COGNIZANT WEEK 3:

What is ServiceNow:

ServiceNow is a cloud-based platform that provides enterprise IT services management (ITSM). It helps automate and streamline business processes for IT operations, including handling incidents, managing requests, and tracking workflows. It's commonly used for IT service management (ITSM), IT operations management (ITOM), and IT business management (ITBM), among other areas.

Services of ServiceNow:

ServiceNow offers a wide range of services that help organizations automate workflows and improve efficiency across various business functions. Below are the key services offered by ServiceNow:

1. IT Service Management (ITSM)

- **Incident Management:** Handles the lifecycle of incidents to ensure they are resolved quickly and efficiently.
- **Problem Management:** Identifies the root cause of incidents and prevents recurring issues.

- **Change Management:** Ensures that IT changes are executed smoothly and minimize risk.
- **Request Management:** Manages and fulfills service requests.
- **Configuration Management Database (CMDB):** Centralized system to track IT assets and their relationships.
- **Service Catalog:** Provides a self-service portal where users can request services, software, and hardware.

2. IT Operations Management (ITOM)

- **Event Management:** Proactively identifies and resolves issues in IT operations.
- **Cloud Management:** Automates and optimizes cloud infrastructure.
- **Discovery:** Detects and maps all IT assets across an organization's infrastructure.
- **Orchestration:** Automates repetitive tasks like password resets, server provisioning, etc.

3. IT Business Management (ITBM)

- **Project Portfolio Management (PPM):** Manages project planning, execution, and resources.
- **Demand Management:** Captures, evaluates, and manages business demands.
- **Financial Management:** Tracks IT spending and aligns it with business goals.

4. Security Operations

- **Security Incident Response:** Automates the detection and resolution of security incidents.
- **Vulnerability Response:** Manages vulnerabilities in systems and applications.
- **Threat Intelligence:** Identifies and responds to security threats.

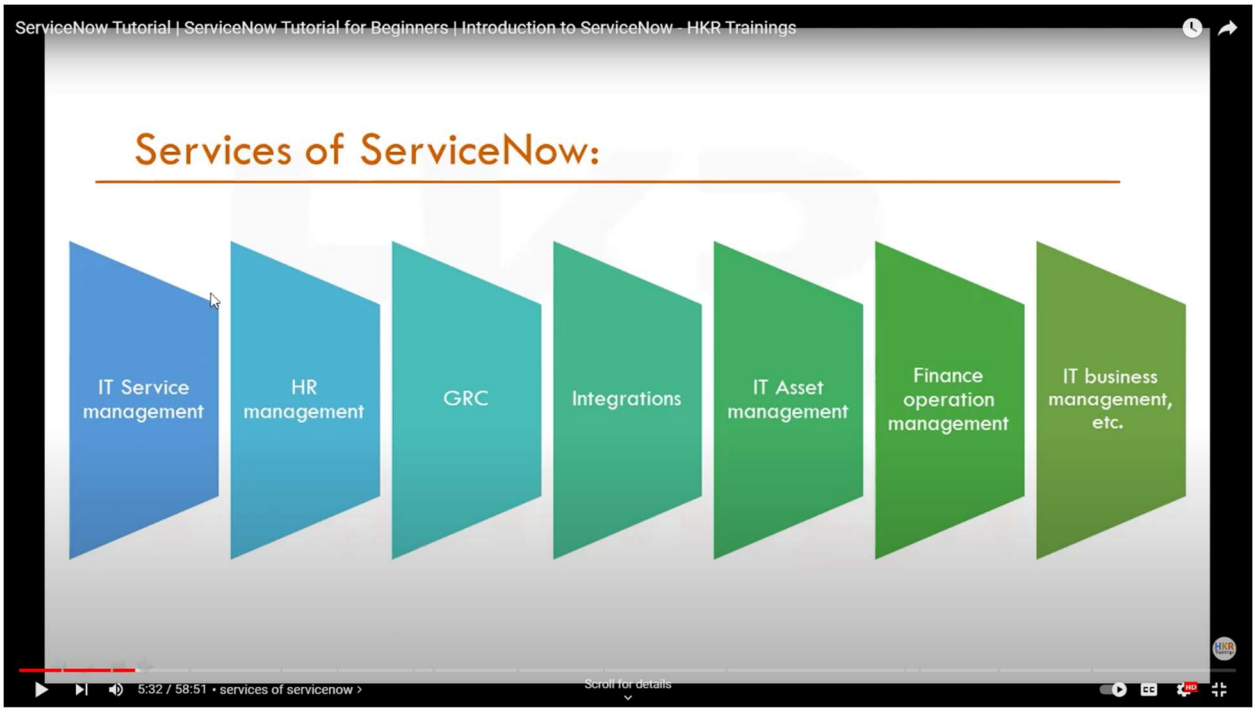
5. Human Resources Service Delivery (HRSD)

- **Case and Knowledge Management:** Manages employee queries and provides a centralized knowledge base.
- **Employee Service Center:** Self-service portal for HR services like onboarding, payroll, and benefits.
- **Onboarding and Transitions:** Automates the employee lifecycle, from hiring to offboarding.

6. Customer Service Management (CSM)

- **Case Management:** Manages customer interactions and issues.

- **Omnichannel Engagement:** Provides customer support through multiple channels (phone, chat, email).
- **Field Service Management:** Optimizes the scheduling and dispatching of field service technicians.



How to get free SNOW instances:

Steps to Get a Free ServiceNow Developer Instance:

1. **Visit ServiceNow Developer Portal:**
    - Go to the official ServiceNow Developer Site.
2. **Sign Up or Log In:**
    - If you don’t have an account, click on "Sign Up" to create one. You’ll need to provide basic details like your email address, name, and password.
    - If you already have an account, click "Log In."
3. **Request a Personal Developer Instance:**
    - Once logged in, navigate to the "Manage" tab on the dashboard.

- Click on **Request Instance** to get your own personal ServiceNow instance.

4. **Choose the Version:**
    - You will be prompted to choose the version of ServiceNow you want to work with. The latest version is generally recommended, but you can select an older version if needed for compatibility or learning purposes.
5. **Wait for the Instance to be Provisioned:**
    - After requesting the instance, ServiceNow will set it up. This may take a few minutes.
    - You'll receive the instance URL, admin username, and password once it's ready.
6. **Access Your Instance:**
    - You can now access your personal ServiceNow instance using the credentials provided. It will be your sandbox environment to develop, test, and explore the platform.

How to become a SNOW developer:

Becoming a ServiceNow (SNOW) developer involves learning the platform, building your skills in scripting, workflow automation, and understanding IT service management (ITSM) concepts. Here's a step-by-step guide to help you become a ServiceNow developer:

1. Understand the Role of a ServiceNow Developer

A ServiceNow developer is responsible for:

- Developing custom applications on the ServiceNow platform.
- Automating workflows and business processes.
- Customizing existing ServiceNow applications.
- Integrating ServiceNow with other systems.

2. Learn the Basics of ITSM and ServiceNow

- **IT Service Management (ITSM):** Learn the fundamentals of ITSM, which is the core of ServiceNow. Understand concepts like incident management, problem management, change management, and service request management.
- **ServiceNow Platform:** Get familiar with the overall architecture of the platform. ServiceNow is a cloud-based solution, so having basic knowledge of cloud computing will help.

3. Sign Up for a Free ServiceNow Developer Account

- Go to the ServiceNow Developer Portal and sign up for a free account.
- Request a **Personal Developer Instance** (PDI) to practice developing on the platform.

4. Learn ServiceNow Scripting (JavaScript)

- ServiceNow uses **JavaScript** for server-side and client-side scripting.
- Start learning **Glide API**, which is specific to ServiceNow and allows developers to interact with the platform's database and automate workflows.
- **Business Rules, Script Includes, and Client Scripts:** These are used to customize and extend the platform's functionality.
- Resources:
    - ServiceNow Developer Site's Learning Path
    - Online platforms like Codecademy, freeCodeCamp, or Udemy for learning JavaScript.

5. Explore ServiceNow's Key Features

Learn and practice working with these essential ServiceNow modules:

- **Service Catalog**: Create and manage service requests and offerings.
- **Workflows**: Automate processes using flow designers or traditional workflows.
- **CMDB (Configuration Management Database)**: Learn how to track assets and their relationships.
- **REST/SOAP Integrations**: Learn how to integrate ServiceNow with other applications using APIs.

6. Take ServiceNow Online Courses

- **ServiceNow Learning:** ServiceNow provides free self-paced learning on their developer portal.
- **LinkedIn Learning** and **Udemy** offer paid courses on ServiceNow development.
- Focus on courses related to:
    - ITSM
    - Application Development
    - Workflow Automation
    - Scripting in ServiceNow

7. Get Certified

ServiceNow offers several certifications that can validate your skills:

- **Certified System Administrator (CSA):** This is the foundational certification that covers core system functionality.
- **Certified Application Developer (CAD):** This certification focuses on developing applications on the ServiceNow platform.
- **Certified Implementation Specialist (CIS):** For those looking to specialize in specific modules like ITSM, HRSD, or Security Operations.

You can prepare for these exams with official ServiceNow courses or third-party platforms like Udemy.

8. Work on Real Projects

- Once you're comfortable with the platform, build your own projects. Some ideas include:
    - Developing custom workflows for handling requests.
    - Creating dashboards and reports.
    - Integrating ServiceNow with external systems.
- Showcase these projects on GitHub or your portfolio website.

9. Stay Updated with ServiceNow

- Follow the latest updates by joining the ServiceNow community.
- Keep up with new releases like **Rome, San Diego**, and others. Each release introduces new features and improvements.

10. Apply for Jobs

- Look for internships or entry-level jobs as a **ServiceNow Developer**, **ServiceNow Administrator**, or **ITSM Analyst**.
- Tailor your resume to highlight your skills in developing on the ServiceNow platform, scripting, and workflow automation.

Modules:

ServiceNow consists of various modules that cater to different aspects of IT and business workflows. Each module is designed to streamline processes and improve efficiency in specific areas like IT Service Management (ITSM), Human Resources (HR), and Customer Service. Below are the key modules in ServiceNow:

1. IT Service Management (ITSM)

- **Incident Management:** Manages the lifecycle of incidents to restore service as quickly as possible.
- **Problem Management:** Identifies the root cause of incidents and prevents recurring issues.
- **Change Management:** Ensures smooth and controlled changes in IT infrastructure.
- **Request Management:** Handles service requests from users, such as software installations or hardware requests.
- **Service Catalog:** A self-service portal where users can browse and request services.

2. IT Operations Management (ITOM)

- **Event Management:** Monitors infrastructure and generates alerts when anomalies are detected.
- **Discovery:** Scans and identifies devices and applications on the network.

- **Service Mapping:** Maps dependencies between IT services and underlying infrastructure.
- **Orchestration:** Automates manual tasks such as password resets and account provisioning.
- **Cloud Management:** Manages and automates cloud resources.

3. IT Business Management (ITBM)

- **Project Portfolio Management (PPM):** Manages project planning, tracking, and execution.
- **Demand Management:** Captures and evaluates business demands to prioritize projects.
- **Application Portfolio Management (APM):** Helps organizations manage their software portfolio.
- **Financial Management:** Tracks IT spending and aligns it with business objectives.

4. Security Operations

- **Security Incident Response:** Automates the process of managing and responding to security incidents.
- **Vulnerability Response:** Manages vulnerabilities in systems, helping reduce risks.
- **Threat Intelligence:** Provides tools to detect and respond to security threats.
- **Governance, Risk, and Compliance (GRC):** Ensures regulatory compliance and mitigates risks.

5. Customer Service Management (CSM)

- **Case Management:** Tracks and resolves customer inquiries and complaints.
- **Knowledge Management:** Provides a centralized knowledge base for customers and support agents.
- **Omnichannel Engagement:** Supports customer interactions across multiple channels like chat, email, and phone.
- **Field Service Management:** Manages on-site service visits by technicians and field agents.

6. Human Resources Service Delivery (HRSD)

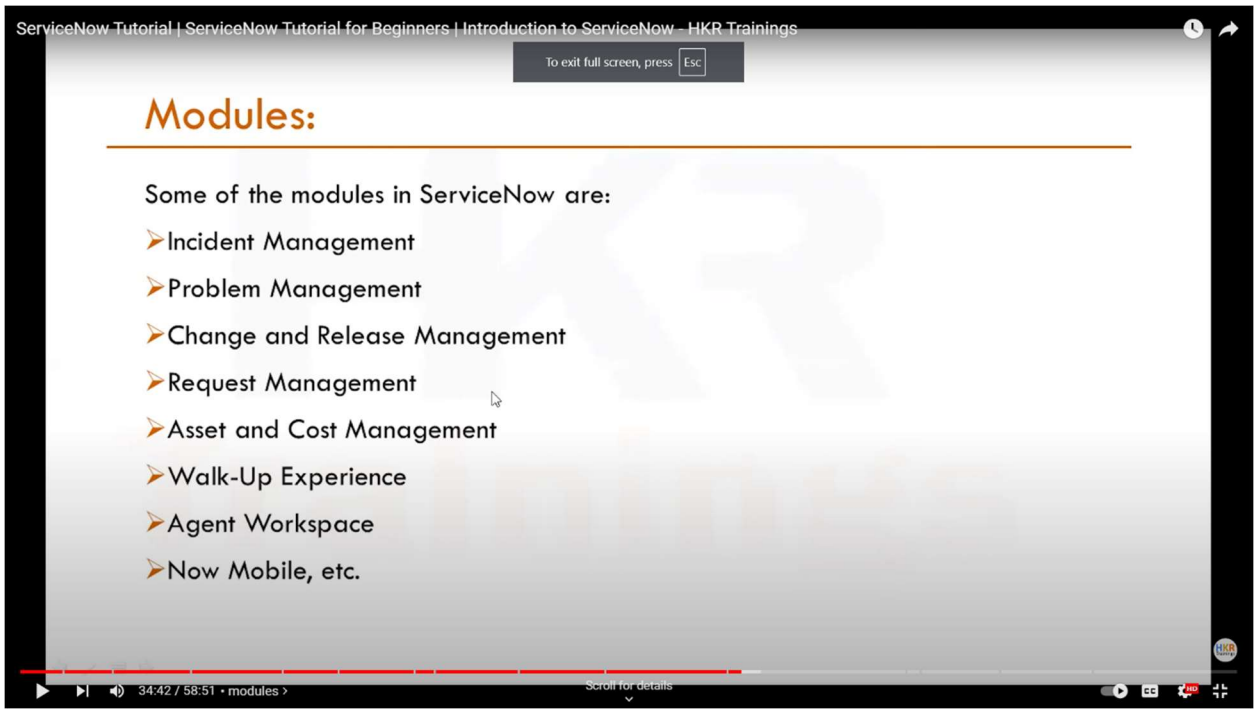
- **Case and Knowledge Management:** Handles employee inquiries and HR cases, such as leave requests or payroll issues.
- **Employee Service Center:** A self-service portal for employees to access HR-related services.
- **Onboarding and Transitions:** Automates the employee onboarding and offboarding process.
- **Employee Document Management:** Stores and manages employee records and documents.

7. Now Platform (App Engine)

- **App Engine:** Allows developers to create custom applications on the ServiceNow platform.
- **Flow Designer:** A low-code tool for automating workflows.
- **Integration Hub:** Integrates ServiceNow with other third-party tools and services.
- **Mobile Studio:** Helps create mobile apps for employees on the ServiceNow platform.

8. Field Service Management

- **Service Scheduling and Dispatching:** Assigns tasks to field technicians and optimizes schedules.
- **Mobile Field Service:** Provides mobile tools for technicians to manage service requests on the go.
- **Asset and Parts Management:** Tracks the equipment and parts needed for field services.



Incident Module:

The **Incident Management module** in ServiceNow is part of the **IT Service Management (ITSM)** suite and is designed to manage and resolve IT issues efficiently, ensuring service continuity. Below are the key components and features of the **Incident Management** module:

1. Incident Creation

- **Manual Incident Creation:** Users can create incidents manually via the ServiceNow interface, using forms to provide details like description, urgency, and impact.
- **Self-Service Portal:** End-users can report incidents using the self-service portal. This allows users to submit tickets easily and check the status of their issues.
- **Email Integration:** Incidents can be automatically created via incoming emails. ServiceNow can capture email content and convert it into incident records.
- **Automated Incident Creation:** ServiceNow can create incidents automatically from monitoring tools or event management systems when a critical issue is detected.

2. Incident Categorization

- **Categorization & Sub-categorization:** Incidents can be categorized based on their nature (e.g., hardware, software, network), allowing for better tracking and analysis.
- **Assignment Groups:** Incidents can be automatically or manually assigned to specific groups based on their category, priority, or affected service.

3. Incident Prioritization

- **Priority Calculation:** Priority is usually calculated based on the **impact** and **urgency** of the incident. This ensures that critical incidents are handled promptly.
- **SLA (Service Level Agreements):** Incident response and resolution times can be tracked against SLAs to ensure that issues are resolved within acceptable timeframes.

4. Incident Assignment

- **Assignment Rules:** Automatically assigns incidents to the correct support teams or individuals based on predefined criteria like location, impact, or category.
- **Workload Balancing:** Distributes incidents evenly among available team members to avoid overburdening specific individuals.

5. Incident Resolution

- **Knowledge Base Integration:** Technicians can access the knowledge base to find solutions to recurring issues, which helps speed up the resolution process.
- **Work Notes and Activity Logs:** Technicians can add work notes and updates to incidents, providing a complete activity history of the issue.
- **Collaboration Tools:** ServiceNow offers integrated chat and collaboration features, allowing teams to work together to resolve complex incidents.

6. Incident Closure

- **Resolution Codes:** When an incident is resolved, the technician can select a resolution code that categorizes how the issue was fixed (e.g., rebooted server, replaced hardware).
- **Incident Feedback:** Option to collect feedback from users regarding their satisfaction with the resolution.
- **Automatic Closure:** After a predefined period, if no feedback is provided, incidents can be automatically closed.

7. Incident Reporting & Analytics

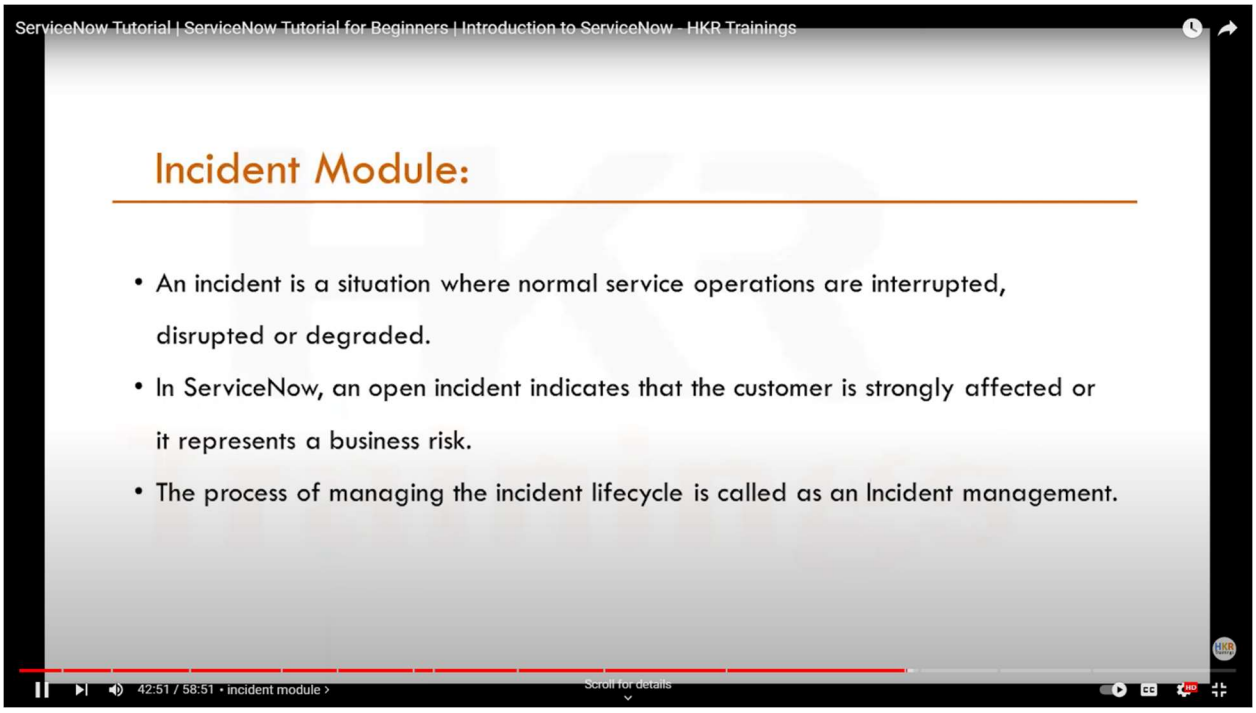
- **Incident Reports:** Pre-built and customizable reports can be generated to analyze incident trends, response times, and resolution efficiency.
- **Dashboard:** Provides real-time views of key metrics such as the number of open incidents, average resolution time, and incidents by category or priority.
- **Root Cause Analysis:** Helps identify underlying causes of recurring incidents for future prevention.

8. Service Level Agreement (SLA) Tracking

- **SLA Metrics:** Track response and resolution times against agreed-upon SLAs.
- **Breached SLAs:** Provides alerts for incidents where the SLA has been breached, helping to identify areas for improvement.

9. Incident Communication

- **Notifications:** ServiceNow sends automatic notifications to relevant stakeholders when incidents are created, updated, or resolved.
- **Major Incident Management:** When an incident is classified as major (high priority), specialized workflows and communication channels are triggered to handle it.



Problem Module:

The **Problem Management module** in ServiceNow helps organizations identify and eliminate the root cause of recurring incidents. It aims to reduce the overall number of incidents by addressing underlying issues. Key features include:

1. **Problem Identification:** Automatically detect problems from recurring incidents or manually create them.
2. **Problem Categorization:** Problems can be categorized for easier management and tracking.
3. **Problem Prioritization:** Prioritize problems based on their impact and urgency.
4. **Root Cause Analysis (RCA):** Investigate the underlying cause of incidents.
5. **Problem Assignment:** Assign problems to appropriate teams using predefined rules.
6. **Known Error Database (KEDB):** Document known errors and workarounds for faster incident resolution.
7. **Problem Investigation:** Detailed investigation of problems using collaboration and notes.
8. **Problem Workflows:** Automate workflows to handle problem identification, investigation, and resolution.

9. **Change Management Integration:** Initiate changes to resolve problems that require system modifications.

10. **Linked Incidents:** Associate multiple incidents with a single problem for easier tracking.

Change Module:

The **Change Management module** in ServiceNow helps organizations manage IT changes in a structured and controlled manner, reducing risk and minimizing service disruptions. It ensures that changes are planned, approved, implemented, and reviewed systematically. Key features include:

1. **Change Request Creation:** Users can manually create change requests, detailing the purpose and scope of the change.

2. **Change Types:** Supports different types of changes—standard (pre-approved), normal (requires approval), and emergency (urgent).

3. **Risk Assessment:** Automatically assesses the risk level of changes based on predefined criteria, such as impact and scope.

4. **Change Advisory Board (CAB):** Allows scheduling and managing CAB meetings for change approvals and discussions.

5. **Change Workflow Automation:** Automates change request workflows, from submission to closure.

6. **Approvals:** Integrates multi-level approval processes to ensure proper authorization before changes are implemented.

7. **Change Scheduling:** Plan changes to occur during low-impact periods using integrated scheduling tools.

8. **Change Conflict Detection:** Identifies potential conflicts with other changes or scheduled events.

9. **Change Plans:** Develop detailed implementation, test, and rollback plans to ensure proper change management.

10. **Post-implementation Review (PIR):** Review the outcome of changes after implementation to assess their success or failure.

11. **Change Calendar:** Visualize all planned changes in a calendar view to avoid conflicts and manage resources.

12. **Configuration Management Database (CMDB) Integration:** Links changes to configuration items (CIs) to track affected services and assets.

13. **Incident and Problem Integration:** Create or link changes to incidents and problems to resolve service issues.

Explore admin and developer:

ServiceNow Administrator

A **ServiceNow Administrator** is responsible for maintaining, configuring, and improving the platform, ensuring that it runs smoothly and efficiently. The role focuses on managing users, maintaining system stability, and handling configurations related to workflows and processes.

Key Responsibilities:

1. **User Management:**
    - Create, modify, and manage users, roles, and groups.
    - Set up permissions and access control based on roles.
2. **System Maintenance:**
    - Regularly monitor the system for performance, ensure uptime, and handle system upgrades.
    - Apply system patches and upgrades to keep the platform up to date.
3. **Configuration Management:**
    - Customize and configure the platform as per organizational needs without heavy coding.
    - Manage core configurations, such as lists, forms, business rules, and UI policies.
4. **Workflow and Process Configuration:**
    - Design and maintain workflows using **Flow Designer** and existing workflow templates.
    - Ensure automation of tasks like incident, problem, and change management.
5. **Reporting and Dashboards:**
    - Generate custom reports and dashboards to track system performance, incidents, or changes.
    - Manage SLAs (Service Level Agreements) and OLAs (Operational Level Agreements).
6. **Data Management:**

- Ensure accurate data input, manage records, and handle data imports and exports.

7. **Service Catalog Maintenance:**
    - Manage and update the **Service Catalog** to handle service requests effectively.
8. **Security Management:**
    - Set up access control rules and security policies.
    - Monitor and audit the platform for any security risks or breaches.

Skills Needed:

- Strong understanding of ITSM processes and tools.
- Familiarity with the ServiceNow platform architecture.
- Knowledge of system configuration, including UI policies, business rules, and client scripts.
- Basic troubleshooting and problem-solving abilities.
- No heavy coding required but an understanding of basic scripting and logic is beneficial.

ServiceNow Developer

A **ServiceNow Developer** builds and customizes applications on the ServiceNow platform, creating solutions that automate business processes. This role focuses more on development, scripting, and creating custom solutions.

Key Responsibilities:

1. **Custom Application Development:**
    - Develop custom applications tailored to specific business needs using ServiceNow's **App Engine**.
    - Utilize JavaScript, **Glide API**, and ServiceNow's development tools for customizations.
2. **Script Customization:**
    - Write **server-side** (Business Rules, Script Includes) and **client-side scripts** (Client Scripts, UI Scripts) to extend platform functionality.
    - Create **UI Actions**, **UI Pages**, and **UI Macros** for customized user experiences.
3. **Integration Development:**

- Build and manage integrations with third-party applications via **REST**, **SOAP** APIs, or **IntegrationHub**.
- Develop custom connectors and integration points for seamless data flow.

4. **Workflow Automation:**
   - Use the **Flow Designer** or traditional workflows to automate business processes.
   - Implement and customize **orchestration** to automate multi-system processes.
5. **Custom Interfaces:**
   - Develop customized user interfaces using **Service Portal** or **UI Builder** for better user experience.
   - Manage and configure the mobile app using **Mobile Studio** for on-the-go access.
6. **Data Management & CMDB:**
   - Develop and customize scripts for the **Configuration Management Database (CMDB)**, ensuring the accurate tracking of assets and services.
   - Build data imports, transformation scripts, and configure data relationships.
7. **Incident, Problem, and Change Automation:**
   - Customize and automate ITSM processes like **Incident**, **Problem**, and **Change Management**.
   - Build custom reports and dashboards for real-time analytics.
8. **Testing & Debugging:**
   - Test custom scripts and integrations thoroughly and resolve any bugs or issues.
   - Use ServiceNow's built-in testing and debugging tools, such as **Script Debugger**.

Skills Needed:

- Strong knowledge of **JavaScript** and **Glide APIs**.
- Familiarity with web technologies like **HTML**, **CSS**, and **AJAX**.
- Experience with integration tools and technologies, such as **REST**/**SOAP** APIs.
- Strong problem-solving skills and the ability to translate business needs into technical solutions.
- Knowledge of ServiceNow's **App Engine** and custom application development.

ServiceNow Growth:

ServiceNow has experienced significant growth since its inception, driven by its comprehensive suite of IT service management (ITSM) solutions and its expansion into various business domains. Here's an overview of ServiceNow's growth trajectory:

1. Early Years and Founding

- **Founded:** ServiceNow was founded in 2004 by Fred Luddy.
- **Initial Focus:** The company started with a focus on IT service management, providing a cloud-based platform for managing IT services.

2. Expansion and Product Evolution

- **2007-2011:** During these years, ServiceNow expanded its offerings beyond ITSM to include modules for IT operations, security, and governance.
- **2012:** The company introduced the **ServiceNow Platform**, which enabled customers to create custom applications and automate business processes.

3. Going Public

- **2012:** ServiceNow went public with its initial public offering (IPO) on the New York Stock Exchange (NYSE) under the ticker symbol **NOW**. This marked a significant milestone in its growth journey.

4. Continued Innovation and Expansion

- **2013-2016:** The company continued to innovate with new features and modules, including **IT Operations Management (ITOM)**, **Customer Service Management (CSM)**, and **Human Resources Service Delivery (HRSD)**.
- **2016:** ServiceNow acquired **SkyGiraffe** to enhance its mobile capabilities and **Cloud Management** to improve its cloud services.

5. Market Leadership and Recognition

- **2017-2019:** ServiceNow was recognized as a leader in the **Gartner Magic Quadrant** for IT Service Management (ITSM) tools, reflecting its strong position in the market.
- **2018:** The company expanded its platform capabilities with the launch of **Now Platform Rome**, introducing new features for automation and user experience.

6. Strategic Acquisitions

- **2020:** ServiceNow acquired **Orchestration**, **Point of Sale (POS)** solutions, and **Element AI** to strengthen its AI and automation capabilities.

- **2021:** The company acquired **Lightstep** for observability and **Swimlane** for security orchestration.

7. Expansion into New Markets

- **2021-2023:** ServiceNow expanded its offerings to include **DevOps**, **Risk Management**, and **Facilities Management**. It also focused on integrating artificial intelligence (AI) and machine learning (ML) into its platform.

8. Global Presence

- **Worldwide Expansion:** ServiceNow has grown its global presence with data centers and operations in multiple regions, including North America, Europe, Asia-Pacific, and Latin America.

9. Financial Growth

- **Revenue Growth:** ServiceNow has seen substantial revenue growth year over year, reflecting strong demand for its platform. It reported revenue of over $7 billion in 2023.
- **Customer Base:** The company serves thousands of enterprise customers globally, across various industries, including finance, healthcare, manufacturing, and technology.

10. Future Directions

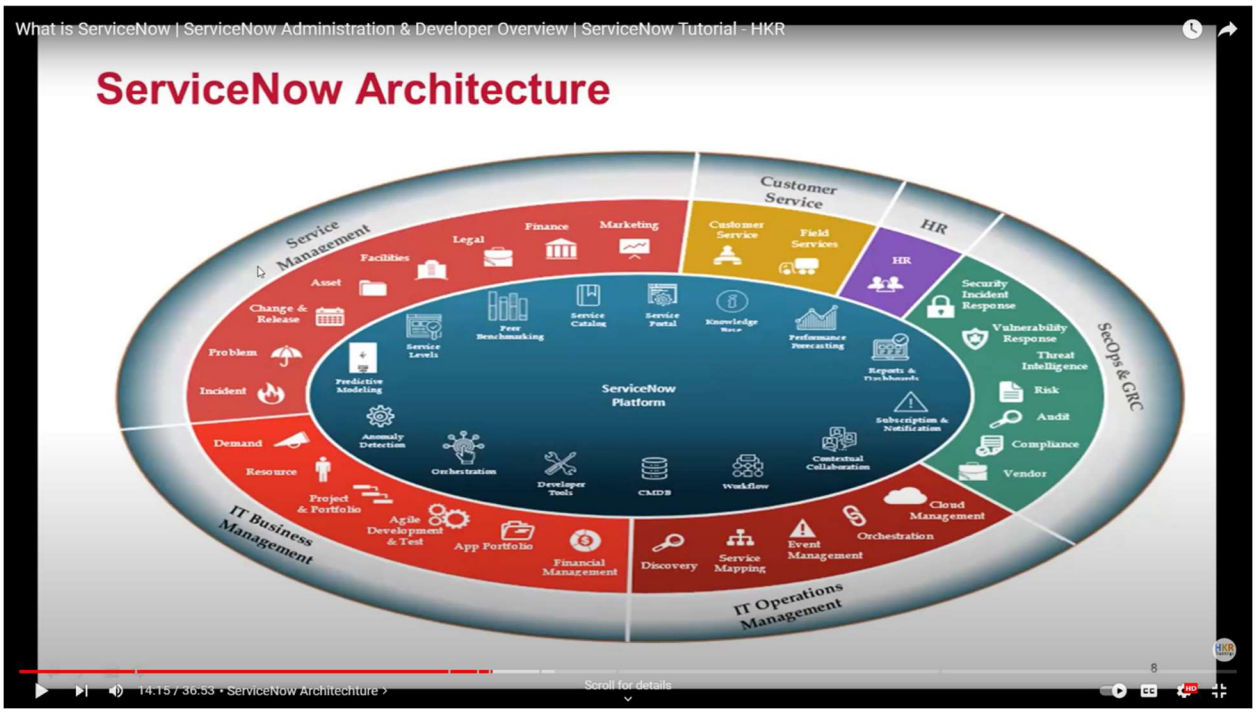
- **Innovation Focus:** ServiceNow continues to focus on innovation, with a strong emphasis on AI-driven automation, enhancing user experience, and expanding its platform capabilities.
- **Sustainability:** The company is also investing in sustainability and digital transformation initiatives to address emerging business needs.

ServiceNow Growth:

1. **Founded in 2004**, ServiceNow began with a focus on IT service management (ITSM).
2. **Went public in 2012** with an IPO on the NYSE under the ticker **NOW**.
3. **Expanded offerings** beyond ITSM to include IT operations, security, and governance.
4. **Acquired several companies** to enhance capabilities, including SkyGiraffe, Cloud Management, and Element AI.
5. **Recognized as a leader** in Gartner's Magic Quadrant for ITSM tools.
6. **Introduced the Now Platform** with features for automation and custom applications.
7. **Global expansion** with data centers and operations in North America, Europe, Asia-Pacific, and Latin America.

8. **Revenue growth** exceeded $7 billion in 2023, reflecting strong demand.
9. **Broad customer base** across industries like finance, healthcare, and technology.
10. **Future focus** on AI-driven automation, digital transformation, and sustainability.

ServiceNow Architecture:



ServiceNow's architecture is designed to provide a robust and scalable platform for managing enterprise IT and business processes. Here's an overview of its key components:

1. ServiceNow Platform Layer

- **Core Platform:** The foundational layer where all applications and services run. It provides essential services such as user authentication, data management, and workflow automation.
- **Now Platform:** This is the underlying architecture that supports the creation and management of applications. It includes a set of tools and services for custom development, workflow automation, and integration.

2. Application Layer

- **Out-of-the-Box Applications:** Includes pre-built applications like Incident Management, Change Management, and Asset Management, which are part of the IT Service Management (ITSM) suite.
- **Custom Applications:** Developers can create and deploy custom applications using ServiceNow's development tools. This is supported by the **App Engine**, **Studio**, and **Service Portal**.

3. Data Management Layer

- **Database:** ServiceNow uses a relational database (primarily MySQL) to store data. It maintains data integrity and supports large volumes of transactions.
- **Configuration Management Database (CMDB):** A specialized database that manages configuration items (CIs) and their relationships, enabling better visibility and management of IT assets.

4. Integration Layer

- **IntegrationHub:** Provides tools for integrating ServiceNow with other systems through APIs, web services, and connectors. It supports both **REST** and **SOAP** integrations.
- **MID Server:** A lightweight Java application used for facilitating data exchanges between ServiceNow and external systems within a secure network.

5. User Interface Layer

- **Service Portal:** A customizable, user-friendly interface for end-users to access services, request items, and view information.
- **UI Framework:** ServiceNow provides various UI elements such as forms, lists, and dashboards for interacting with data and workflows.

6. Security Layer

- **Access Control:** Manages user permissions and data access using role-based access controls (RBAC).
- **Encryption:** Supports data encryption both at rest and in transit to ensure security and compliance.

7. Workflow and Automation Layer

- **Flow Designer:** A low-code tool for designing and automating workflows across different applications and processes.
- **Workflow Editor:** Allows for the creation and management of complex workflows and approvals using a graphical interface.

8. AI and Analytics Layer

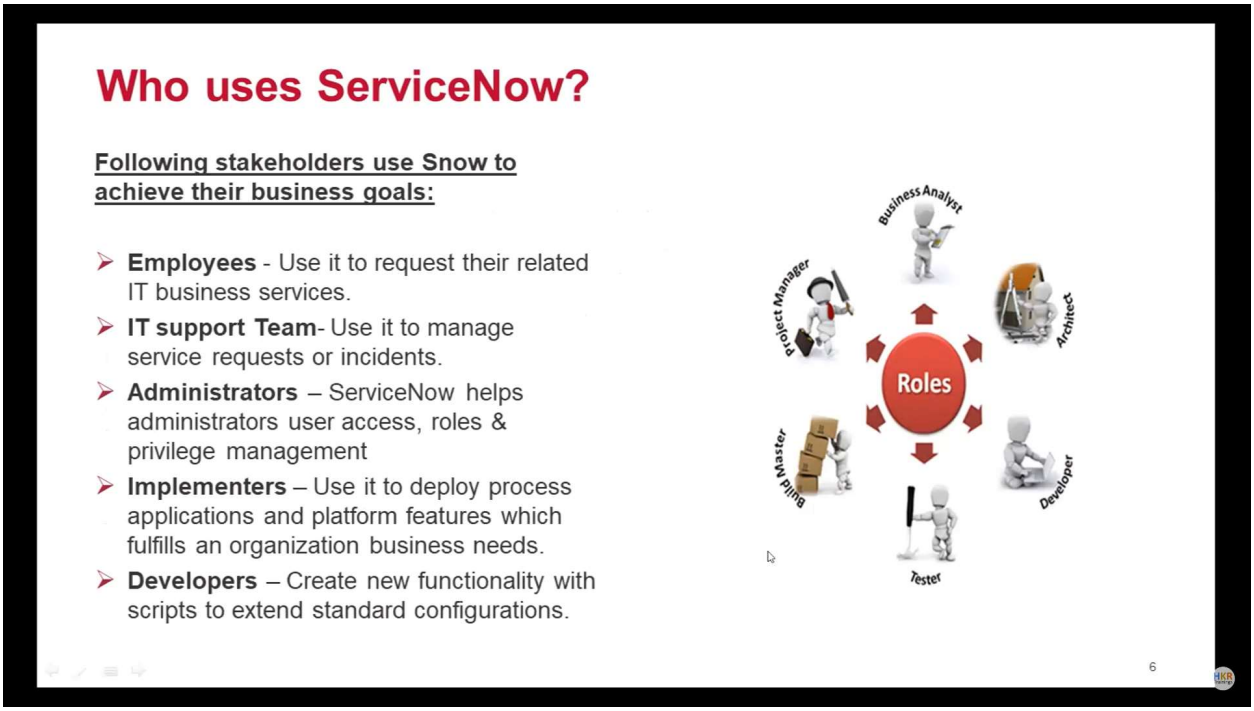
- **Performance Analytics:** Provides real-time insights and analytics into system performance, including dashboards and reports.
- **AI/ML Integration:** Incorporates artificial intelligence and machine learning capabilities to enhance automation and predictive analytics.

9. Mobile and Web Interfaces

- **Mobile Studio:** Allows the creation of mobile applications and interfaces for accessing ServiceNow on mobile devices.
- **Web Interface:** Provides a web-based interface for accessing ServiceNow functionalities from a desktop or laptop.

10. Development Tools

- **Application Studio:** A development environment for building custom applications with tools and templates.
- **Script Editor:** For writing and debugging scripts used in custom applications and workflows.



What is catalog:

In ServiceNow, a **catalog** refers to the **Service Catalog**, which is a user-facing portal that provides a structured way to request IT and business services. It includes:

1. **Service Items:** A collection of services, products, or requests that users can order, such as hardware, software, or support.
2. **Categories:** Organizational units within the catalog that group related items for easier navigation.
3. **Order Forms:** Customizable forms that capture details for service requests and provide necessary information.
4. **Workflow Automation:** Automated processes that handle requests, approvals, and fulfillments.
5. **Knowledge Base Integration:** Links to related knowledge articles and documentation to assist users.
6. **User Access:** Provides a user-friendly interface for requesting and tracking service requests and approvals.