified ITSM system on ServiceNow that manages user issues through incidents, problems, and changes, supported by forms, dashboards, and task boards."

MODULES IMPLEMENTED

- 1. User Account Creation
- 2. Custom Tables and Forms
- 3. Incident Management
- 4. Problem Management
- 5. Change Management
- 6. Reports & Dashboards
- 7. Visual Task Boards

USER CREATION

User creation in ServiceNow means adding new people (users) to the system so they can log in and interact with the platform. Each user has a unique profile with roles and permissions that control what they can see and do.

In simple words:

User creation is like giving someone their own account on ServiceNow so they can raise issues, fix problems, or manage records based on their role.

Key Parts of a User Profile:

- Name and Email
- User ID (username)
- Password
- Roles (like admin, end-user, or technician)
- Department (like IT, Students, Faculty)

How User Creation Is Used in our Project

In ServiceNow Instance, we created users to simulate a real IT service environment where different people play different roles:

- 1. Student Users
 - o Report incidents (e.g., "My laptop won't turn on")
 - Use the Service Portal to submit requests
- 2. IT Support Staff
 - View and resolve incidents
 - Update status and add work notes
 - o Assigned the "ITIL" role
- 3. Admin or Faculty
 - May raise issues or approve change requests
 - Have extra permissions
- 4. System Administrator
 - manage users, forms, tables, and dashboards

Steps Followed in the Project:

- 1. Go to Users \rightarrow User Administration \rightarrow Users
- 2. Click "New" to create a new user
- 3. Fill in:
 - Name: "John Doe"

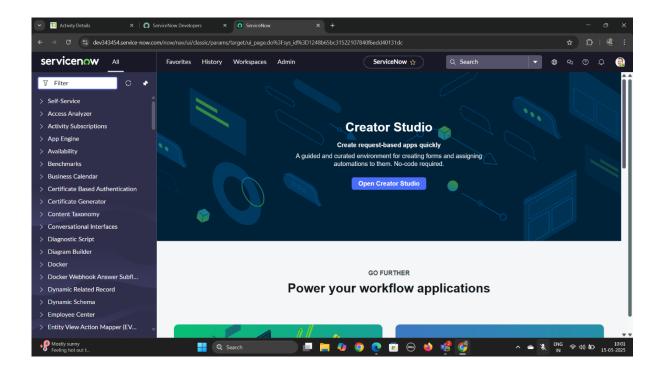
- User ID: "john.doe"
- o Email, password, department, etc.
- 4. Assign a role (e.g., itil for IT support, or admin for yourself)
- 5. Save \rightarrow The user is now active and can log in

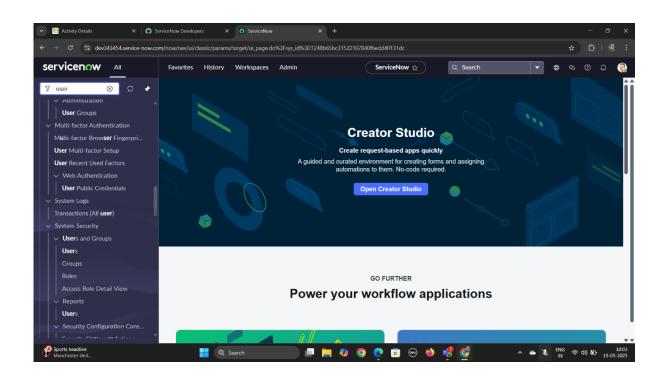
Example

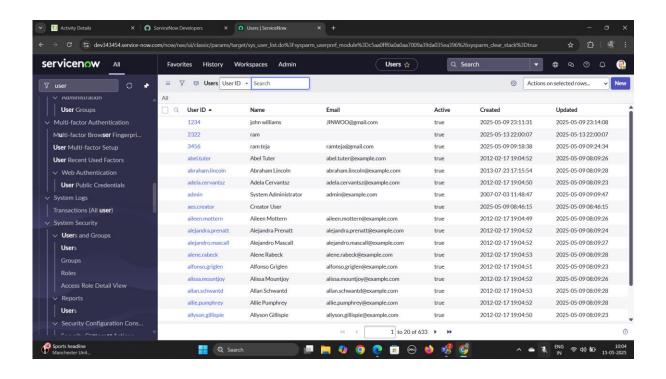
- created a user named "Ravi Kumar" (student)
- He logs into the portal and reports an issue: "Wi-Fi not working in Lab 3"
- also created a user "Priya Mehta" (IT technician)
- She checks the incident, resolves it, and closes the task

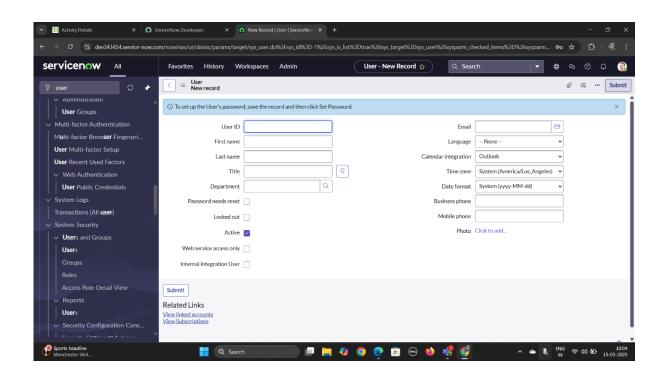
Why It Matters:

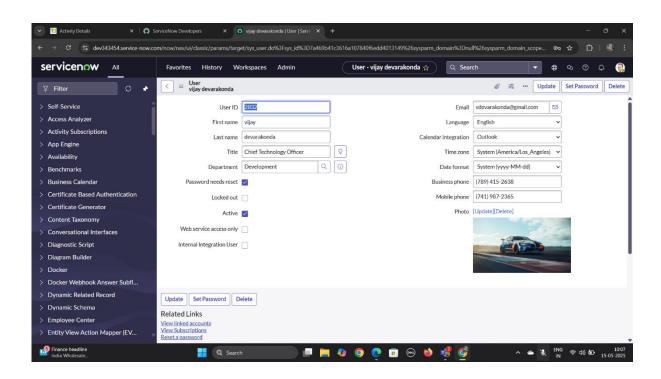
User creation lets you simulate real people interacting in your IT helpdesk system. It helps show how different roles work together to manage services and resolve problems.

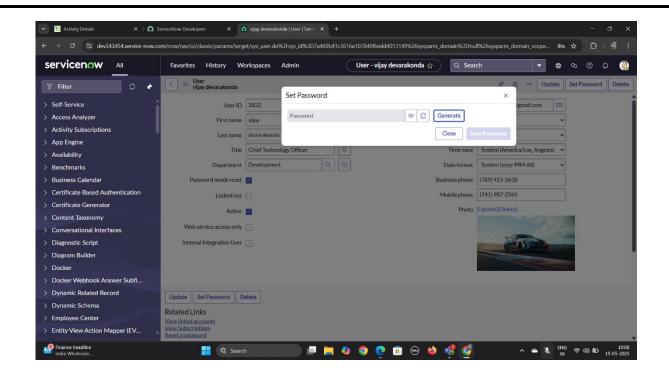


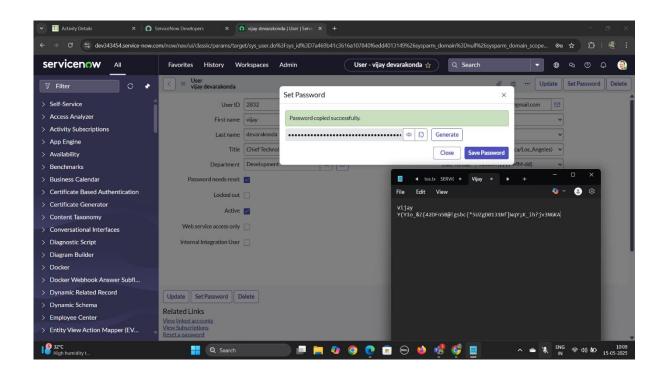


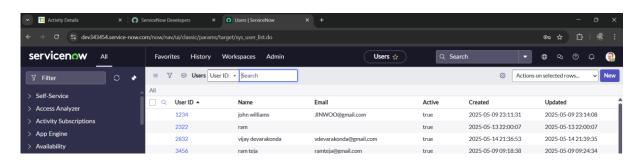




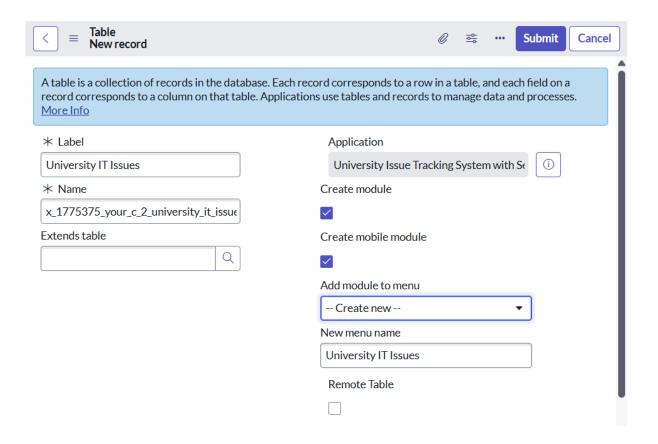


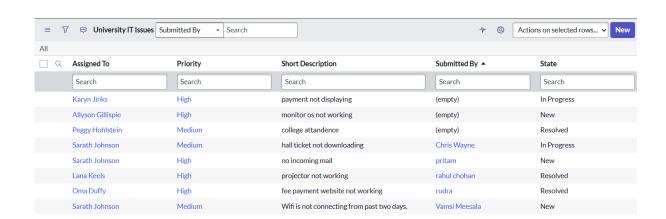






CUSTOM TABLES AND FORMS





INCIDENT MANAGEMENT

Incident Management is the process of identifying, recording, and resolving unplanned interruptions or issues (called "incidents") in IT services. The main goal is to restore normal service as quickly as possible to minimize impact on users.

In simple words:

"If something breaks or stops working — like Wi-Fi, a projector, or a laptop — an incident is created and tracked until it gets fixed."

How Incident Management is Used in This Project

In this project, Incident Management is used to simulate an IT helpdesk system for a college or campus. Here's how:

- 1. Issue Reporting (Creating an Incident)
 - A student or staff member reports a technical problem (e.g., "Wi-Fi not working" or "Printer is jammed").
 - o This issue is logged in the system as an Incident through a form.

2. Caller & Details

- o The person who reports the issue is called the "Caller".
- o The form includes fields like: Caller name, Short Description, Urgency, Priority, and Assigned group.

3. Tracking & Assigning

- The incident is assigned to an IT support technician or team.
- Status of the incident is tracked (e.g., New \rightarrow In Progress \rightarrow Resolved \rightarrow Closed).

4. Linking to Problems (if needed)

o If multiple incidents are related (e.g., "Wi-Fi not working in all labs"), they are linked to a Problem record.

5. Reporting

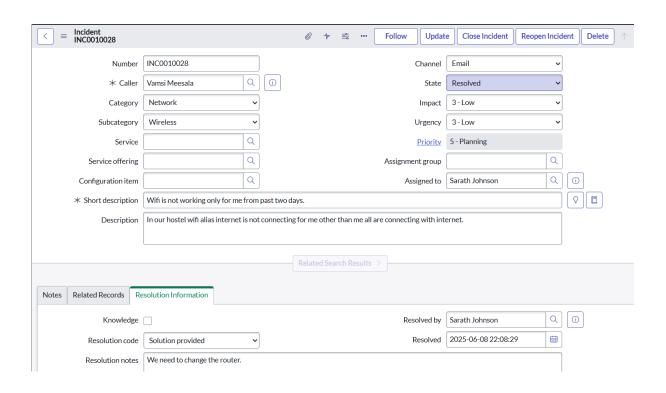
- o Incidents are used to generate reports (e.g., "How many incidents were resolved this week?").
- o These reports can be visualized on dashboards.

6. Visual Task Boards

 Incidents appear as cards that can be moved across stages (New, In Progress, Done) for easy task tracking.

Example:

- Ayyappa reports: "WIFI is not working properly for 2 days"
- A technician views the incident, updates its status, fixes the issue, and closes the incident.
- This incident can also be shown on a visual task board and counted in reports.



PROBLEM MANAGEMENT

Problem Management is the process of identifying and managing the root cause of one or more incidents. Its main goal is to prevent recurring issues by finding the underlying reason and fixing it permanently.

In short:

"If the same issue keeps happening again and again, we stop just fixing it temporarily and instead find out why it's happening—and fix it for good."

Key Difference:

- Incident = a one-time issue (e.g., "Wi-Fi not working today")
- Problem = the reason behind multiple incidents (e.g., "Wi-Fi router keeps crashing every week")

How Problem Management is Used in This Project

1. Identify Repeating Issues

- o Multiple incidents are reported for the same problem (e.g., "Wi-Fi not working in different labs")
- o This tells us it might be a bigger issue.

2. Create a Problem Record

- o An IT admin creates a "Problem" in ServiceNow.
- o Fields include: Problem Statement, Description, Impact, and Priority.

3. Link Related Incidents

- o All related incidents are linked to the problem.
- o This helps the IT team track which issues are caused by the same root cause.

4. Investigate Root Cause

- o The IT team investigates to find out why the issue is happening.
- o Example: Maybe the router has outdated firmware or low capacity.

5. Fix & Prevent

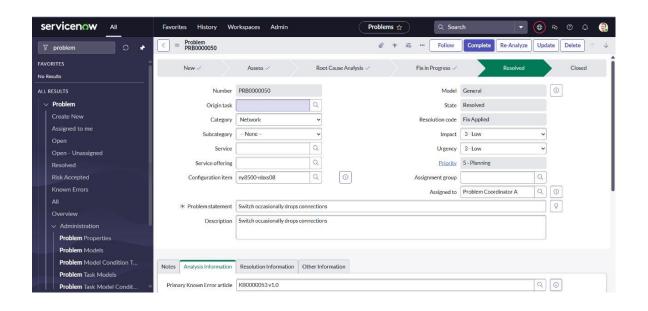
- o Once the root cause is found, a change request is created (like replacing the router).
- o After fixing it, the problem and linked incidents are marked as resolved.

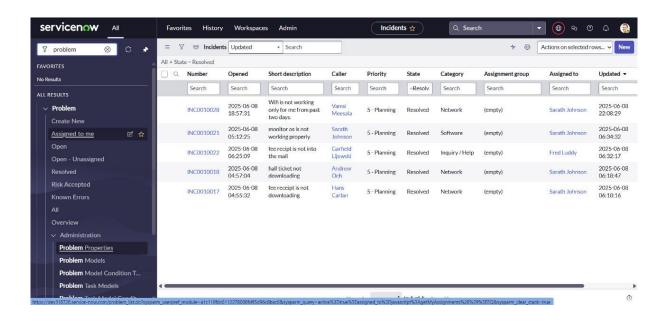
6. Report & Analyze:

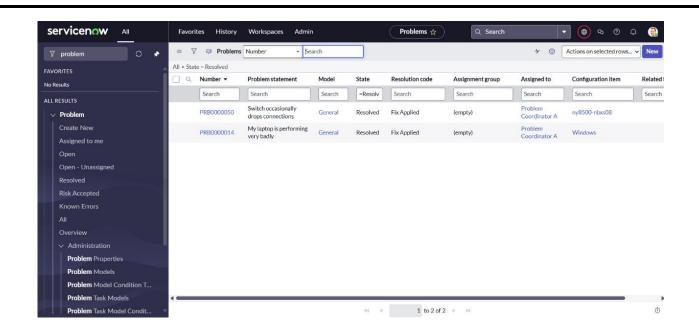
o Problem records can be included in reports to show how many issues were permanently resolved.

Example

- Students report "Wi-Fi not working" in multiple locations.
- These incidents are linked to a new Problem: "Campus routers frequently fail under load."
- After investigation, the problem is fixed by upgrading the routers.
- All related incidents are closed after resolution.







CHANGE MANAGEMENT

Change Management is the process of planning, approving, implementing, and reviewing changes to IT systems or services in a safe and controlled way.

In simple terms:

"If we need to make a change to fix something or improve the system — like upgrading software or replacing a router — we follow a proper process so that it doesn't cause new problems."

Types of Changes in ServiceNow:

- 1. Standard Change Pre-approved, low-risk (e.g., scheduled software updates)
- 2. Normal Change Needs approval and planning (e.g., upgrading the network system)
- 3. Emergency Change Done quickly due to urgent issues (e.g., replacing a broken server)

How Change Management is Used in Your Project

Change Management is used after a problem is identified and needs a permanent fix that may affect other systems.

Here's how it works:

- 1. Problem Identified
 - o Example: "Wi-Fi routers in the labs are outdated and keep failing."
 - o A Problem record is created (Problem Management).

2. Change Request Created

- o To fix the problem, the IT team creates a Change Request.
- Fields include: Change Type, Description, Risk Level, Implementation Plan, and Rollback Plan.

3. Approval Process

o Normal changes go through an approval workflow to ensure it's safe and planned well.

4. Implementation

o The change is scheduled and implemented by the IT team (e.g., installing new routers).

5. Review & Closure

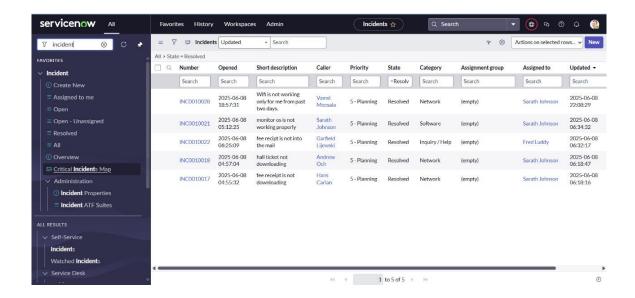
- o After the change is successful, it is reviewed and closed.
- o Any related incidents or problems are also resolved.

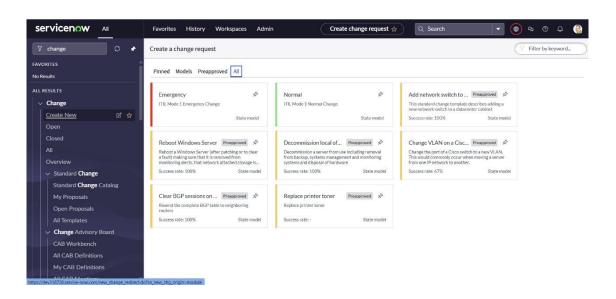
Example from our Project

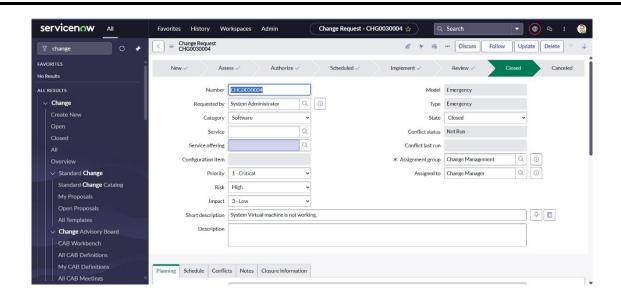
- Problem: "Frequent Wi-Fi failures due to old routers."
- Change Request: "Replace old routers with high-speed models."
- Type: Normal Change
- Status: Planned \rightarrow Approved \rightarrow Implemented \rightarrow Closed

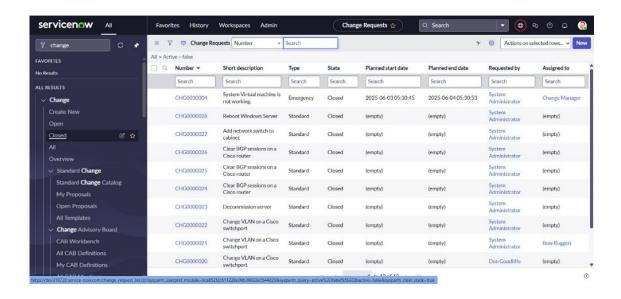
Why It Matters:

Using Change Management helps avoid disruptions, reduces risk, and ensures every change is well-documented and reviewed.









REPORTS AND DASHBOARDS

- Reports: These are visual or tabular summaries of data from records (like incidents, problems, or changes). They help track performance, spot trends, and monitor key metrics.
- Dashboards: These are collections of multiple reports and widgets shown together on one screen. Dashboards give a quick overview of everything that's happening.

In simple words:

"A report shows data in charts or tables, and a dashboard brings several reports together so we can easily monitor everything in one place."

How Reports and Dashboards Are Used in This Project

Reports and dashboards are used to analyze and monitor service operations, like how many incidents are created, resolved, pending, or linked to problems and changes.

Here's how:

- 1. Create Reports
 You create different types of reports such as:
- Incidents by Priority (Bar Chart)
- Open vs. Closed Incidents (Pie Chart)
- Changes by Status (List or Donut Chart)
- Problems by Impact (Column Chart)
- Tickets Assigned to Each Technician

You choose the data table (e.g., Incident), chart type, group by field (e.g., Status, Priority), and what to measure (e.g., Count).

2. Build Dashboards

You group your important reports into one dashboard screen such as:

"TrackMyIssue" – includes:

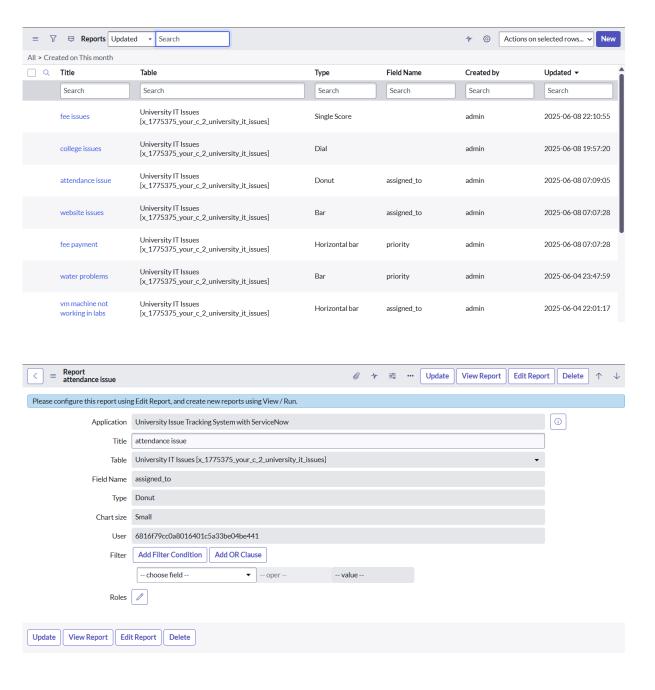
- Total Open Incidents
- Resolved Problems
- Emergency Changes This Month
- Incidents by Department
- SLA (Service Level Agreement) breaches
- 3. Purpose in the Project
- Gives IT admin and tutors a real-time view of service status
- Helps identify areas that need improvement
- Makes it easy to show results to tutors and friends
- Makes your project more professional and complete

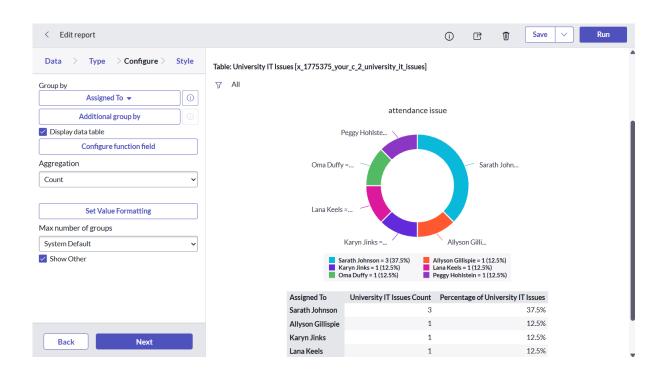
Example:

- created a bar chart showing "Number of Incidents per Priority".
- created a dashboard named "IT Helpdesk Overview".
- It displays charts like "Incidents by Technician", "Open Problems", and "Pending Change Requests".

Final Output:

Dashboard acts like a control panel, showing what's working well and what needs attention — all in one place!





VISUAL TASK BOARDS

VTB stands for Visual Task Board. It is a digital, drag-and-drop board in ServiceNow that helps users visualize and manage tasks in a more interactive way — just like sticky notes on a whiteboard.

In simple terms:

VTB is like a Kanban board where you can see tasks (like incidents, problems, or changes) in columns based on their status (To Do, In Progress, Done), and you can move them by dragging.

Why use VTB?

- Makes work more visual and easier to manage
- Great for team collaboration and status tracking
- Helps you organize tasks by status, priority, or assigned team

Types of Visual Task Boards:

- 1. Freeform Board Manual cards and lanes (basic to-do list)
- 2. Guided Board Auto-generated from a table like Incident or Change
- 3. Flexible Board Combines manual and data-driven cards // How VTB is Used in This Project

In this mini project:

- 1. Create a VTB (Guided Board)
 - Source: Incident table
 - o Group by: State (e.g., New, In Progress, On Hold, Resolved)
- 2. View Tasks Visually
 - o Each incident appears as a card on the board.
 - o Example card: "Laptop not starting assigned to John"
- 3. Drag and Drop
 - o As the IT team works on issues, they drag the cards to different columns:
 - New \rightarrow In Progress \rightarrow Resolved \rightarrow Closed
- 4. Assign and Track Work
 - Technicians can see who is working on what.
 - Managers or tutors can check progress instantly.
- 5. This will
 - o Helps to demonstrate how incident resolution flows visually.
 - o Makes your project more interactive and easier to explain.
 - o Impresses tutors by showing how modern IT teams track work.

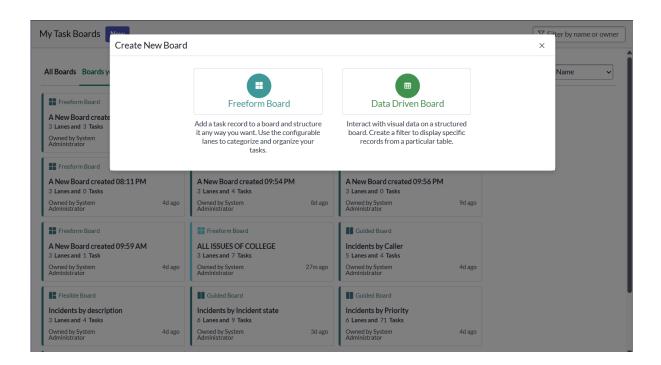
Example:

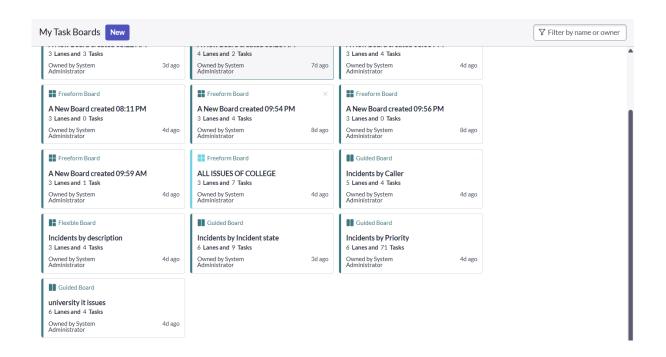
You create a VTB called "Incident Tracker Board" with columns:

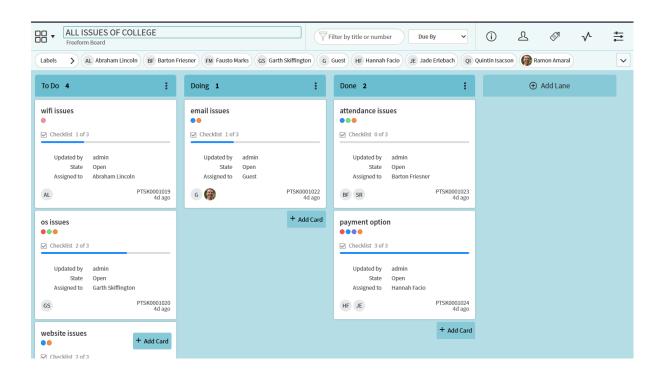
- New
- In Progress
- Resolved
- Closed

Cards:

- "Wi-Fi not working" In Progress
- "Projector issue" Resolved
- "Printer jam" New







VIRTUAL AGENT

A Virtual Agent in ServiceNow is an AI-powered chatbot that interacts with users through a chat interface. It understands natural language and helps users perform tasks or solve problems without needing to manually navigate the ServiceNow portal.

How It Works:

In the project, the Virtual Agent helps users (students, faculty, staff) to:

- Raise an IT issue by simply chatting (e.g., "I can't connect to Wi-Fi")
- Check the status of existing tickets
- Get basic troubleshooting advice (FAQs)
- Connect to a live IT staff member if needed

The chatbot collects the necessary details, fills in the ticket form automatically, and submits it — all through a conversation.

Benefits in Our Project:

- No need to understand forms or portals just talk to the chatbot.
- Saves time for users unfamiliar with the ServiceNow interface.
- Available 24/7 to answer basic IT queries or guide users.
- Reduces the workload on IT staff by automating common requests.

CONCLUSION

This project successfully demonstrated the core features of ServiceNow by simulating a real-world IT helpdesk system in a campus environment. We implemented key IT Service Management (ITSM) processes, including user account creation, form and table configuration, incident management, problem identification, and change control. Visual tools such as reports, dashboards, and visual task boards helped track performance and improve visibility.

Through this project, we gained practical experience in how IT teams manage technical issues efficiently using ServiceNow. It also highlighted the importance of structured workflows, proper communication, and automation in solving IT problems. Overall, the project enhanced our understanding of IT service delivery and showcased how ServiceNow can improve both user satisfaction and team productivity in any organization.

Final Note:

This project helped bridge the gap between theory and practice by using a real-world enterprise tool in a simplified, educational setting.