

COGNIZANT WEEK 3

MODULE 3

SERVICENOW DEVELOPMENT MODULES

WHAT IS SERVICE NOW

WHAT IS SERVICENOW

ServiceNow is a cloud-based platform that provides enterprise services for automating IT service management, business operations, and other workflows.

IT Service Management: It automates core IT service processes such as incident management, problem management, change management, and request fulfillment. It allows IT teams to resolve issues faster, reduce service outages, and improve user experiences.

1. **Service Portal:** An interface where users can access services, log incidents, or submit requests.
2. **Workflows and Automation:** **ServiceNow** enables businesses to create custom workflows to automate processes across departments.
3. **Incident Management:** A process that tracks and manages incidents, aiming for quicker resolution to restore normal service operations.
4. **Knowledge Management:** Helps in managing the organization's knowledge base to allow easy access to important information, FAQs, and troubleshooting guides.
5. **Asset and Configuration Management (CMDB):** Keeps track of all IT assets and configurations, helping to ensure proper maintenance and visibility across the IT infrastructure.

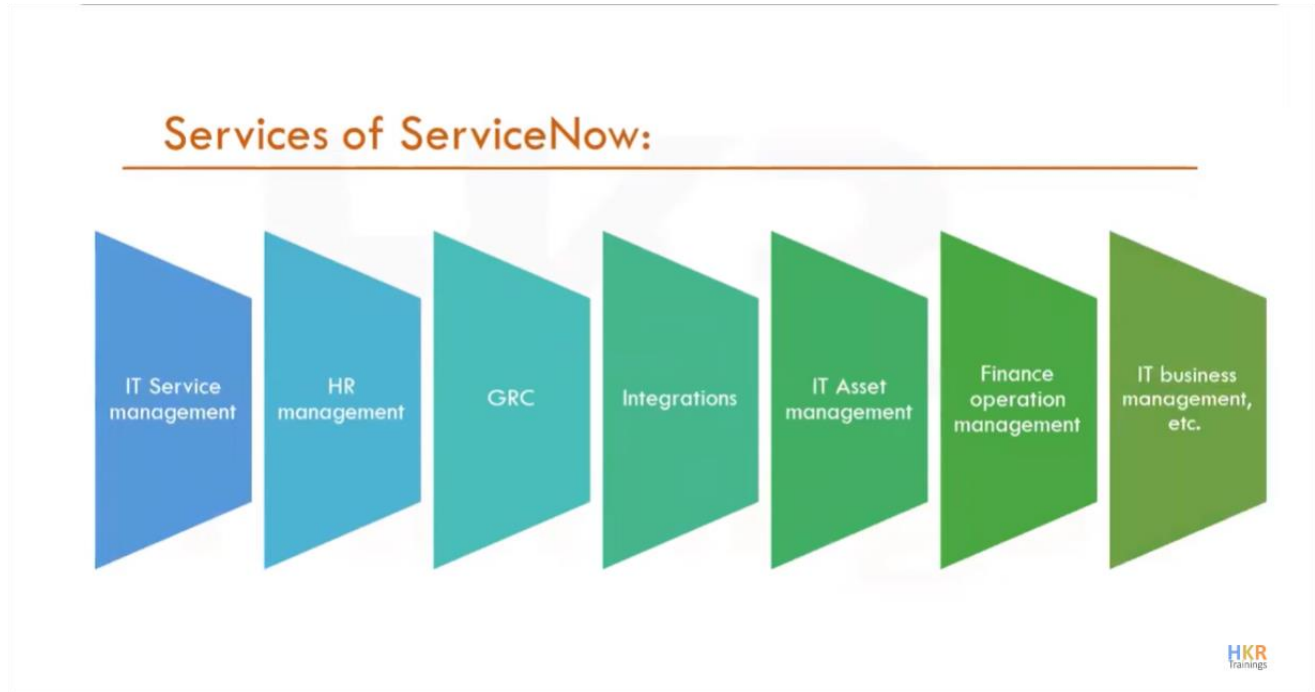
➤ What is ServiceNow?

- ServiceNow is a cloud based platform, which was mainly developed for workflow and process automation as per the ITIL principles.
- However, it is highly customisable and also can be used for other purposes.



SERVICES OF SERVICENOW

ServiceNow offers a wide range of services that help organizations automate and manage their business processes across different departments.



1. IT Service Management (ITSM):

- **Incident Management:** Helps track and resolve incidents (IT issues or outages) quickly to minimize impact on business operations.
- **Problem Management:** Focuses on identifying and resolving the root cause of incidents to prevent them from recurring.
- **Change Management:** Manages changes in IT infrastructure, ensuring they are planned, tested, and implemented smoothly.
- **Request Management:** Automates the process of handling service requests from employees or customers.
- **Service Level Management (SLM):** Tracks and manages performance against service level agreements (SLAs).

2. IT Business Management (ITBM):

- **Project and Portfolio Management (PPM):** Helps manage IT projects, portfolios, and resources to align with business goals.

- **Financial Management:** Tracks IT spend and budgets, helping optimize costs and investments.
- **Application Portfolio Management (APM):** Manages the lifecycle of applications to align with business needs and performance objectives.

3. HR Service Delivery:

- **Employee Onboarding:** Automates and streamlines the onboarding process for new hires, integrating multiple departments like HR, IT, and facilities.
- **Case and Knowledge Management:** Provides a unified platform for managing employee inquiries and requests.
- **Employee Self-Service:** Allows employees to find answers to their queries via a self-service portal and knowledge base.

4. Customer Service Management (CSM):

- **Omnichannel Support:** Provides customer support through multiple channels like email, phone, chat, and self-service portals.
- **Case Management:** Tracks and manages customer issues and inquiries, helping teams respond and resolve them efficiently.
- **Field Service Management:** Manages field operations like technician scheduling and dispatching to resolve issues on-site.

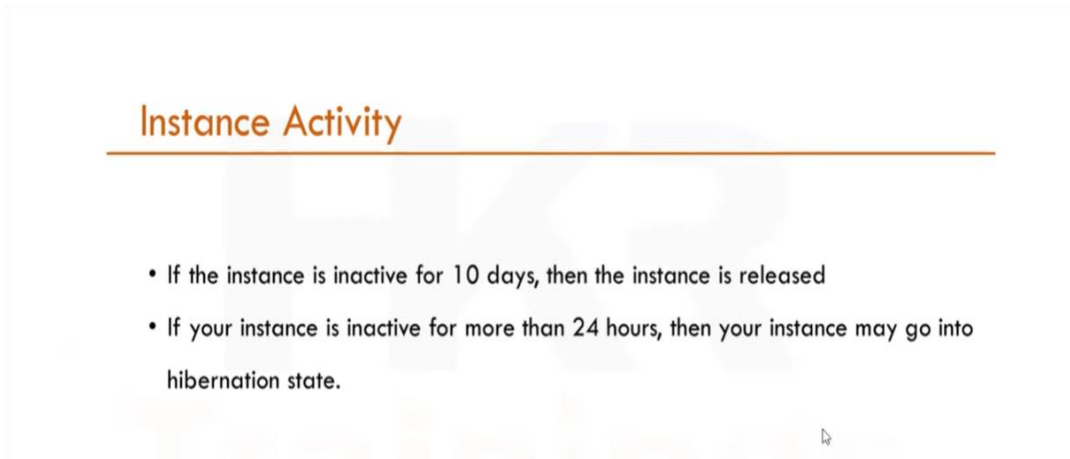
5. Governance, Risk, and Compliance (GRC):

- **Risk Management:** Helps identify, assess, and mitigate risks to align with organizational objectives.
- **Compliance Management:** Ensures the organization meets regulatory requirements and internal policies.
- **Audit Management:** Automates audit workflows and provides real-time insights into audit status and issues.

INSANE ACTIVITY

In ServiceNow, **Insane Activity** refers to a specific detection method used within **Security Operations**, particularly in **User Activity Monitoring** or **Security Incident Response**. It is designed to detect abnormal or suspicious user activities that may indicate potential security threats, such as insider threats or compromised accounts.

- "Insane" in this context refers to activity that deviates significantly from a user's normal behavior patterns.
- The system flags such activities as potential security incidents that require immediate investigation.



Common Examples of Insane Activity:

- **Mass Downloads or Uploads**
- **Unusual Login Patterns**
- **Unauthorized Access Attempts**
- **Excessive Privilege Usage**
- **High-Frequency Actions**

Detection and Monitoring:

- **Machine Learning & AI:** ServiceNow uses machine learning models to establish a baseline of normal user behavior. Any deviations from this baseline are flagged as potential "insane activity."
- **Behavioral Analytics:** Monitors user activity over time to spot patterns or anomalies.
- **Thresholds & Rules:** Administrators can set specific thresholds or rules that define what constitutes insane activity, depending on the organization's security policies.

Security Incident Response:

- When insane activity is detected, the system can automatically trigger a **security incident**. This incident can be assigned to the relevant security team for investigation.

- Automated workflows can help contain the threat by, for example, **disabling user accounts, isolating affected systems, or blocking IP addresses.**

Integration with Other Tools:

- ServiceNow integrates with third-party **SIEM (Security Information and Event Management)** tools to aggregate and correlate logs from different sources, which helps in identifying insane activity across the network.
- Integrations with identity management systems help track **user access** and manage permissions dynamically.

Response Automation:

- **Automated Playbooks:** When insane activity is detected, automated playbooks can be triggered to investigate, contain, and mitigate the potential security incident.
- **Alerts & Notifications:** The system can notify relevant teams via email, SMS, or chat platforms like Microsoft Teams or Slack to ensure swift response.

User Behavior Analytics (UBA):

- ServiceNow also integrates **User Behavior Analytics (UBA)** to continuously monitor and analyze user activities. It detects deviations from normal patterns and highlights risky behaviors, contributing to insane activity detection.

Insider Threat Mitigation:

- One of the main goals of tracking insane activity is to mitigate **insider threats**. Insider threats can be intentional (e.g., malicious insiders stealing data) or unintentional (e.g., users inadvertently compromising security). Detecting insane activity helps address both cases.

HOW TO BECOME A SNOW DEVELOPER?

- Becoming a **ServiceNow (SNOW) Developer** involves a combination of acquiring the right skills, gaining experience with the platform, and obtaining relevant certifications.

- ServiceNow is a popular cloud-based platform used by organizations for IT service management (ITSM), business process automation, and more, making ServiceNow developers highly sought-after.



1. Understand ServiceNow Basics

It is important to understand the core concepts and modules of the ServiceNow platform:

- Learn about ITSM processes like Incident Management, Problem Management, Change Management, and Request Fulfillment.
- Familiarize yourself with the ServiceNow interface, navigation, and core modules.
- Understand how ServiceNow workflows operate to automate business processes.

2. Learn JavaScript

- **JavaScript** is the primary programming language used in ServiceNow for scripting. As a developer, we will be working with **server-side** (Glide API, Business Rules) and **client-side** (Client Scripts, UI Policies) JavaScript.
- Understanding JavaScript fundamentals is crucial, as we will use it to interact with the ServiceNow API and build custom functionalities.

3. Sign Up for the ServiceNow Developer Program

- Join the **ServiceNow Developer Program**, which gives access to a personal ServiceNow instance where you can practice development skills. The program also provides learning paths, documentation, and training modules.

4. Hands-On Practice in a Personal Developer Instance

- Use the **free developer instance** provided by ServiceNow to practice:
 - **Building custom applications**
 - **Creating and configuring workflows**
 - **Writing client and server scripts**
 - **Working with the ServiceNow API (GlideRecord, GlideAggregate)**

5. Learn ServiceNow Development Concepts

- **Client Scripts:** JavaScript used for front-end operations like form validation and field-level manipulations.
- **Business Rules:** Server-side scripting to enforce business logic or run backend operations.
- **UI Policies and UI Actions:** Control the user interface's behavior.
- **GlideRecord:** API used for querying and modifying records in ServiceNow.
- **Flow Designer:** A low-code tool to automate processes through drag-and-drop workflows.
- **REST APIs & Integrations:** Learn to build integrations using REST, SOAP, and other web services.
- **Service Portal Development:** Creating and customizing the user-facing Service Portal.

6. ServiceNow Certifications

Obtaining ServiceNow certifications will help validate knowledge and make you stand out to employers. Some of the key certifications include:

- **Certified System Administrator (CSA):** This is the entry-level certification and the first step to becoming a ServiceNow Developer. It covers the basics of the platform, including user interfaces, database structure, applications, and modules.
- **Certified Application Developer (CAD):** After getting hands-on experience and learning about application development, you can pursue this certification. It focuses on building custom applications, scripting, managing data, and security.

7. Stay Updated with ServiceNow Releases

- ServiceNow releases major updates twice a year (typically named after cities, like "Tokyo," "Utah"). As a developer, it's important to stay updated on the latest features, changes, and improvements in each release.
- Explore new features and incorporate them into our solutions, ensuring we remain knowledgeable about the platform's evolution.

CAREER AND GROWTH IN SERVICENOW

A career in ServiceNow offers substantial growth opportunities, as the platform is widely used by enterprises to streamline IT service management (ITSM), automate workflows, and integrate business processes. With the increasing demand for ServiceNow skills, professionals in this field can progress into various specialized and leadership roles.

Entry-Level Roles

a. ServiceNow Administrator

- **Role:** Responsible for managing and maintaining the ServiceNow platform, ensuring proper configuration, handling user roles, permissions, and performing routine platform maintenance.
- **Skills:** Knowledge of ITSM processes, basic scripting, ServiceNow user interface, and system configuration.
- **Career Path:** This is typically the starting point for those entering the ServiceNow field. Admins often move into developer or specialist roles as they gain experience.

2. Mid-Level Roles

a. ServiceNow Developer (Senior)

- **Role:** Takes on more complex development tasks, such as building scoped applications, integrating third-party systems, optimizing performance, and managing larger-scale implementations.
- **Skills:** Deep understanding of ServiceNow scripting, API integrations (REST/SOAP), database management, and custom application development.
- **Career Path:** Senior developers can progress into technical leadership roles or specialized tracks such as integrations, security, or automation.

3. Advanced Roles

a. ServiceNow Architect

- **Role:** Leads the design and architecture of the entire ServiceNow platform for an organization. Architects ensure the platform is scalable, efficient, and aligned with business goals. They often guide large-scale implementations and integrations.
- **Skills:** In-depth understanding of ServiceNow architecture, enterprise integrations, scalability, platform security, and performance tuning. Experience with multiple modules (ITSM, ITOM, HR, CSM, etc.).
- **Career Path:** ServiceNow architects can grow into enterprise-level roles such as **Enterprise Architect** or **Chief Technical Officer**, or focus on specialized consulting roles for high-profile projects.

4. Specialized Roles

a. ServiceNow Security Operations (SecOps) Specialist

- **Role:** Focuses on using ServiceNow for security operations, managing vulnerabilities, security incidents, and threat intelligence. They automate security processes to improve response times.
- **Skills:** Knowledge of SecOps, security frameworks, incident response, threat management, and ServiceNow's Security Operations module.
- **Career Path:** SecOps specialists can move into security architect roles or leadership positions in the cybersecurity domain.

5. Executive-Level Roles

a. ServiceNow Practice Lead/Director

- **Role:** Leads a team of ServiceNow developers, consultants, and architects within an organization or a consulting firm. Responsible for driving the overall ServiceNow strategy, ensuring that projects are executed successfully, and aligning the platform's capabilities with business goals.
- **Skills:** Leadership, business development, strategic planning, platform expertise, and cross-functional team management.
- **Career Path:** Practice leads can progress to **Vice President (VP) of IT Operations** or **Chief Information Officer (CIO)** roles within the organization.

SERVICENOW UI OVERVIEW

The **ServiceNow User Interface (UI)** is designed to provide a comprehensive, user-friendly experience for both end-users and developers, offering tools to interact with various ServiceNow applications.

ServiceNow UI Overview:

- We interact with the application and modules of the ServiceNow platform through the user interface using a web browser.
- The version of the user interface that accompanies the Istanbul version of ServiceNow is called UI16.

1. Navigation Bar

The Navigation Bar is located at the top of the ServiceNow interface and provides key navigation elements, allowing users to move between different areas of the platform.

- **Application Navigator (Menu):** This is the main menu where users can access different applications, modules, and specific records. It has a search bar where users can search for applications or navigate through categories.
- **Favorites and History:** This section allows users to access their favorite modules, frequently used applications, and recent activity, improving navigation efficiency.
- **User Menu:** Located on the right side of the bar, this menu allows users to view their profile, log out, access preferences, and manage their roles and sessions.
- **Global Search:** This search feature enables users to search for records, catalog items, knowledge articles, and other content across the entire platform.

2. Application Navigator

The Application Navigator is located on the left side of the screen. It's a collapsible menu that shows a list of available applications, modules, and forms based on user roles and permissions.

- **Categories and Modules:** Applications are grouped into categories such as ITSM, HR, and SecOps, with each category containing specific modules.

- **Filter Navigator:** This search bar allows users to quickly search for specific applications, modules, and records by typing in the name or keywords.

3. Content Frame

The Content Frame is the main working area where users view and interact with records, forms, lists, reports, and dashboards. Depending on the action selected from the Application Navigator, the Content Frame dynamically displays the relevant content.

- **Forms:** Forms are used to create or edit records. They are customizable and can include fields for data entry, related lists, and buttons for saving or submitting records.
- **Lists:** ServiceNow lists display records in a table format, where each row represents a record, and each column corresponds to a field. Lists allow filtering, sorting, and editing data.
- **Reports and Dashboards:** Users can view data visualizations, metrics, and key performance indicators (KPIs) through reports and dashboards displayed in the Content Frame.

4. Banner Frame

The Banner Frame at the top of the screen includes quick access to common actions and platform features. It's persistent across all views, providing shortcuts to essential tools.

- **System Settings Icon (Gear):** Users can change their personal preferences such as themes, time zones, notifications, and accessibility settings.
- **Help Icon:** Provides access to documentation and support resources.
- **Notifications:** Displays alerts and messages relevant to the user's role and activity, such as task updates, approvals, and system warnings.

5. ServiceNow Homepage

The Homepage serves as a landing page that provides a customizable overview of essential information. It can contain widgets like reports, lists, links, and other UI elements.

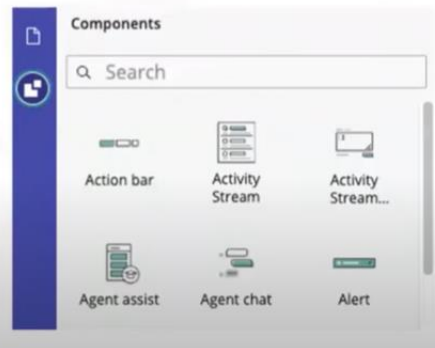
- **Widgets:** Users can add widgets to the homepage to display lists, reports, shortcuts, and metrics for quick access.

- **Dashboards:** Dashboards can be set as a homepage, showing multiple widgets in a unified layout. Users can create personal dashboards or view shared ones for team-wide insights.

SERVICENOW COMPONENTS

ServiceNow Components:

- The Components are the basic elements of your page.
- Components range from the basic elements like labels, and buttons to more complex experience components like lists and forms.
- These components can be added to your page to create or personalize your

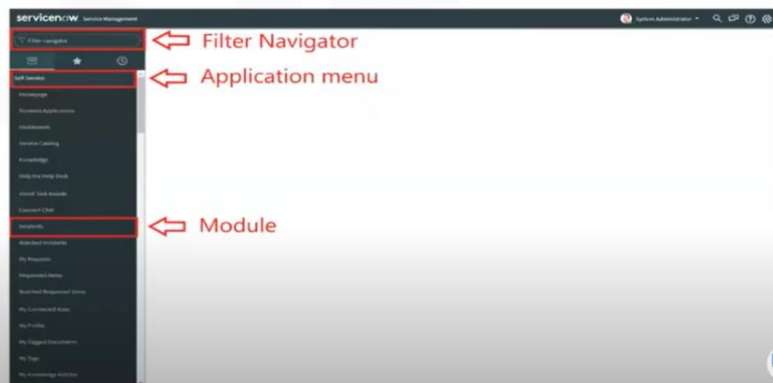


ServiceNow is a cloud-based platform designed to help organizations manage their IT, HR, and business workflows through automation and efficient service delivery. It is primarily known for its IT Service Management (ITSM) capabilities but has expanded to various enterprise functions.

MODULES

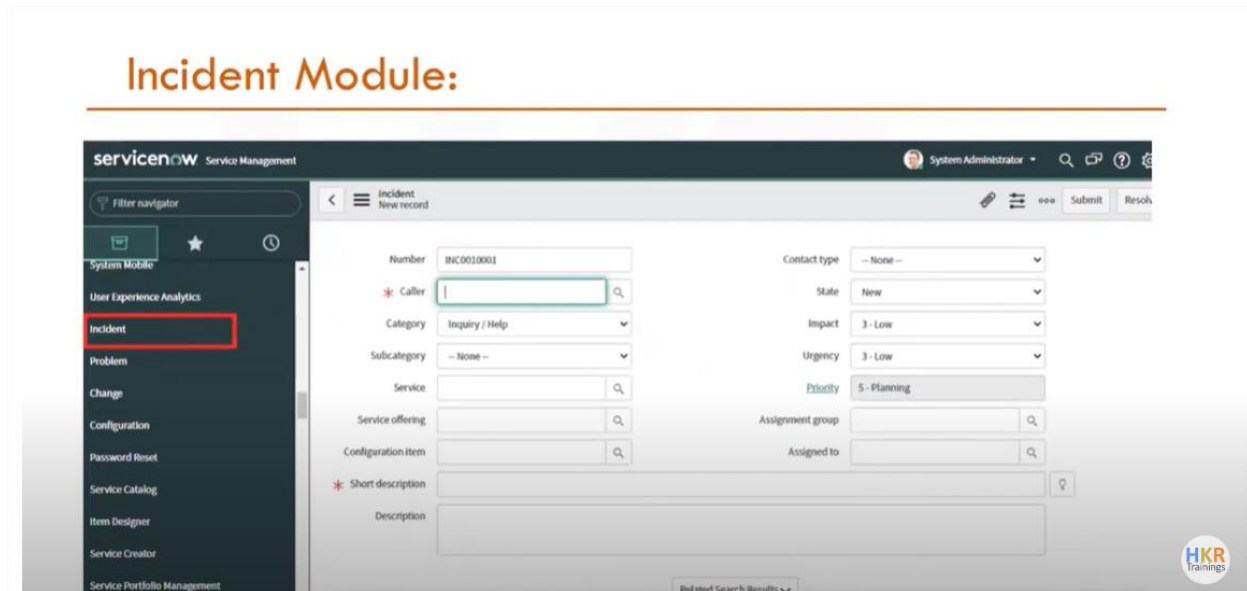
Modules:

Modules are the elements that make up the ServiceNow application navigator.



ServiceNow is organized into various modules, each catering to different areas of enterprise service management, IT operations, and more.

INCIDENT MODULES



The **Incident Management** module in ServiceNow is a part of the IT Service Management (ITSM) suite and is designed to help organizations manage IT incidents efficiently. Its primary goal is to restore normal service operation as quickly as possible and minimize the adverse impact on business operations.

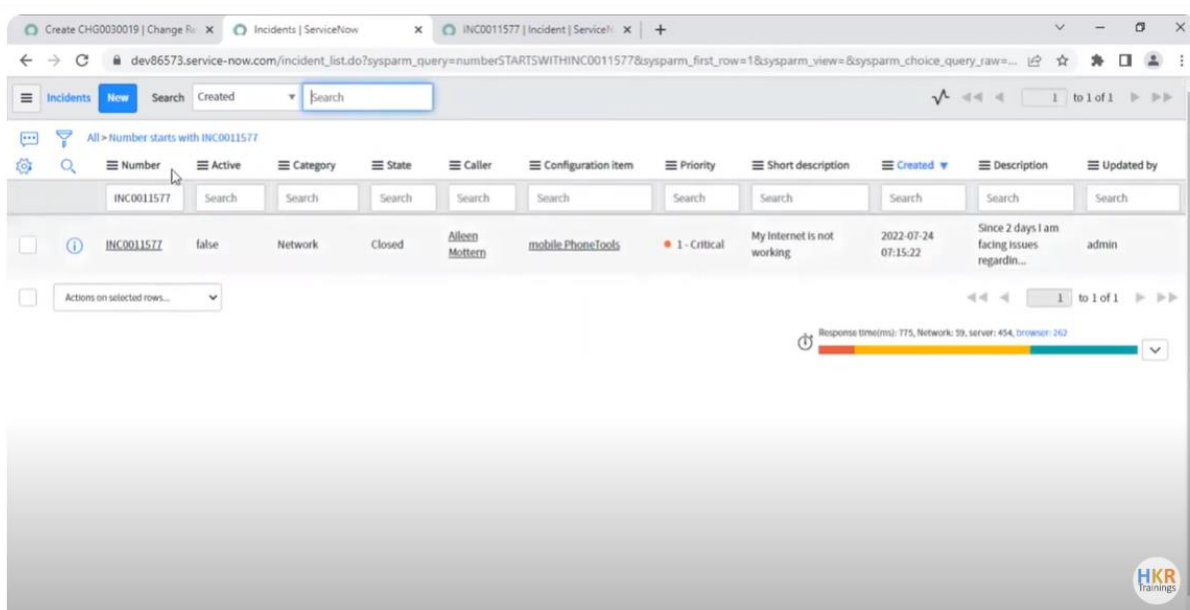
PROBLEM MODULE

The **Problem Management** module in ServiceNow is designed to help organizations manage and resolve the root causes of recurring incidents or potential issues within their IT infrastructure. By identifying and addressing the underlying problems, it helps prevent incidents from recurring and minimizes the impact of future incidents on business operations.

LIST: A list in ServiceNow refers to a data representation of records from a particular table in the platform, displayed in rows and columns. It allows users to view, filter, edit, and manage large sets of data quickly.

List:

- A list displays a set of records from a table.
- Users have the ability to search, sort, filter and edit data in lists.
- Users can search, sort, filter, and edit data in lists. Lists can be integrated into forms and can have sublists.
- The list interface includes a title bar, breadcrumbs and filters, columns of data, and a footer. Every column in a list represents a field in the table.



FORMS

Forms:

- A form is a content page that displays the fields and values of a single record in a database table.
- Forms have a 1-column layout, a 2-column layout, or a blend of both.

The screenshot shows a ServiceNow incident form for incident INC0000041. The form is divided into two main sections: a 2-column layout on the left and a 1-column layout on the right. The 2-column layout includes fields for Number (INC0000041), Caller (Bow Ruggieri), Category (Hardware), Subcategory (None), Service, Service offering, and Configuration item. The 1-column layout includes fields for Contact type (Phone), State (In Progress), Impact (1 - High), Urgency (3 - Low), Priority (3 - Moderate), Assignment group, and Assigned to (ITIL User). The Short description field at the bottom contains the text 'My desk phone does not work'. The form also includes a top navigation bar with buttons for Follow, Update, Resolve, and Delete.

In **ServiceNow**, forms are used to display and edit individual records from a table. They are the primary interface for users to view details and input data. Each form corresponds to a specific record in a table and is customizable to suit business requirements.

FILTERS

Filters:

- A filter limits the records that appear in a list by giving a set of conditions that every record must meet in order to be included in the list.
- The condition includes the field, operator, value and grouping.

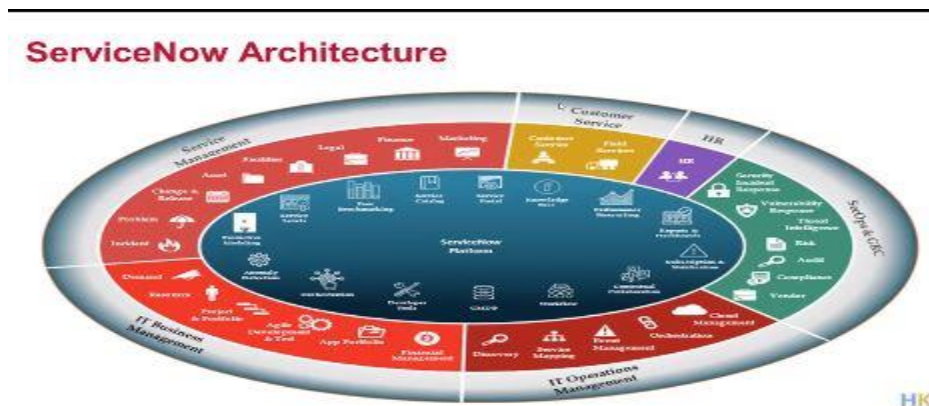
In ServiceNow, filters are used to refine and display records based on specific criteria from a table or list. Filters help users retrieve only the records they need to work with, making data more manageable and easier to analyze.

PART 2

Admin and Developer

ServiceNow is a cloud based platform which can be accessed through any of the application like phone, desktop, laptop. ServiceNow is being used in a lot of sectors around the globe.

ServiceNow Architecture



Who Uses ServiceNow

Employees: Use it to request their related IT business services.

IT support Team: Use it to manage service requests or incidents.

Administrators: ServiceNow helps administrators user access, roles and privilege management.

Implementers: Use it to deploy process applications and platform features which fulfils an organization business needs.

Developers: Create a new functionality with scripts to extend standard configurations.

CATALOG

Catalog in ServiceNow can be used to view different types of specific items and allows users to buy the items. It can be viewed as a similar to platform like amazon, in which both of them requires their own login processes.

DASHBOARD



A dashboard is a collection of visualizations that can be used to gather information and provide an overview of a company, department, or group.