Week 4-Understanding Document

Introduction to Scripting

ServiceNow is a cloud-based IT service management (ITSM) platform designed to manage and automate business processes. Scripting within ServiceNow allows for the customization and automation of workflows, improving efficiency and meeting specific business requirements. Scripting in ServiceNow primarily involves JavaScript, which is used in both client-side and server-side scripting.

Client-Side Scripting

Client-side scripting refers to scripts that run on the user's browser and interact with forms and fields. These scripts help manage form validations, user interactions, and dynamic behaviors.

Examples of client-side scripting include:

1. Client Scripts: JavaScript code that runs on form load, submission, or field change.
2. UI Policies: Rules that dynamically show, hide, or make fields mandatory.
3. UI Actions: Buttons or links that trigger specific actions on forms.

Server-Side Scripting

Server-side scripting refers to scripts that run on the ServiceNow server. These scripts handle database operations, automate business logic, and process records.

Examples of server-side scripting include:

1. Business Rules: Scripts that run in response to record changes (insert, update, delete).
2. Script Includes: Reusable server-side code that can be called from other scripts.
3. Scheduled Jobs: Automated tasks that run at specific times or intervals.

Scripting in Real-Life Scenarios

In real-world scenarios, ServiceNow scripting is often used to automate tasks, enforce business logic, and integrate ServiceNow with external systems. Here are a few examples:

Example 1: Client Script for Form Validation

This script ensures that the 'Assignment Group' field is mandatory for critical priority tickets:

```
function onSubmit() {
   var priority = g_form.getValue('priority');
   if (priority === '1' && g_form.getValue('assignment_group') === '') {
      alert('Assignment group is mandatory for critical priority tickets!');
      return false;
   }
```

```
    return true;
}
```

Example 2: Server-Side Script for Auto-Assigning Tasks

This server-side script automatically assigns an incident to the 'Technical Support' group if no assignment group is set:

```
var gr = new GlideRecord('incident');
gr.get('sys_id', current.sys_id);
if (gr.assignment_group == '') {
    gr.assignment_group = 'Technical Support';
    gr.update();
}
```

1. Understanding How ServiceNow Functions

ServiceNow is a cloud-based enterprise platform designed to streamline and automate workflows and service management across various departments. The platform integrates multiple business processes into one centralized system. Key features include IT Service Management (ITSM), Human Resources (HR), Security Operations, and Customer Service Management (CSM).

Key Components:

- Modules: Collections of related applications that automate processes, such as the Incident, Problem, and Change Management modules.
- Tables: Central storage for all ServiceNow records, organized into fields (columns). Each record in a table represents a unique instance of a data type.
- Records: Individual entries in a table (e.g., a single incident).
- Forms: Interface for viewing or modifying a single record. Users input data through forms when creating or updating records.
- Lists: Display multiple records from a table, often allowing sorting, filtering, and exporting of data.

How the Platform Works:

a. Task Automation: Through predefined or custom workflows, ServiceNow automates repetitive tasks such as ticket creation, task assignment, and escalations.
b. Reporting and Dashboards: Users can create real-time reports and dashboards to monitor performance metrics, such as resolution time, task completion, and SLA compliance.
c. Integration: ServiceNow integrates with external systems using APIs, ensuring seamless data flow between different platforms such as CRM, ERP, and HR systems.

2. How to Properly Configure and Personalize the Platform

One of the strengths of ServiceNow is its ability to be configured and personalized to match the unique needs of any organization. While the platform comes with a robust set of out-of-the-box features, most organizations find the need to customize their instances to optimize their processes.

Configuration Options:

a. Forms and List Layouts: Administrators can configure forms by adding, removing, or rearranging fields to capture the necessary data. List layouts are customizable so that users can view relevant columns for efficient record navigation.

b. Business Rules: Business Rules are server-side scripts that automatically execute when records are inserted, updated, or queried. This allows organizations to automate specific processes, such as validating data before it's stored or triggering certain actions when conditions are met.

c. UI Policies: UI Policies allow admins to dynamically control form fields, making them mandatory, read-only, or hidden based on certain conditions. For example, when certain fields are filled out, other fields may become visible or required.

d. Service Catalog: The Service Catalog can be configured to provide users with access to predefined services such as hardware requests or software installations. The catalog allows customization of request forms and approval workflows.

e. Personalized Dashboards and Reporting: Users can create personalized dashboards to visualize real-time data and key performance indicators (KPIs). Dashboards can be role-based, ensuring that users see information relevant to their function.

f. Notifications and Alerts: Administrators can configure notifications via email, SMS, or in-platform alerts based on specific triggers, such as task assignment, SLA breaches, or workflow actions.

Personalization for Users:

a. Homepages: Users can customize their homepage to display dashboards, lists, or reports that are important to their daily tasks.
b. Favorites and Bookmarks: Frequently accessed applications or records can be bookmarked for quick navigation.
c. Themes and Branding: Organizations can brand their ServiceNow instance by changing colors, logos, and themes, ensuring the platform reflects their identity.

3. Incident Management Module

The Incident Management Module in ServiceNow is part of the IT Service Management (ITSM) suite, designed to manage and resolve incidents in an organization's IT infrastructure. An incident is any unplanned interruption or reduction in the quality of an IT service.

Key Features:

- Incident Creation: Incidents can be created manually or automatically (through email or integrations with monitoring tools).
- Categorization and Prioritization: Incidents are categorized (e.g., hardware, software) and prioritized based on urgency and impact. This helps support teams focus on the most critical issues first.

- Assignment Groups: Incidents are assigned to specific teams based on predefined assignment rules. The correct group of technicians is notified, and the incident is logged for resolution.
- Incident Resolution and Closure: The responsible team resolves the issue and updates the incident with resolution details. Once the user confirms the resolution, the incident is closed.

Workflow in Incident Management:

a. User Report: A user reports an incident via self-service, phone, email, or integrated system.
b. Incident Logging: The incident is logged in the system and categorized.
c. Assignment and Diagnosis: The incident is assigned to a support group, where diagnosis and troubleshooting occur.
d. Resolution: After investigation, the incident is resolved.
e. Closure: The incident is closed once the user confirms the resolution.

Benefits of Incident Management:

- Reduced downtime for IT services.
- Streamlined communication between IT support teams and end-users.
- Better tracking and resolution times through SLAs and workflows.

4. Problem Management Module

The Problem Management Module is designed to address the underlying causes of incidents. It helps identify recurring issues and reduce the impact of future incidents by investigating and eliminating root causes.

Key Features:

- Problem Creation: Problems are usually generated after several related incidents are logged or when a major incident occurs.
- Root Cause Analysis: Support teams investigate the root cause of a problem, conducting in-depth analysis to prevent future incidents.
- Workarounds: Temporary solutions, known as workarounds, can be provided to mitigate the impact of the problem while a permanent solution is sought.
- Problem Resolution: Once the root cause is identified, a permanent fix is implemented to prevent recurrence.

Problem Management Workflow:

a. Incident Correlation: Similar incidents are reviewed to determine if there is a broader problem.
b. Problem Investigation: A problem record is created, and investigation into the root cause begins.
c. Workaround Application: If no immediate resolution is possible, a temporary workaround is applied.
d. Resolution and Closure: After a permanent fix is applied, the problem is closed.

Benefits:

- Reduces repeat incidents by addressing the root cause.
- Improves system stability and performance.
- Enhances incident resolution by providing teams with better insight into recurring issues.

5. Change Management Module

The Change Management Module helps organizations implement changes to their IT environment in a controlled and systematic way, reducing risk and minimizing disruptions.

Key Features:

- Change Request Creation: A Change Request (CR) is created to document proposed changes to the IT environment.
- Change Types:
  - Standard Changes: Pre-approved, low-risk changes that follow a repeatable procedure (e.g., software patching).
  - Normal Changes: Changes that require approval based on a risk assessment and are scheduled after the review process.
  - Emergency Changes: Changes that need to be made quickly to resolve a critical incident or prevent a major service outage.
- Risk Assessment and Approval: Changes are assessed for potential risks, and approval workflows are initiated to ensure necessary reviews.
- Change Calendar: All scheduled changes are tracked on a calendar, providing visibility into what changes are happening and when.

Change Management Workflow:

a. Change Request Submission: The request for change is documented, including details of the change, risk assessment, and expected impact.
b. Approval Process: The change is reviewed and either approved or rejected based on its risk level.
c. Implementation: Once approved, the change is implemented according to a predefined schedule.
d. Review and Closure: After implementation, the change is reviewed to ensure it was successful and then closed.

Benefits:

- Minimizes the risk associated with IT changes.
- Improves visibility and tracking of changes across the organization.
- Ensures that changes are implemented following a structured, repeatable process.

6. Lists in ServiceNow

Lists in ServiceNow allow users to view multiple records from a table in a grid format. Each row in a list represents a record, and each column represents a field within that record.

Key Features:

- Customizable Layouts: Users can customize the list layout by choosing which columns (fields) to display, adjusting the width of columns, and defining default sorting orders.
- Filters: Lists can be filtered based on specific criteria, such as showing all incidents assigned to a particular user or displaying only high-priority problems.
- Search: The platform allows for text-based searches within lists to find specific records quickly.
- Bulk Actions: Users can select multiple records and perform actions like deleting or updating all selected records at once.
- Exporting: Data from lists can be exported to formats like Excel or CSV for further analysis or reporting outside of ServiceNow.

7. Forms in ServiceNow

Forms provide the interface for creating, viewing, and editing individual records in ServiceNow. Each form displays the fields related to a particular record, allowing users to input or modify data.

Key Features:

- Form Fields: Each form consists of various fields (text, date, reference,

choice lists) that capture specific data about the record.

- Form Layouts: The layout of the form can be customized, allowing administrators to group fields logically and adjust the flow of data input.
- Reference Fields: Certain fields allow users to link records from one table to another (e.g., referencing a user or asset in an incident form).
- Related Lists: These display information about other records related to the one being viewed, such as a list of tasks related to an incident.
- Validation: Forms can be configured to validate data before submission, ensuring that required fields are completed or that input meets specific criteria.