Order of Execution in Salesforce

The **Order of Execution in Salesforce** refers to the sequence in which different automation processes, triggers, and operations execute when a **record is saved** in Salesforce.

Salesforce Order of Execution (Insert/Update)

1. **Loads the initial record**
   - Salesforce retrieves the record from the database (if updating) or creates a new instance (if inserting).
2. **System Validation**
   - Runs system validations for required fields, field types, and field length checks.
   - If the request came from the standard UI edit page, Salesforce also checks page layout-specific rules.
3. **Before Record-Triggered Flows Execute**
   - These are **flows that run before the record is saved** to the database.
4. **Before Triggers Execute**
   - Any Apex **before triggers** defined on the object execute.
5. **Custom Validation Rules Execute**
   - Runs **most** custom validation rules.
6. **Duplicate Rules Execute**
   - Checks for duplicate records based on configured **Duplicate Rules**.
7. **Record Saved (Without Committing)**
   - The record is temporarily saved to the database but is **not yet committed**.
8. **After Triggers Execute**
   - Any Apex **after triggers** execute.
9. **Assignment Rules Execute**
   - Executes **Lead** or **Case assignment rules**, if applicable.
10. **Auto-Response Rules Execute**
    - Auto-response emails (for Leads, Cases, or Custom Objects with enabled Auto-Response Rules) are sent.
11. **Workflow Rules Execute**
    - If a **Workflow Rule** updates fields, Salesforce updates the record **again**, which may cause re-execution of some validation rules.
12. **Duplicate Rules Recheck (If Workflow Updates Were Made)**
    - If workflow field updates cause new duplicate field values, **duplicate rules execute again**.
13. **Before & After Update Triggers Re-execute (If Workflow Updates Were Made)**
    - **Before Update Triggers & After Update Triggers** execute one more time (but only once).
    - **Custom Validation Rules do not run again**.
14. **Escalation Rules Execute**
    - If escalation rules are enabled (e.g., for Cases), they execute.
15. **Salesforce Flow Automations Execute**
    - **Process Builder** runs.
    - **Flows launched by processes** run.
    - **Flows triggered by workflow rules** (if in the pilot program).
16. **Record-Triggered Flows (After Save) Execute**

o Runs any **record-triggered flows** that execute **after the record is saved**.
17. **Entitlement Rules Execute**
    o If applicable, entitlement rules process (e.g., case entitlements).
18. **Roll-Up Summary & Cross-Object Workflow Updates**
    o If the record has a **roll-up summary field**, Salesforce performs calculations and updates the parent record.
    o The **parent record** then goes through the same save procedure.
    o If the parent record is updated, and a **grandparent record** contains a roll-up summary field, it too is updated.
19. **Criteria-Based Sharing Evaluation Executes**
    o Recalculates sharing access based on **Criteria-Based Sharing Rules**.
20. **Commits All DML Operations**
    o **At this point, all DML operations are committed to the database.**
21. **Executes After-Commit Logic**
    o After committing the transaction, Salesforce performs:
        ▪ **Sending emails**
        ▪ **Executing @future methods (Asynchronous Apex)**
        ▪ **Async sharing rule processing (for records >25,000)**
        ▪ **Placing Outbound Messages in a queue**
        ▪ **Calculating search indexes**
        ▪ **Rendering file previews**
        ▪ **Publishing Platform Events (if configured)**

Operations That Don't Invoke Triggers

Certain operations do **not** invoke Apex Triggers, including:

- **Cascading Deletes**
    o When deleting parent records, child records get deleted, but triggers do **not** fire on those child records.
- **Cascading Updates from Merge Operations**
    o If child records are reparented due to a merge operation, their update triggers do **not** fire.
- **Mass Updates**
    o **Mass campaign status changes, mass division transfers, mass approval request transfers, mass email actions, and mass address updates** do not trigger Apex.
- **Field Type Modifications**
    o Changing **custom field data types** does not trigger Apex.
- **Picklist Modifications**
    o Renaming or replacing picklist values does **not** trigger Apex.
- **Price Book Management**
    o Managing price books does not invoke triggers.
- **User Default Division Updates**
    o Changing a user's **default division** with the "Transfer Division" option checked does not invoke triggers.
- **Person Account & Business Account Type Changes**

- If a **Business Account** is converted to a **Person Account** (or vice versa), **before & after update triggers do not fire**.
- **FeedItem LikeCount Increments**
  - When the **LikeCount** on a `FeedItem` increases, **triggers do not fire**.

Order Of Execution Image

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