**Module 4 – ServiceNow Scripting Fundamentals and Functions**

UNDERSTANDING DOCUMENT

**Scripting in ServiceNow**

Scripting basically divided into two types client side and server side

**Client-Side Scripting**: Used for user interface changes, such as form modifications and field validations.

**Server-Side Scripting**: Used for data handling, such as querying and manipulating data in the database.

**Script Types**:

**Client Script**: Executes on the client-side (browser).

**Server Script**: Executes on the server-side (backend).

**UI Policies :** UI Policies are client-side logic that governs form and form field behavior.

**Data Policies** : It is a server-side logic that enforces data consistency by setting field attributes as mandatory or read-only.

**ACL Scripting**: Used for access control rules.

**Business Rules** : These are server-side logic that execute when database records are queried, updated, inserted, or deleted.

**Fixed Script**: For one-time execution of server-side code, captured in an update set.

**Background Script**: For running ad-hoc scripts directly from the instance, enable us to monitor and react to events in the browser

**Overview of ServiceNow:**

ServiceNow is a cloud-based platform which is mainly developed for workflow and process automation as per the ITIL principles just like Gmail, it is accessible from anywhere and operates entirely in the cloud. It operates under the Application Platform as a Service (APaaS) model, allowing users to create and host applications on the cloud without needing to write extensive code.

**Core Modules and Services:**

* **ITSM (IT Service Management):** The foundational module, including Incident, Problem, and Change Management.
* **HR Management:** Handles onboarding and offboarding processes.
* **GRC (Governance, Risk, and Compliance):** Focuses on risk management and compliance, particularly relevant for financial institutions.
* **Financial Operations Management:** Often used in the banking sector for managing financial processes.
* **Asset Management:** Manages assets like laptops and other equipment.
* **Business Management:** Deals with business operations and process management.

**Getting Free ServiceNow Instances:**

To access a free ServiceNow instance, visit developer.servicenow.com, register, and follow the instructions to obtain an instance. Ensure regular login to avoid the instance going in to hibernation.

**Becoming a ServiceNow Developer:**

A degree is recommended but not strictly necessary; non-technical backgrounds can also succeed. Familiarity with JavaScript is helpful but not mandatory. Get the ServiceNow Certified System Administrator (CSA) certification, which might come with a free voucher code upon course completion.

**Career Growth:**

ServiceNow offers substantial career growth opportunities, with a strong market presence and increasing demand. The platform's growth is reflected in its stock market performance and widespread adoption.

**Training and Certification:**

Training is available for beginners covering fundamentals, admin, developer skills, and integrations. After completing training, candidates can take certification exams, often with free vouchers available.

**ServiceNow Certification**

First, complete the ServiceNow Fundamental course on the Now Learning platform, after completing the course, you'll receive a voucher code for the certification exam, use the voucher code to register for your exam on the ServiceNow portal, we can choose between a free course with a voucher or a paid instructor-led course that includes a voucher. The voucher typically covers the exam fee.

**ServiceNow User Interface Overview**

We need to enter into service now by user name and password this opens native UI , Service now has two UI versions ui16 and UI 15 , to switch it by going to setting and switch UI versions . New versions are released every six months, named after cities (e.g., Istanbul, San Diego, Tokyo).

There are 4 UI elements

1.Banner Frame : It the top most section which consist of the logo , which is customizable and can be used as home button, user menu which provides options like Profile , impersonate user to switch the user , elevate role for high impact actions and logout option . banner frame also contain Tools like global search , chat , help desk and system settings which has theme , accessibility , list and form , notification and developer settings.

2.Application navigator : Application navigator contains a Navigation filter which filters list of applications , All Applications option where all applications can be accessed ,and a history tab for previous searches and a favourite tab which consist of the favourites we add .

3.Content Page : The whole content which we are working on will be shown here it is more like work space.

4.Edge(available in UI 15) : Edge is only available in UI 15 , It is a like a vertical task bar located at left side of the page.

**Customization and Settings**

**Themes**: Customize the appearance of the instance (e.g., dark mode, black and white).

**User Preferences**: Adjust settings for notifications, accessibility, list and form views.

**Developer Settings**: Includes options like application picker visibility and update set management.

**ServiceNow Modules**

**Incident Management**

1. **Creating an Incident:**
   * An incident is created when there's an interruption to a service.
   * Fill out details such as the incident number, caller, category, state, urgency, priority, and assignment group.
   * Once resolved, update the resolution details and close the ticket. This will trigger an email notification to inform the caller of the resolution.
2. **Incident Resolution:**
   * After resolving, the incident will automatically close in seven days unless manually closed earlier.
   * The resolution details are documented, and the status is updated to 'Resolved'.
3. **Incident Lifecycle:**
   * An incident can be tracked through its status and resolution, and can be updated or closed as necessary.

**Problem Management**

1. **Creating a Problem:**
   * If an incident repeats frequently, it is escalated to a problem.
   * Problems are managed similarly to incidents but focus on identifying and fixing the root cause.
2. **Problem Lifecycle:**
   * **Assessment:** Determine the issue and assign it to the appropriate team.
   * **Root Cause Analysis:** Identify the underlying cause of the problem.
   * **Fix:** Apply the necessary changes to resolve the problem.
   * **Resolution:** Document the fix and close the problem ticket.

**Change Management**

1. **Creating a Change Request:**
   * Changes are made to rectify or improve systems, often involving development and deployment.
   * Different types of changes include emergency (immediate action required), normal (requires approval), and standard (pre-authorized).
2. **Change Lifecycle:**
   * **Planning:** Define what needs to be changed and why.
   * **Approval:** Obtain necessary approvals.
   * **Implementation:** Execute the change.
   * **Review and Closure:** Assess the change’s impact and finalize.

**List and Forms**

List displays record from data table like incident , problem, etc.. There are different elements in list like title bar which consist list control menu which consist of view , filter , Group by , show , refresh and favourites. It has name of the table and a search bar for searching specified content. A activity stream icon which tracks activity of the table and a navigator to jump from pages , header consists a personalize list , condition builder , breadcrumbs , sort indicator , and column headings and the Data is presented in tabular format which consist of rows and columns basically these rows are the records and the columns are the attributes.

We can Import data into the list from various formats (e.g., XML) and also Export list data in formats like Excel, CSV, XML, or PDF.

Forms provide the elements you need to view change or add data to some record that stored in ServiceNow database. Every time you are viewing a record you are either viewing existing record or creating a new record. There is a form for each and every record approximately there are 4478 types of forms.

Examples : incident record form , user record form etc..

Every form consists form title , form menu , UI action buttons , header bar which Displays record type, data table, and record name. Fields which is the Main section with various data types (string, Boolean, choice, reference) Required which are mandatory to enter , Read-only in which we can only read and can not write , and Reference field for pulling values from other tables. We can change view of the form by changing view which we can access from view in menu.

We can change layout of the form using form layout can add or remove the fields in manual way and form design can create forms and arranged by using drag and drop feature

* Filter Records: Use the filter icon to narrow down to specific records.
* Group Records: Group by categories to organize data.
* Sort Records: Change the sorting order (ascending/descending).
* Create Favourites: Save commonly used views for quick access.
* Customize List and Form Views: Adjust layouts and fields as needed.