VISVESVARAYA TECHNOLOGICAL UNIVERSITY
BELGAUM – 590014

ServiceNow Report on

"ServiceNow Platform and Development Fundamentals"

Submitted in the partial fulfillment of the requirement for the award of the degree of **Bachelor of Engineering in Artificial Intelligence and Machine Learning** of Visvesvaraya Technological University, Belgaum.

Submitted by:

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Opp. Art of Living, Udayapura, Kanakapura Road, Bangalore- 560082(Affiliated to Visvesvaraya Technological University, Belagavi and Approved by AICTE, New Delhi). (Accredited by NBA until 30-06-2025, NAAC (A+))

OBJECTIVES:

1. Define what ServiceNow is and explain its purpose in IT service management.

2. Identify the core components and architecture of the ServiceNow platform.

3. Describe the infrastructure for deploying and utilizing ServiceNow services.

4. Navigating the ServiceNow Platform and Mastering ServiceNow User Interfaces.

5. Data Imports and Integrations, Report Creation and Management

6. Understand the platform data model that supports reporting capabilities in ServiceNow.

7. Demonstrate how to create, manage, and share different types of reports within ServiceNow to present data effectively.

8. Discuss the importance of data visualization in decision making.

9. ServiceNow Branding and Customization

10. Explain the process of customizing the ServiceNow user interface through branding tools.

11. Demonstrate how to apply a corporate identity to the ServiceNow portal, using Company Guided Setup and UI Builder.

12. Define Low Code No Code development and its relevance in the context of digital transformation.

13. Discuss the benefits and limitations of following a Low Code No Code approach in software development.

14. Identify the career opportunities available in the Low Code No Code development space.

What is ServiceNow?

According to the six honest serving men policy followed by Rudyard Kipling, we shall see the definition of ServiceNow based on:

What?, Why?, When?, How?, Where? and Who?

Who?

- It is basically the employees.
- There are about 17,000 employees
- ServiceNow is recognized as one of Glass Doors best places to work in both the UK and the US.
- It targets mid-range to large enterprise companies like the ones given below:

The **CEO** of ServiceNow: Bill McDermott who has contributed in the increment of the company's market value from $39 billion to $156 billion.

Founder of ServiceNow: Fred Luddy who is both the founder and the board Chairman.

When?

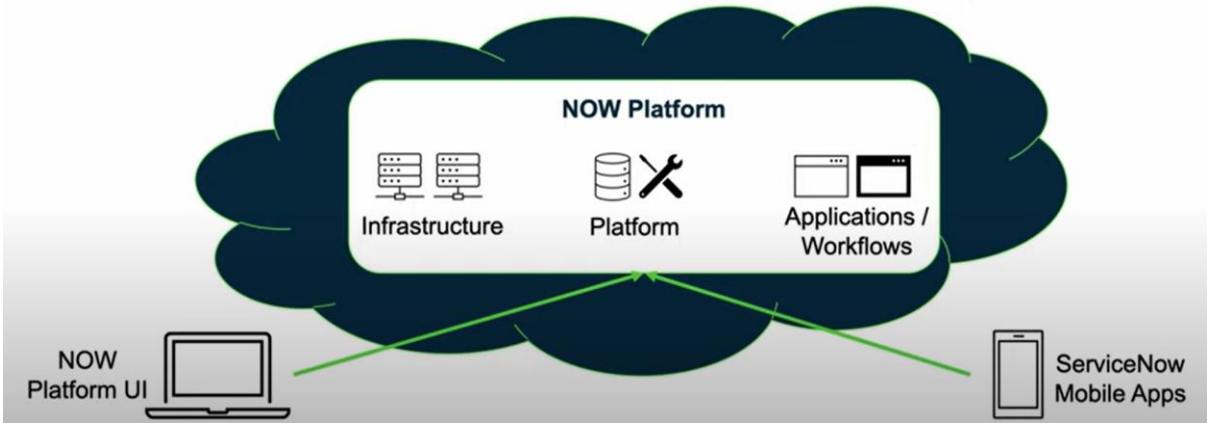
- It was initially named as GlideSoft and in 2006 it got its name as ServiceNow.
- In the year 2018, it was on marked as number one of the world's most innovative companies.

Why?

- Fred Luddy witnessed that IT made smart Business People feel embarrassed and ignorant. It does not produce **revenue,** it is **expensive.**
- He recognized that if IT was designed in a way that it can allow business people to solve business problems on their own where they could have an interactive platform with the IT service.

How?

It is a Cloud based Application Platform as a Service (APaaS).



It provides infrastructure, platform and application/workflows required to support Business-IT needs where the business people can connect to and utilize the platform from their PCs and mobile devices.

- **ServiceNow's infrastructure includes:**
  Resources, security, Service Level Agreements and Backups.
- **ServiceNow's platform:**
  All applications (OOB and custom) for the entire enterprise are supported by a single, common, data- model and database.
  Ability to develop custom applications and workflows that integrate seamlessly into the platform
- **ServiceNow's workflows includes:**
  IT, Employee, Customer, Creator workflows.

Where?

Headquarters: Santa Clara, California.

Office Locations & Employees: Across the globe including North America, Latin America, Europe, Middle-East, Africa, Asia Pacific, Japan.

Data Centres:

Asia Pacific Japan: Australia, Hong Kong, Japan, Singapore, India

Europe, Middle East, Africa: Germany, Ireland, Netherlands, Switzerland, UK

North America: Canada, USA

South America: Brazil

What?

ServiceNow is a software company based in Santa Clara, California, founded by Fred Luddy in 2003, to solve problems large enterprises face with traditional IT delivery by providing a robust, simple to use, cloud-based environment in which businesspeople can solve the business problems themselves.

In summary,

The Now Platform is an Application Platform as a Service (APaaS).

ServiceNow is a cloud-based.

ServiceNow provides and supports the infrastructure computer resources.

ServiceNow provides a platform upon which you can develop your own custom solutions.

ServiceNow provides a robust set of applications and workflows to support most common business processes.

All applications (OOB and custom) for the entire enterprise are supported by a single, common, data-model and database.

2. Identify the core components and architecture of the ServiceNow platform.

The primary components include:

A User is an individual that has been given access to an instance. Users are usually assigned to 1 or more groups and can be granted multiple roles. A user with no roles assigned is called a self-service user. They can login and access actions like viewing the homepage, Service Catalog, articles, and surveys.

A Group is a set of users who share a common purpose and need access to similar data. Multiple roles can be assigned to a single group.

A Role is a collection of permissions. A role can be assigned to an individual user, a group of users, or another role. Multiple roles can be assigned to a single role. It's best to assign roles to a group rather than an individual user.

ARCHITECTURE:

When you purchase an instance, it is ServiceNow's responsibility to support the IT infrastructure and compute resources needed to enable and secure that instance.

Enterprise Cloud

Most cloud services are built on a multi-tenant architecture in which your platform and data are co-mingled with other companies. ServiceNow is built on a multi-instance architecture. You have your own instance of the platform and database.

Availability & Redundancy

All ServiceNow datacenters are paired with another datacenter to provide redundancy and failover. Redundancy is built Into every layer including devices, power, and network resources. When you purchase an instance, it is ServiceNow's responsibility to support the IT infrastructure and compute resources needed to enable and secure that instance.

Backups & Security

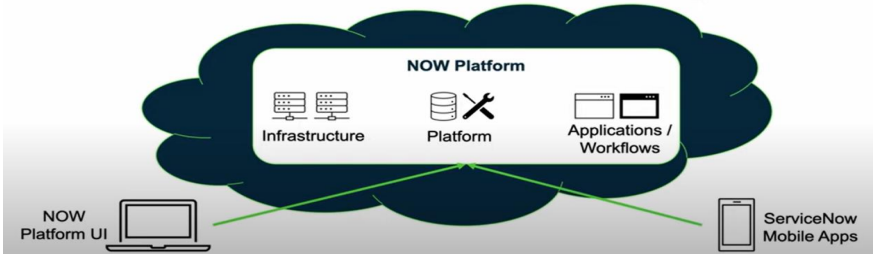
ServiceNow provides 4 weekly full data backups and 6 days of daily differential backups. The entire platform is secured using multiple technologies which have been certified by third-party security organizations.

Domain Separation (multi-tenancy)

The ServiceNow platform provides the ability to separate data, processes, and administrative tasks on an instance into logical groupings called domains.

All users can potentially see records from the 'global domain', but only users who belong to a domain can see domain-specific records.

3. Describe the infrastructure for deploying and utilizing ServiceNow services.



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IT Workflows

IT Service Management (24)

IT Operations Management (13)

IT Business Management (10)

IT Asset Management (4)

DevOps (4)

Security Operations (8)

Governance, Risk, and Compliance (13)

Telecommunications Network Performance Management (3)

Employee Workflows

HR Service Delivery (16)

Workplace Service Delivery (10)

Legal Service Delivery (10)

Procurement Service Management (6)

Safe Workplace Suite (1)

Customer Workflows

Customer Service Management (29)

Field Service Management (11)

Connected Operations (4)

Financial Service Operations (25)

Telecommunications Service Management(24)

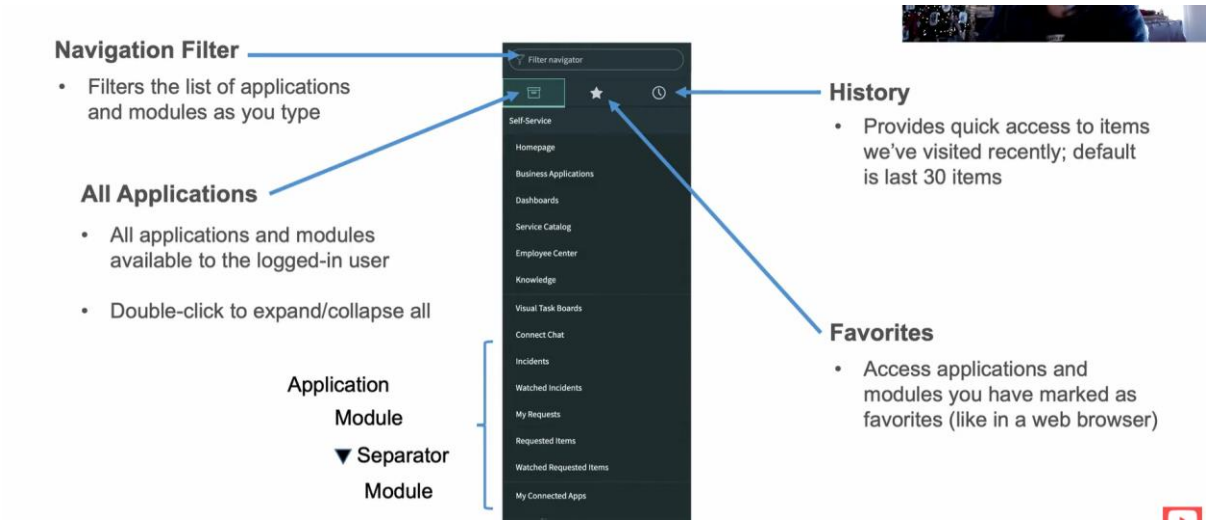
Creator Workflows

App Engine (15)

IntegrationHub (8)

4. Navigating the ServiceNow Platform and Mastering ServiceNow User Interfaces.

Navigation:



User Interfaces:

The **NowPlatform Ul** us the primary UI. It is best used on desktop and laptop computers and is accessed via a web-browser and the instance URL.

The **ServiceNow Mobile Apps** are best used on mobile devices and can be installed from the device's app store. The ServiceNow Agent app targets fulfilling requests. The Now Mobile app is built for the needs of employees. The ServiceNow Onboarding app targets the needs of new-hire employees.

The **ServicePortal** is a user-friendly. self-service, widget-based portal accessed via a web-browser and special URL.

5. Data Imports and Integrations, Report Creation and Management

The data import and integrations basically includes the following steps:

Source -> Staging -> Target

Before we go too far, let's settle on basic concepts and terminology. The process of importing data normally involves pulling data from a Source data entity and loading it into a Target data entity.

In ServiceNow, the import process introduces an intermediary data entity between those two steps. We will refer to that entity simply as Staging (ServiceNow calls it an Import Set Table).

That entity is an automatically created custom table that is used to stage the imported data prior to processing and loading into the Target. It enhances the performance of the import and provides a useful tool for designing field-level mappings and data transformations.

So, a ServiceNow import actually involves 3 data entities:

1. Source

The entity containing the data to be imported into ServiceNow

ServiceNow is prepared to work with many sources including files (Excel, CSV, JSON, etc.), JDBC- compatible databases, LDAP, REST, and custom scripts

2. Staging

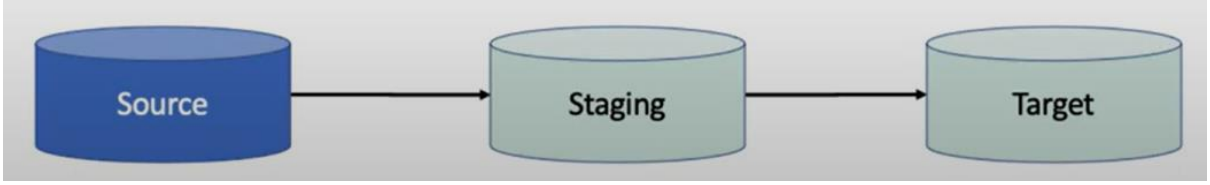
A table that ServiceNow automatically creates as part of the import process to temporarily store data pulled from the Source prior to transforming and adding to the Target

Enhances the performance of the import and provides useful tools for designing field-level mappings and data transformations.

3. Target

The ServiceNow table into which the data will be imported

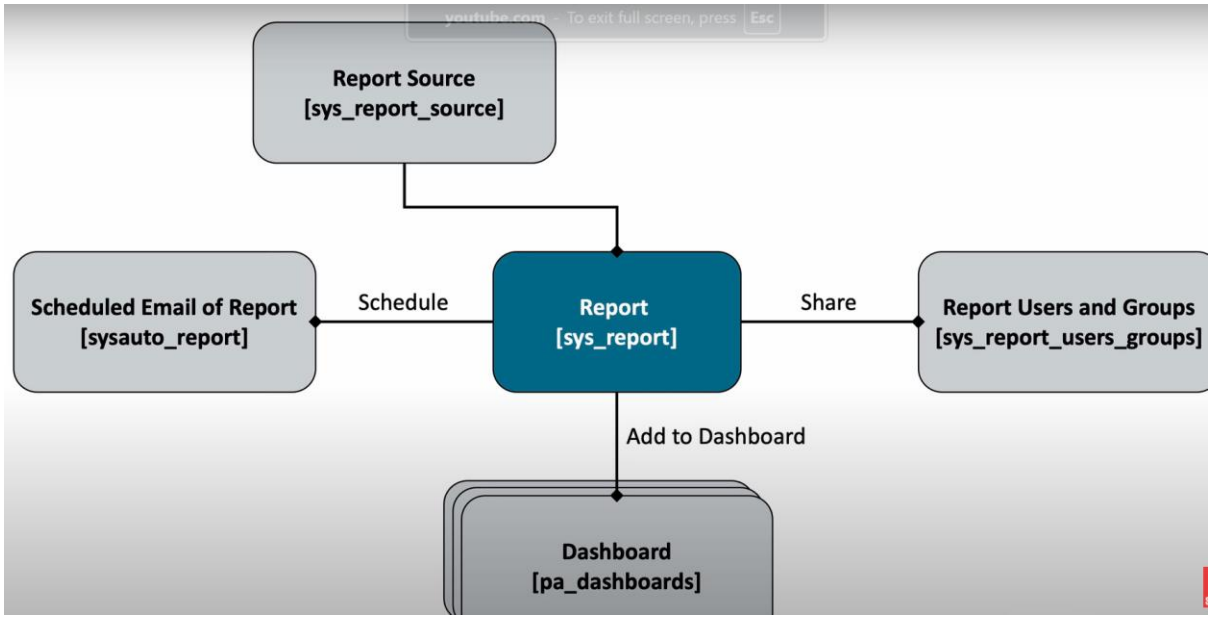
This could be an out-of-box ServiceNow table or a custom table created specifically for our purposes.



Service Now basically looks at the attributes saved in the Data Source and it will create a field for each of it in the staging field. Click on the attachments button and then click on choose file and choose the name of the file you want to import and click on open and then click on **save** or **submit.**

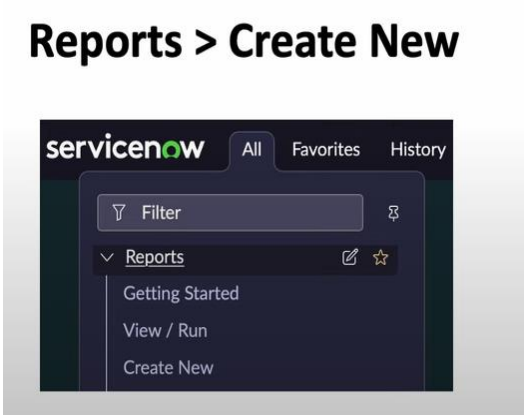
Report Creation and Management

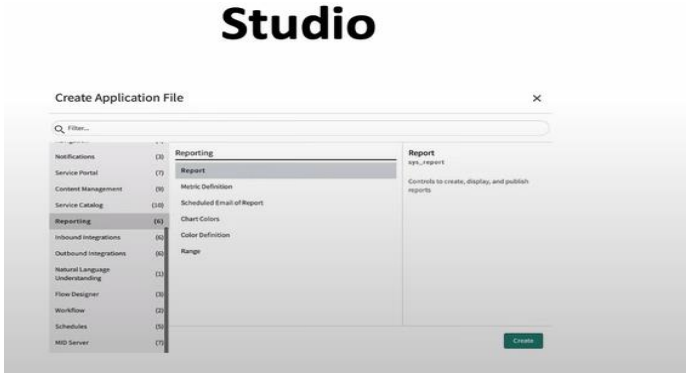
All reports are stored in the reports table. There are 4 other tables for different functionalities.

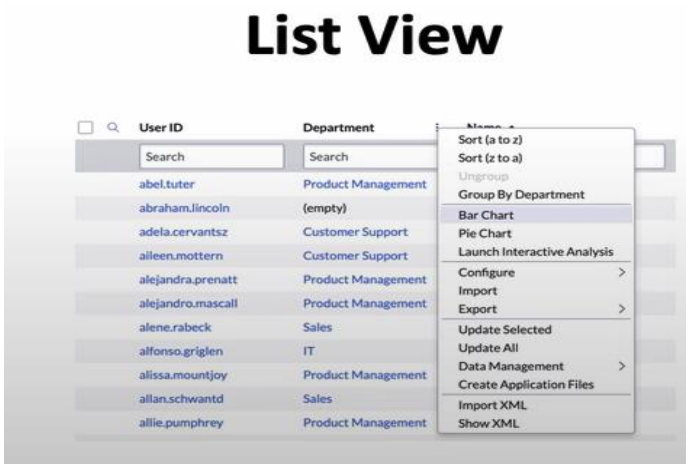


When you create a new report in ServiceNow, you are inserting a record into the Report [sys_report] table.

There are three different ways to create reports:







Navigate to the "Reports" application in ServiceNow.

Click "Create New" or "New" to start a new report.

Choose the table or dataset you want to report on (e.g., Incidents, Changes).

Select the type of report you need (e.g., List, Bar Chart, Pie Chart).

Define the criteria and filters to display relevant data.

Arrange fields and set up visualization options.

Apply additional filters to refine the data.

Group and sort data as needed.

Set up aggregations (e.g., sum, count).

Adjust the layout and design of the report to enhance readability.

Set up automatic generation of the report at specified intervals.

Configure notifications to automatically send the report to designated recipients.

Save your report configuration for future use or modifications.

Share the report with specific users or groups by adjusting access permissions.

Add the report to dashboards for a consolidated view of data.

Edit, delete, or clone reports as necessary.

Control who can view, edit, or manage reports by setting appropriate permissions.

Track report usage and performance.

Refine queries and data sources to improve efficiency.

6. Understand the platform data model that supports reporting capabilities in ServiceNow.

Core Tables: ServiceNow uses tables to store data. Core tables include incident, change_request, problem, etc. These tables have predefined fields and are the primary sources for reports.

Custom Tables: Users can create custom tables to store data specific to their organization's needs. Custom tables can be used as data sources for reports.

Standard Fields: These are pre-defined fields in core tables (e.g., short_description, priority).

Custom Fields: Fields added to standard or custom tables to capture additional data. Custom fields can be used to filter and display data in reports.

Reference Fields: Fields in one table that reference records in another table. For example, an incident might reference a user table for the caller field. These relationships help in creating reports that pull data from multiple tables.

Lookup Fields: Fields that pull data from other tables based on defined conditions, allowing for more dynamic reporting.

List Views: Predefined views of table data. Users can create custom views to show specific columns and data configurations.

Form Views: Displays detailed records, which can be used in reporting for understanding individual entries.

Reports: Built on top of tables and their data. Reports can be customized to display specific fields, apply filters, and use various visualizations (charts, graphs).

Dashboards: Combine multiple reports and widgets into a consolidated view. Dashboards can include interactive elements to drill down into specific data points.

7. Discuss the importance of data visualization in decision making.

Simplifies Complex Data: Visualization transforms complex data sets into easy-to-understand charts, graphs, and dashboards, making it simpler for users to interpret large volumes of information.

Identifies Trends and Patterns: Graphical representations help in spotting trends, patterns, and outliers that may not be obvious in raw data, facilitating quicker insights.

Quick Insights: Visualizations provide immediate, at-a-glance insights, enabling faster decision-making compared to interpreting raw data or lengthy reports.

Real-Time Data: Dashboards and visualizations that update in real-time allow for timely responses to changing conditions and issues.

Predictive Insights: Historical data visualizations can aid in forecasting future trends and outcomes, supporting strategic planning and resource allocation.

Scenario Analysis: Visualization tools can help in analyzing different scenarios and their potential impacts, aiding in better planning and risk management.

9. ServiceNow Branding and Customization

To brand and customize ServiceNow, start by uploading your organization's logo and modifying the color scheme to match your brand identity. Customize the login page with branded images and messaging, and update the banner and footer areas to include company information and promotional content.

You can adjust form and list layouts to fit your specific workflows, including rearranging or adding fields to improve usability. Create custom dashboards and widgets to display relevant metrics and data visualizations, tailored to different user roles and departments.

Implement UI policies and business rules to control form and field behavior, such as visibility and mandatory fields. Customize the Service Portal to provide a branded and user-friendly experience, modifying layouts, themes, and available widgets as needed.

For the Service Catalog, tailor catalog items and record producers to align with your organization's service offerings, and customize associated forms and workflows. Design and

modify workflows to automate processes and integrate with other systems according to your business needs.

Adjust notification and email templates to include your organization's branding elements, such as custom headers and signatures. Write and modify script includes, business rules, and client scripts to enhance platform functionality and tailor it to specific business requirements.

Use the App Engine to develop and deploy custom applications, creating new tables, forms, and workflows tailored to your unique needs. Customize the mobile interface to ensure a consistent brand experience across devices, adjusting views and interactions accordingly.

Finally, use IntegrationHub to manage integrations with external systems, customizing how ServiceNow interacts with other applications and data sources to streamline processes and enhance functionality.

10. Explain the process of customizing the ServiceNow user interface through branding tools.

To customize the ServiceNow user interface through branding tools, start by navigating to the System UI application and selecting Branding or Branding Editor. Upload your organization's logos for the login page and application header to ensure consistent branding.

Next, adjust the color scheme within the Theme settings. Modify the colors for headers, navigation bars, and backgrounds to align with your organization’s branding guidelines. Customize the login page by uploading branded images and modifying background and text elements to create a cohesive brand experience from the start.

Update the header and footer sections by adding branding elements such as text, logos, and links. This can be done through the Branding tools to reflect your company's identity.

For the Service Portal, access the configuration settings to modify the portal's layout, theme, and widgets to match your branding. Customize forms and lists by rearranging fields and adjusting appearances to enhance usability and align with your branding.

Update notifications and email templates by including branded elements in email communications. Modify headers, footers, and signatures to ensure consistency with your organization’s brand.

Finally, preview and test the customizations to ensure that all branding elements display correctly and meet your standards. Once confirmed, apply and publish the changes to make them live, and monitor the interface to ensure that the branding updates are functioning as intended.

11. Demonstrate how to apply a corporate identity to the ServiceNow portal, using Company Guided Setup and UI Builder.

Guided Setup provides a System Administrator step-by-step instructions to configure various Applications and Modules within your instance to suit the needs of the users.

To access Guided Setup, locate the Guided Setup application in the Application Navigator and select the ITSM Guided Setup or ITOM Guided Setup module.

ITSM Guided Setup includes the following categories: Company, Connectivity, Foundation Data, CMDB, Incident Management, Major Incident Management, Problem Management, Change Management, Service Catalog, Knowledge Management, Continual Improvement Management, Project Communication, Go Live

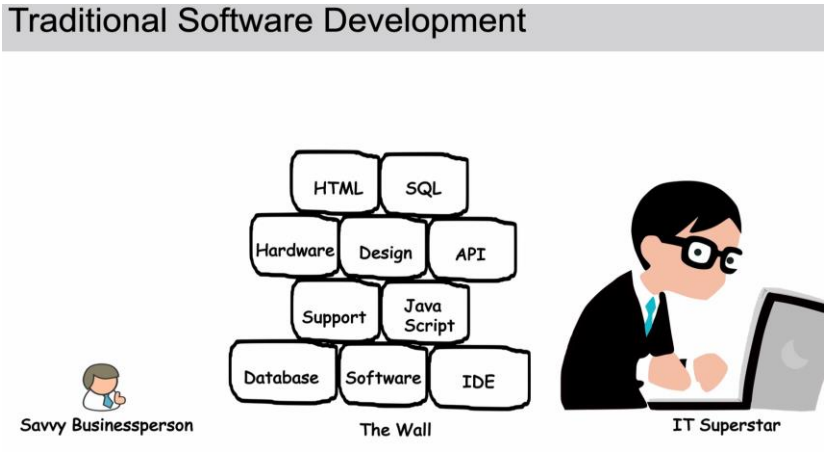
ITOM Guided Setup includes the following categories: MID Server, Discovery, Event Management, Operational Intelligence, Cloud Provisioning and Governance.

Service Portal and UI Builder are two additional tools that can be used to brand the interface.

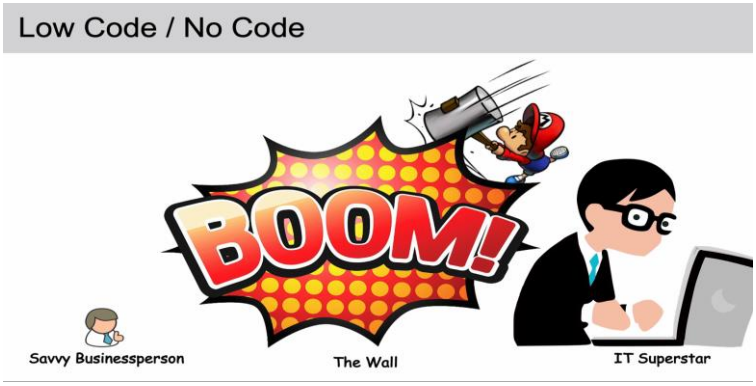
Service Portal is a widget-based tool that allows creation of intuitive, user-friendly interfaces to the Now Platform.

UI Builder allows you to build-out a functional page by choosing from a library of components (buttons and data visualizations) and layouts.

12. Define Low Code No Code development and its relevance in the context of digital transformation.



Low Code/No code: It is Our hero and the master of destruction and eliminating barriers between Savvy Businessperson and digital transformation. Builder of easy-to-use, intuitive IT-services that empower Savvy Businessperson to solve business problems himself.



ServiceNow provides

App Engine Studio (AES): Guided experience for creating everything you need for your low code / no code applications; build tables, import spreadsheets, create workflows, Ul's, manage security.

Studio: Dig deeper into your applications components and capabilities; IDE

Now Experience UI Builder: Create workspaces and portals via drag-and-drop.

Flow Designer: Use natural language to automate workflows, approvals, tasks, notifications and record operations without writing any code.

CMDB: Understand the entirety of your IT infrastructure; the underlying platform upon which your low code / no code apps are built.

Low-code and no-code tools in ServiceNow accelerate digital transformation by enabling rapid application development and process automation. Users can build and customize applications quickly using visual interfaces with minimal coding, empowering non-technical users to address business needs efficiently.

ServiceNow's visual workflow editors streamline process automation, reducing errors and freeing up IT resources. IntegrationHub facilitates easy connections with external systems through pre-built connectors, simplifying integration without extensive coding.

Customization of forms, dashboards, and service portals is straightforward with no-code tools, enhancing user experience and aligning with branding. Mobile app development is also simplified, improving accessibility across devices.

Agile development practices benefit from low-code/no-code platforms, allowing for rapid prototyping, testing, and deployment. Governance and compliance are supported through built-in features, ensuring adherence to organizational standards. Overall, these tools lower development costs, optimize resources, and accelerate digital transformation.

13. Discuss the benefits and limitations of following a Low Code No Code approach in software development.

Pros

- Empowers the people that know the business to solve business problems themselves
- Improves agility via tools for creating IT- services quickly
- Lower costs via more apps in less time with less dependence on IT
- Increased automation opportunities

Cons

- Requires generalization which limits flexibility
- Limits technical improvements (I can code this better)

14. Identify the career opportunities available in the Low Code No Code development space.

In the low-code and no-code development space, career opportunities include roles such as low-code/no-code developers who build and customize applications using these platforms, often requiring proficiency in specific tools and a basic understanding of programming. Business analysts analyze business needs and translate them into application requirements, working closely with development teams.

Solution architects design and oversee the implementation of solutions on low-code/no-code platforms, requiring a deep understanding of platform capabilities and system integration. Application support specialists provide ongoing maintenance and troubleshooting for applications, needing strong problem-solving skills and familiarity with the platforms

Citizen developers, typically working within business units rather than IT, create and modify applications to meet departmental needs with basic platform knowledge. Product managers oversee the development and deployment of applications, ensuring they align with user needs and business goals.

Platform specialists offer expertise in specific low-code/no-code tools, focusing on configuration, customization, and best practices. Training and enablement specialists develop and deliver training programs to help users effectively use these platforms.

Consultants advise organizations on implementing and optimizing low-code/no-code solutions, requiring consulting skills and deep platform knowledge. UX/UI designers focus on creating user interfaces and experiences for applications, leveraging their design skills and understanding of low-code/no-code design capabilities

These roles cover various aspects of the low-code/no-code development field, including technical development, business analysis, strategic planning, and user experience design.