**Chapter 5: Script Includes**

* A Script Include is a reusable server-side JavaScript class or function.
* It allows centralizing logic that can be called from Business Rules, other Script Includes, or GlideAjax.
* Supports **server-to-server calls** and can also be exposed for **client-to-server (via GlideAjax)**.
* **Standard Script Include**
  + Purely server-side code.
  + Used in Business Rules, Script Actions, Scheduled Jobs, etc.
* **Client Callable Script Include**
  + Must extend AbstractAjaxProcessor.
  + Accessed from client-side scripts (UI Scripts, Client Scripts) using **GlideAjax**.
  + Must be marked as **Client Callable = true**.
  + Methods must be defined inside the this scope, and only those with the naming convention functionName returning a value can be called.

Types of Script Includes (in simple terms):  
 1️⃣ On-Demand / Classless – Runs directly without creating a class.  
 2️⃣ Class-Based – Creates a reusable class that can hold multiple functions.  
 3️⃣ Client Callable – Allows client-side scripts to call server-side code via GlideAjax.

**You can practice below:**

**🔹 1. On-Demand / Classless Script Include**

📌 Quick utility functions, no class creation.

**🏋️ Practice Scenarios:**

1. **Greeting Function**
   * Create a classless function sayHello(name) that returns "Hello, <name>".
   * Call it from a **Business Rule** on incident when inserting a record, log the greeting in the system log.
2. **Calculate Age**
   * Create a classless function calculateAge(dob) that calculates a person’s age from their date of birth.
   * Call it from a **Script Action** attached to sys\_user when a new user is created.
3. **Priority Calculator**
   * Create a function calculatePriority(impact, urgency) that returns a number (1 = Critical, 2 = High, 3 = Moderate, 4 = Low).
   * Call it from a **Business Rule** on incident to automatically set priority based on impact and urgency.

**🔹 2. Class-Based Script Include**

📌 For reusable libraries & multiple functions.

**🏋️ Practice Scenarios:**

1. **String Utilities**
   * Create a Script Include StringUtils with functions:
     + toUpperCase(str) → return uppercase.
     + reverse(str) → return reversed string.
   * Call it from a **Business Rule** on incident to transform short\_description.
2. **Math Library**
   * Create a Script Include MathLibrary with methods:
     + square(num)
     + factorial(num)
   * Call it from a **Scheduled Job** that calculates factorial of 5 and logs it to the system log.
3. **IncidentHelper**
   * Create IncidentHelper Script Include with:
     + isMajorIncident(impact, urgency) → returns true if both are 1.
     + assignToMajorTeam(incidentSysId) → assigns record to a "Major Incident" group.
   * Call it from a **Business Rule** on incident when inserting.

**🔹 3. Client Callable (GlideAjax)**

📌 For client scripts that need server-side data.

**🏋️ Practice Scenarios:**

1. **Get Current User’s Name**
   * Script Include UserDetailsAjax → method getCurrentUserName() returns gs.getUserDisplayName().
   * Call it from a **Client Script** on incident form → show an alert with user’s name when the form loads.
2. **Fetch User’s Manager**
   * Script Include UserManagerAjax → method getManager(sys\_id) returns manager’s name.
   * Client Script on incident form → when caller changes, fetch and display manager’s name in a field.
3. **Get Open Incident Count**
   * Script Include IncidentCountAjax → method getOpenCount() returns number of open incidents for the logged-in user.
   * Client Script on incident form → when form loads, alert “You have X open incidents.”