

Project Design Phase-II
Data Flow Diagram & User Stories

Date	27 December 2025
Team ID	
Project Name	An employee requests installation of licensed software through the Service Catalog
Maximum Marks	4 Marks

Data Flow Diagrams (DFD)

A **Data Flow Diagram (DFD)** represents how data flows through the **Software Installation Request Automation system**. It shows how requests are submitted, processed, approved, fulfilled, and stored within ServiceNow.

The DFD helps in understanding:

- How data enters the system
- How it is processed by workflows and approvals
- Where data is stored
- How results are delivered back to users

DFD – Level 0 (Context Diagram)

External Entity:

- Employee (Requester)

System:

- Software Installation Request Automation System (ServiceNow)

Data Flow:

- Employee submits software request
- System processes the request
- Employee receives approval status and completion notification

DFD – Level 1 (Detailed Flow)

Entities & Processes:

- **Employee (Requester)**
- **Service Portal**
- **Service Catalog**
- **Approval Workflow**
- **IT Support Team**
- **ServiceNow Database**

Data Stores:

- sc_request (REQ)
- sc_req_item (RITM)
- sc_task (SCTASK)

Data Flow:

1. Employee submits software request via Service Portal
2. Request details stored in REQ and RITM tables
3. Approval workflow routes request to Manager / Software Admin
4. Approved requests generate Catalog Tasks
5. IT Support completes installation
6. Notifications sent to employee
7. Request closed and stored for audit

User Stories

Use the below template to list all the user stories for the product.

User Stories Table

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance Criteria	Priority	Release
Employee (Requester)	Software Request Submission	USN-1	As an employee, I can submit a software installation request through the Service Catalog.	Software request is successfully submitted with all required details.	High	Sprint-1
Employee (Requester)	Request Validation	USN-2	As a user, I must enter mandatory fields like software name and justification.	System prevents submission if mandatory fields are missing.	High	Sprint-1
Employee (Requester)	Notification	USN-3	As a user, I receive confirmation email after submitting the request.	Email notification received with request number.	High	Sprint-1
Manager / Approver	Approval Management	USN-4	As a manager, I can approve or reject software requests.	Approval decision updates request status correctly.	High	Sprint-2
Software Admin	Compliance Approval	USN-5	As a software admin, I can review license compliance before approval.	Only compliant requests are approved.	Medium	Sprint-2

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance Criteria	Priority	Release
IT Support Team	Task Fulfillment	USN-6	As an IT support member, I receive a catalog task for software installation.	Task is auto-assigned after approval.	High	Sprint-2
IT Support Team	Task Completion	USN-7	As IT support, I can update task status during installation.	Task status reflects progress accurately.	Medium	Sprint-3
Employee (Requester)	Request Tracking	USN-8	As a user, I can track request status in the Service Portal.	User can view current status anytime.	Medium	Sprint-3
System	Exception Handling	USN-9	As a system, I can place request on hold if license is unavailable.	Incident is created automatically.	Medium	Sprint-3
Administrator	Deployment & Migration	USN-10	As an admin, I can migrate configurations using Update Sets.	All configurations move without errors.	High	Sprint-4

User Types Covered

- **Employee (Requester)** – submits and tracks software requests
- **Manager / Approver** – approves or rejects requests
- **Software Admin** – ensures licensing compliance

- **IT Support Team** – installs requested software
- **Administrator** – manages configuration and deployment