REQUIREMENT ANALYSIS PHASE

Project Title: Optimizing User, Group, and Role Management with Access Control and Workflows

DATE	NOV 2, 2025
TEAM ID	NM2025TMID07601
PROJECT NAME	Optimizing User, Group, and Role Management with Access Control and Workflows
MAXIMUM MARKS	4 MARKS

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1. Introduction

This phase identifies and defines both **functional** and **non-functional** requirements necessary to build a secure, automated task management workflow in ServiceNow.
The system involves two key users — **Alice (Project Manager)** and **Bob (Team Member)** — managed by the **Admin**, who configures all roles, ACLs, and workflows.

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2. Functional Requirements

ID	Requirement	Description	Actor
FR1	Create User Roles	System must support two primary roles — Project Manager and Team Member.	Admin
FR2	Create Tasks	Alice should be able to create and assign tasks to Bob.	Alice
FR3	Update Tasks	Bob must be able to update only the *Status* and *Comments* fields of assigned tasks.	Bob
FR4	Apply ACLs	System should restrict Bob's access to only allowed fields.	Admin
FR5	Automate Workflow	The system should automatically trigger Flow Designer when a record is created/updated.	System
FR6	Request Approval	Once the task is marked "Completed," an approval request should go to Alice.	System
FR7	Approve Tasks	Alice should be able to approve or reject task completion requests.	Alice

FR8	Display Approvals	Approved/rejected requests must appear in “My Approvals.”	System
FR9	Store Data	Task records, user data, and approval logs must be stored in ServiceNow tables.	System

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3 Non-Functional Requirements

ID	Category	Description
NFR1	Platform	The solution will be built and tested on ServiceNow Personal Developer Instance (PDI).
NFR2	Security	All data access controlled by ACLs (Access Control Lists) ensuring least privilege.
NFR3	Reliability	Approval and update processes must execute consistently and record all status changes.
NFR4	Usability	Role-based interfaces to reduce user confusion and ensure easy task tracking.
NFR5	Maintainability	Configurations should be easily modifiable (roles, tables, and flows).
NFR6	Performance	Workflow execution and approvals should occur in under 3 seconds per event.
NFR7	Auditability	Each update or approval must be logged automatically by the platform.

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4 System Actors

Actor	Description
Admin	Configures instance, creates users, roles, tables, ACLs, and workflows.
Alice (Project Manager)	Creates tasks, assigns to Bob, and approves completed work.
Bob (Team Member)	Updates assigned tasks (status/comments) and requests approvals.
ServiceNow System	Automates updates and approvals via Flow Designer.

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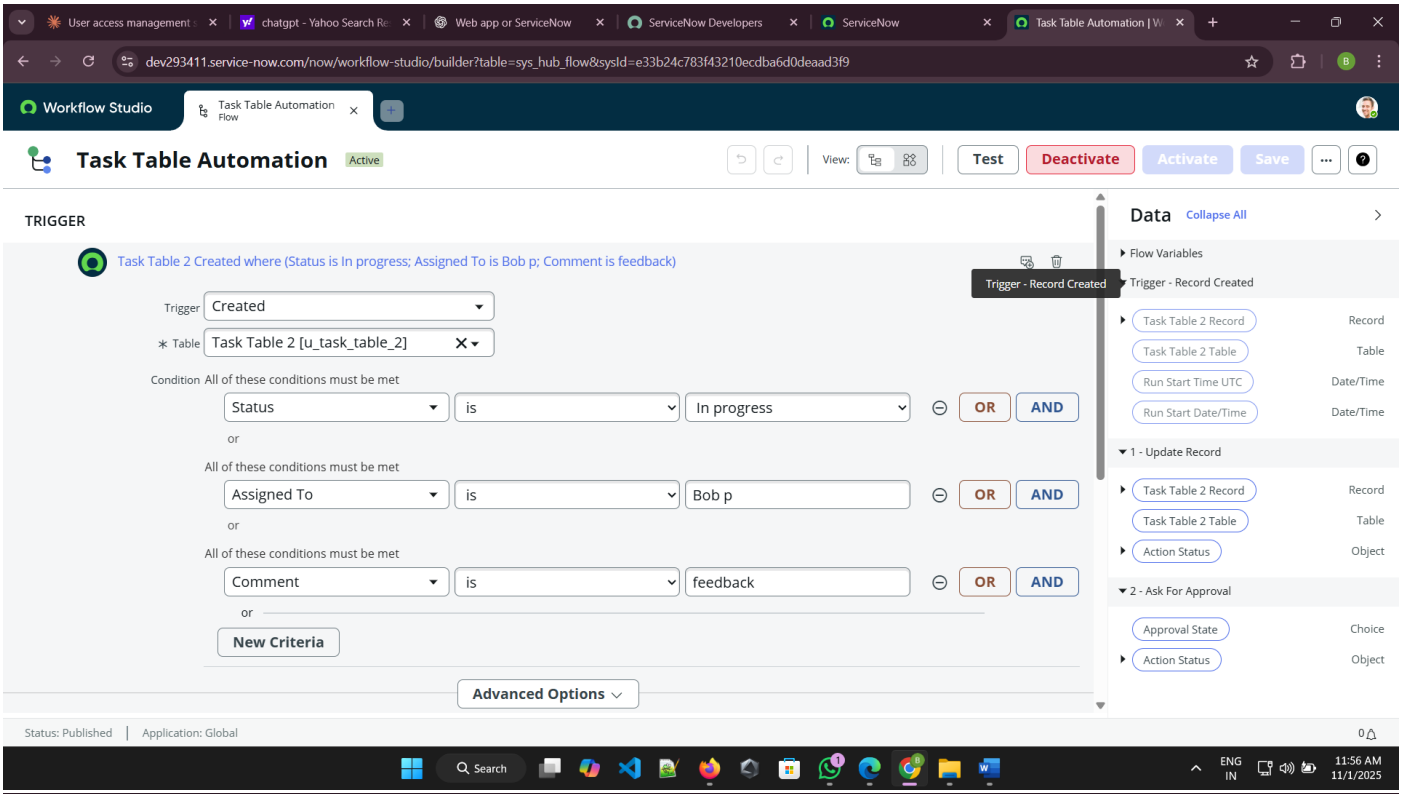
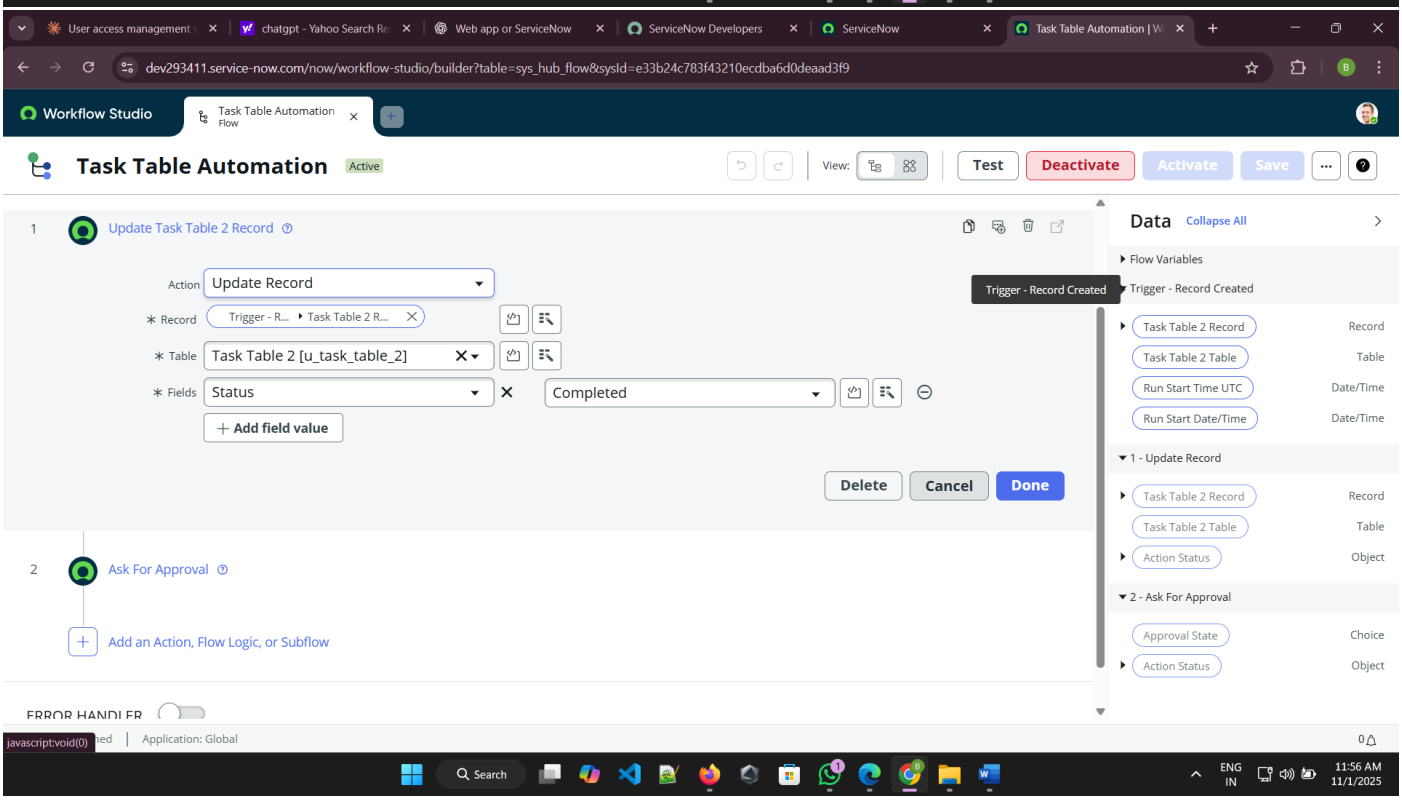
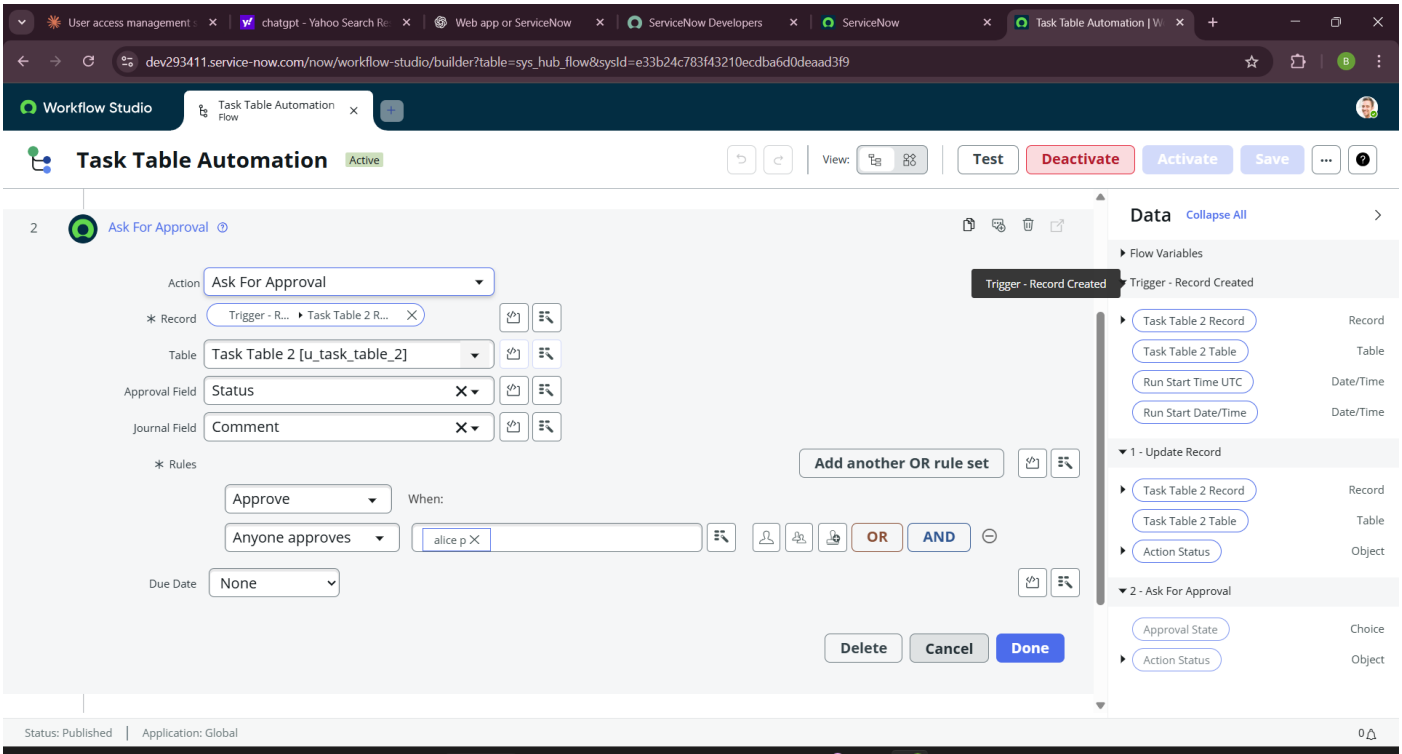
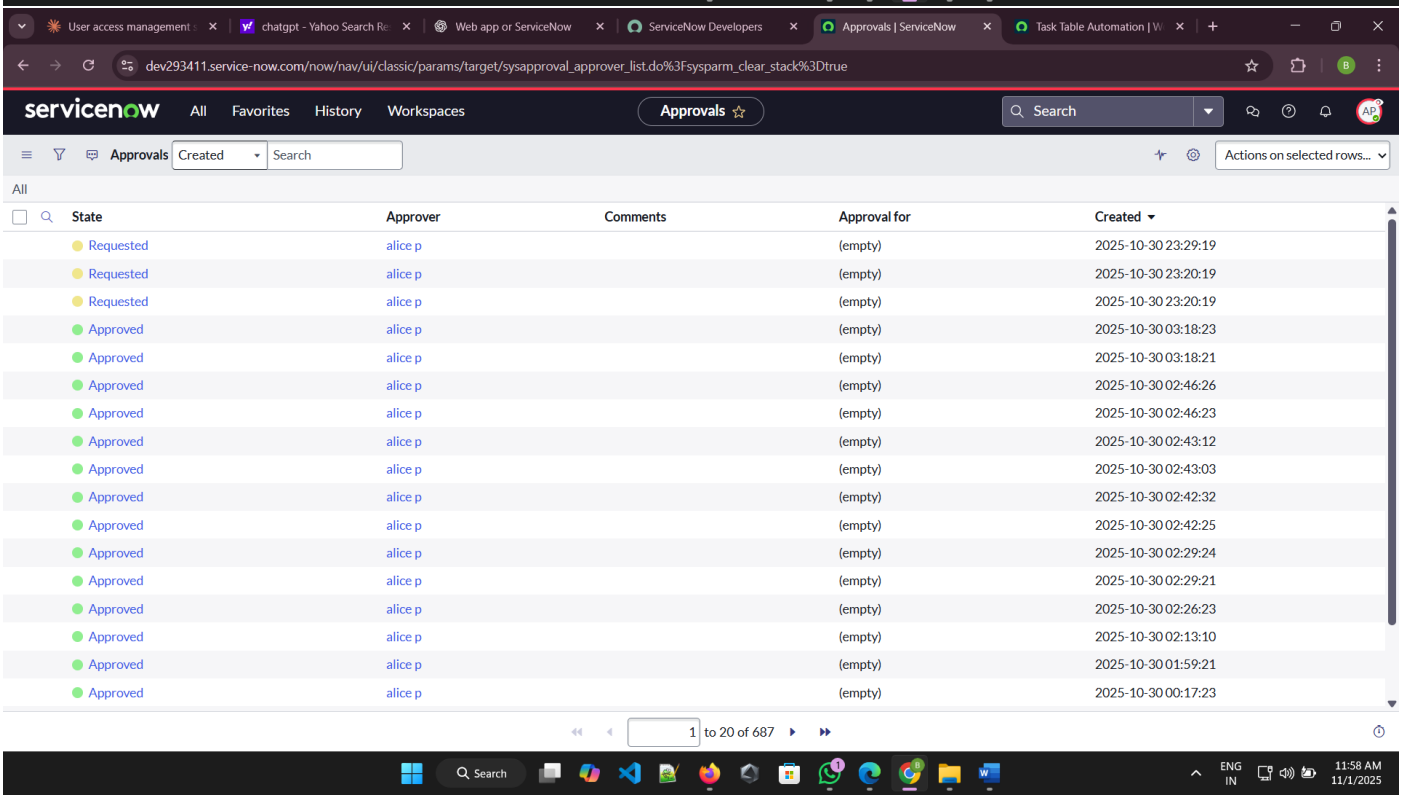
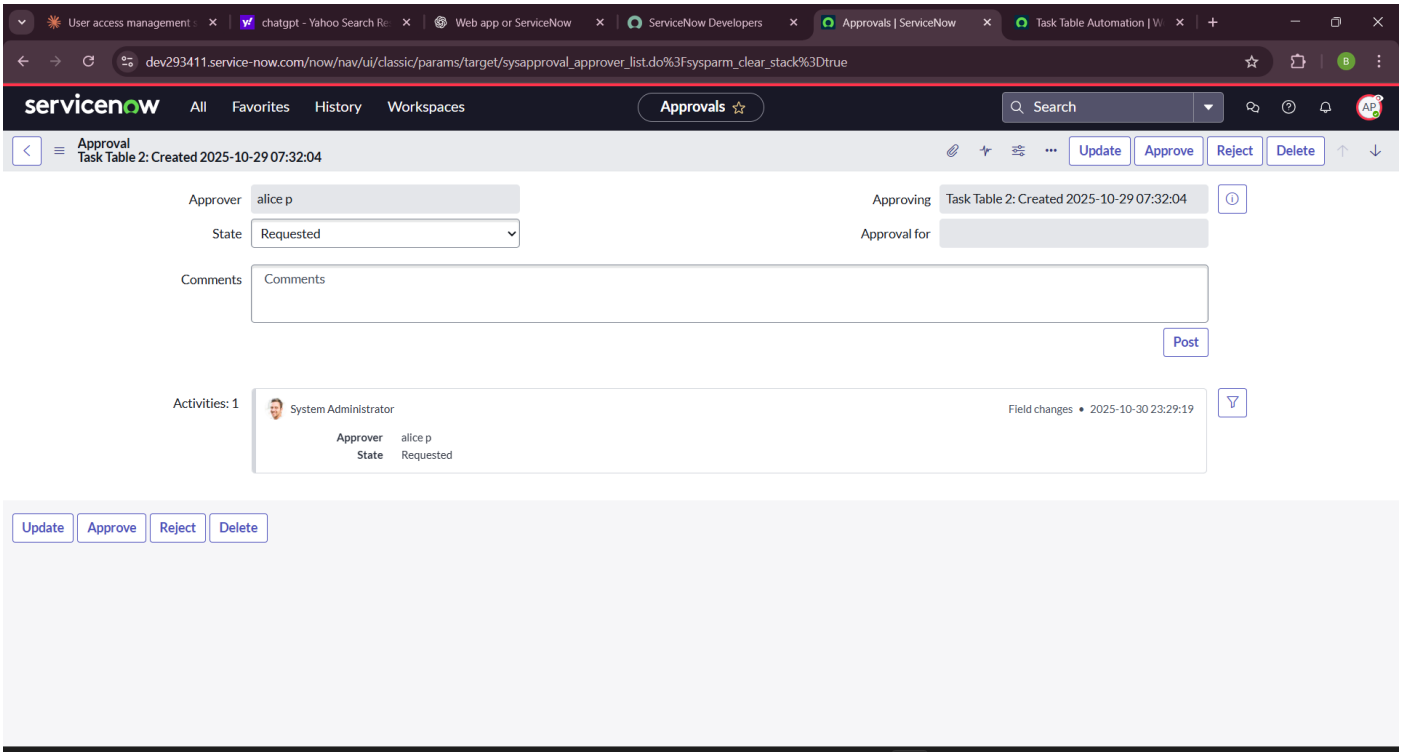
5 Requirement Matrix (Insert Screenshot)

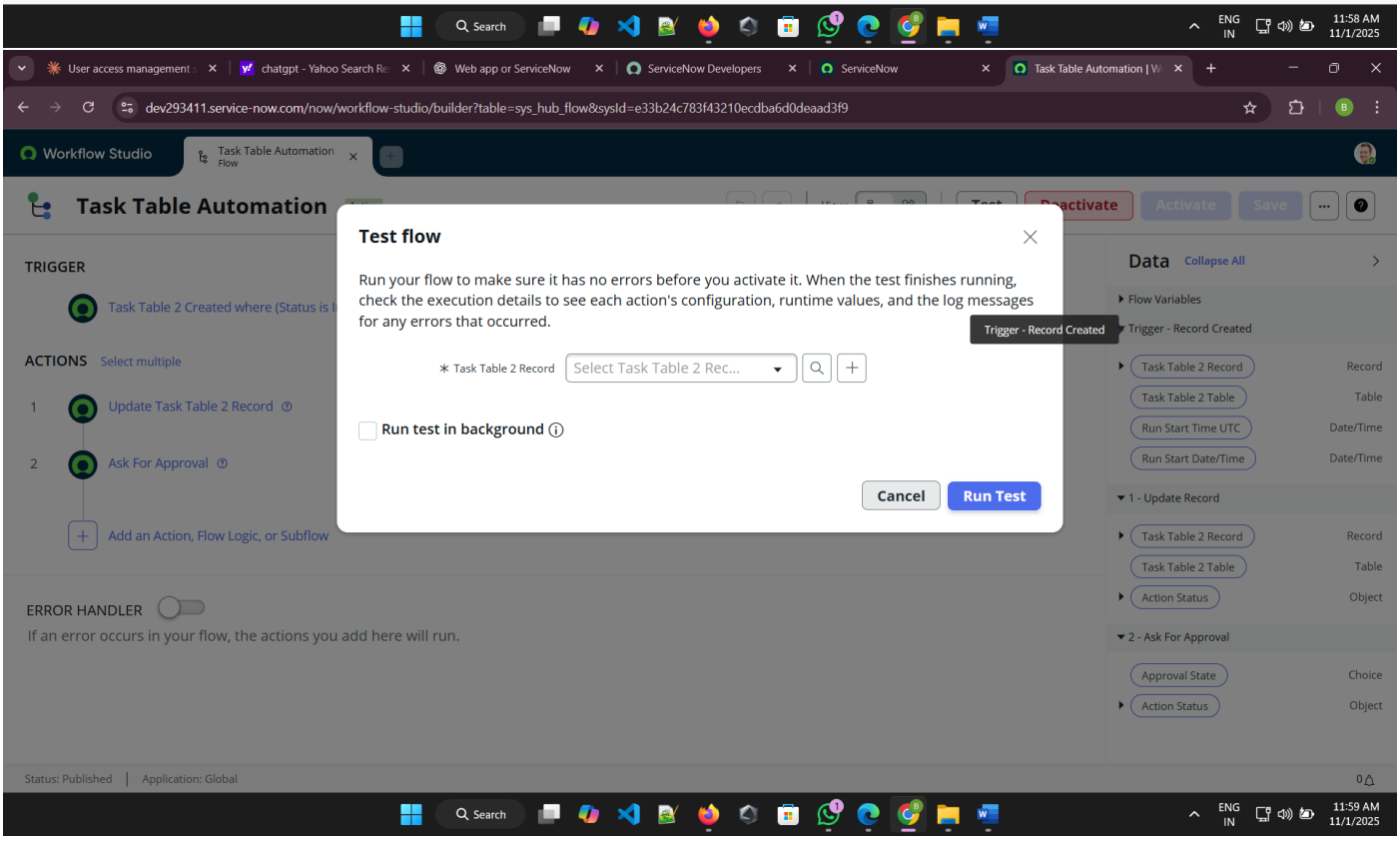


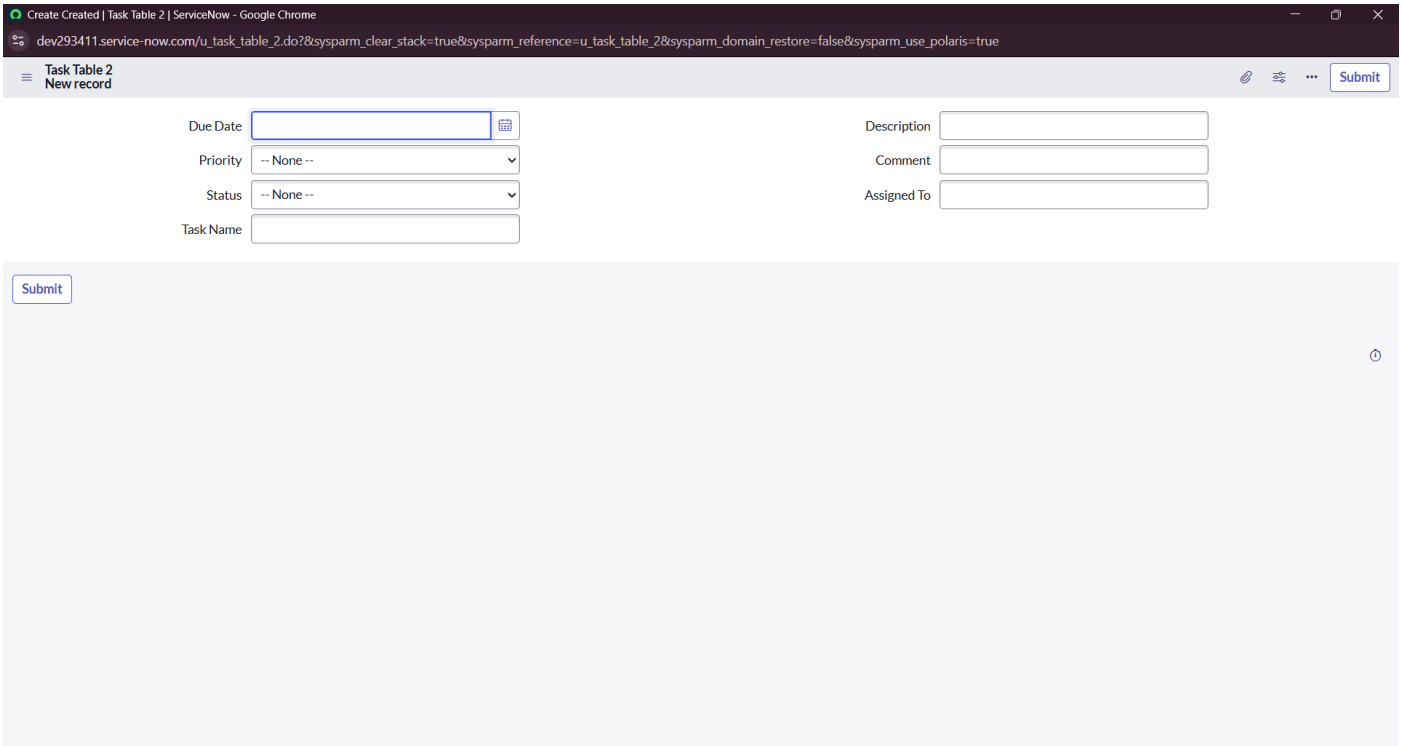


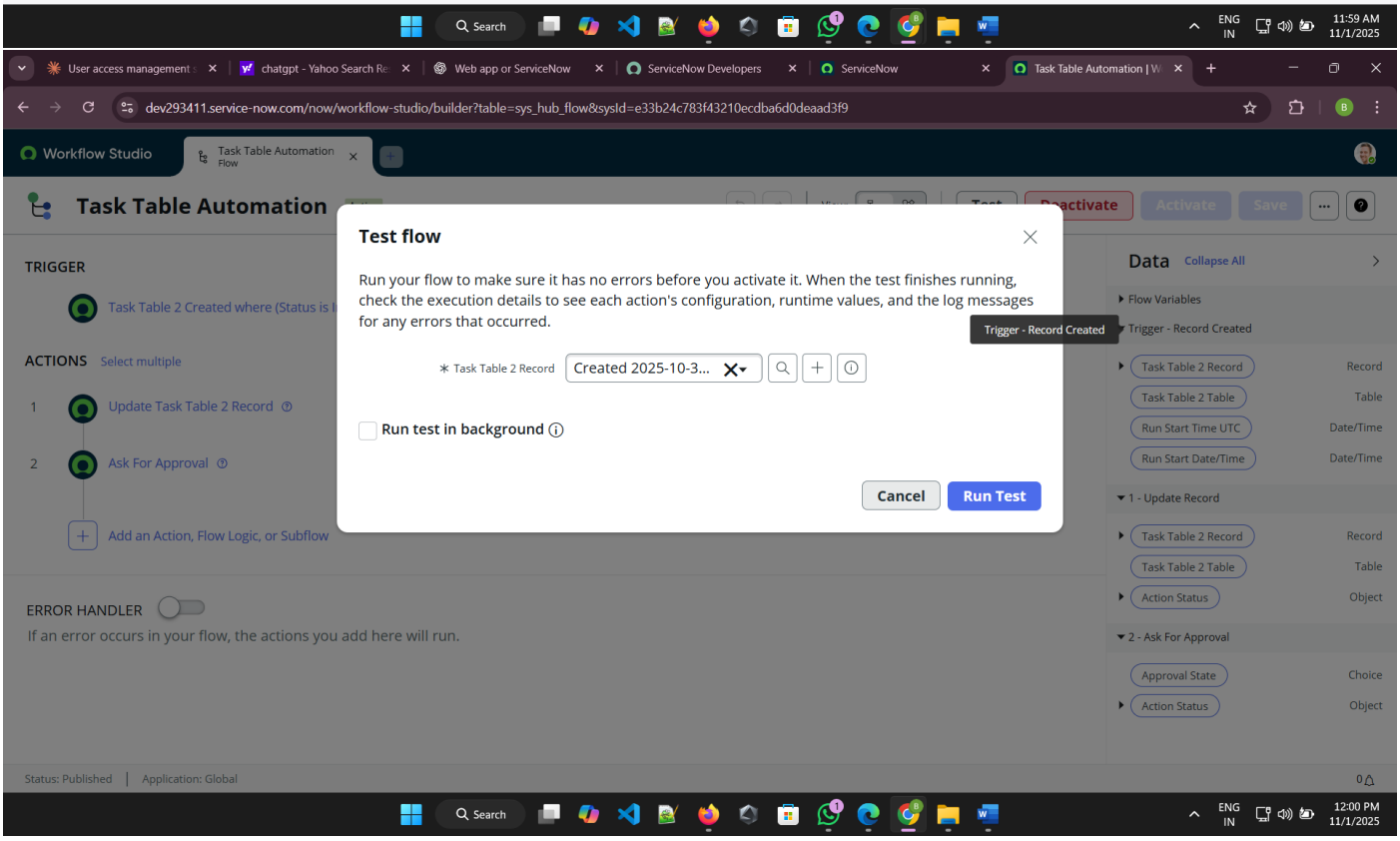

Workflow Studio
Task Table Automation
Active
Test
Deactivate
Activate
Save
2
Ask For Approval
Action
Ask For Approval
Record
Trigger - R... Task Table 2 R...
Table
Task Table 2 [u_task_table_2]
Approval Field
Status
Journal Field
Comment
Rules
Add another OR rule set
Approve
When:
Anyone approves
alice p
OR
AND
Due Date
None
Delete
Cancel
Done
Data
Collapse All
Flow Variables
Trigger - Record Created
Task Table 2 Record
Record
Task Table 2 Table
Table
Run Start Time UTC
Date/Time
Run Start Date/Time
Date/Time
1 - Update Record
Task Table 2 Record
Record
Task Table 2 Table
Table
Action Status
Object
2 - Ask For Approval
Approval State
Choice
Action Status
Object
Status: Published
Application: Global


servicenow
All
Favorites
History
Workspaces
Approvals
Search
Approvals
Created
Search
Actions on selected rows...
All
State
Approver
Comments
Approval for
Created
Requested alice p (empty) 2025-10-30 23:29:19
Requested alice p (empty) 2025-10-30 23:20:19
Requested alice p (empty) 2025-10-30 23:20:19
Approved alice p (empty) 2025-10-30 03:18:23
Approved alice p (empty) 2025-10-30 03:18:21
Approved alice p (empty) 2025-10-30 02:46:26
Approved alice p (empty) 2025-10-30 02:46:23
Approved alice p (empty) 2025-10-30 02:43:12
Approved alice p (empty) 2025-10-30 02:43:03
Approved alice p (empty) 2025-10-30 02:42:32
Approved alice p (empty) 2025-10-30 02:42:25
Approved alice p (empty) 2025-10-30 02:29:24
Approved alice p (empty) 2025-10-30 02:29:21
Approved alice p (empty) 2025-10-30 02:26:23
Approved alice p (empty) 2025-10-30 02:13:10
Approved alice p (empty) 2025-10-30 01:59:21
Approved alice p (empty) 2025-10-30 00:17:23
1 to 20 of 687


servicenow
All
Favorites
History
Workspaces
Approvals
Search
Approval
Task Table 2: Created 2025-10-29 07:32:04
Update
Approve
Reject
Delete
Approver
alice p
State
Requested
Approving
Task Table 2: Created 2025-10-29 07:32:04
Approval for
Comments
Post
Activities: 1
System Administrator
Field changes • 2025-10-30 23:29:19
Approver alice p
State Requested
Update
Approve
Reject
Delete


Workflow Studio
Task Table Automation
Flow
Task Table Automation
Deactivate
Activate
Save
TRIGGER
Task Table 2 Created where (Status is I
ACTIONS
Select multiple
1
Update Task Table 2 Record
2
Ask For Approval
Add an Action, Flow Logic, or Subflow
ERROR HANDLER
If an error occurs in your flow, the actions you add here will run.
Test flow
Run your flow to make sure it has no errors before you activate it. When the test finishes running, check the execution details to see each action's configuration, runtime values, and the log messages for any errors that occurred.
Task Table 2 Record
Select Task Table 2 Rec...
Run test in background
Cancel
Run Test
Data
Collapse All
Flow Variables
Trigger - Record Created
Trigger - Record Created
Task Table 2 Record
Record
Task Table 2 Table
Table
Run Start Time UTC
Date/Time
Run Start Date/Time
Date/Time
1 - Update Record
Task Table 2 Record
Record
Task Table 2 Table
Table
Action Status
Object
2 - Ask For Approval
Approval State
Choice
Action Status
Object
Status: Published
Application: Global


Create Created | Task Table 2 | ServiceNow - Google Chrome
dev293411.service-now.com/u_task_table_2.do?&sysparm_clear_stack=true&sysparm_reference=u_task_table_2&sysparm_domain_restore=false&sysparm_use_polaris=true
Task Table 2
New record
Submit
Due Date
Priority
-- None --
Status
-- None --
Task Name
Description
Comment
Assigned To
Submit


Search
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11/1/2025
User access management
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Web app or ServiceNow
ServiceNow Developers
ServiceNow
Task Table Automation | W
dev293411.service-now.com/now/workflow-studio/builder?table=sys_hub_flow&sysId=e33b24c783f43210ecdba6d0deaad3f9
Workflow Studio
Task Table Automation
Flow
Task Table Automation
Test
Deactivate
Activate
Save
TRIGGER
Task Table 2 Created where (Status is I
ACTIONS
Select multiple
1
Update Task Table 2 Record
2
Ask For Approval
Add an Action, Flow Logic, or Subflow
ERROR HANDLER
If an error occurs in your flow, the actions you add here will run.
Test flow
Run your flow to make sure it has no errors before you activate it. When the test finishes running, check the execution details to see each action's configuration, runtime values, and the log messages for any errors that occurred.
* Task Table 2 Record
Created 2025-10-3...
Run test in background
Cancel
Run Test
Data
Collapse All
Flow Variables
Trigger - Record Created
Trigger - Record Created
Task Table 2 Record
Record
Task Table 2 Table
Table
Run Start Time UTC
Date/Time
Run Start Date/Time
Date/Time
1 - Update Record
Task Table 2 Record
Record
Task Table 2 Table
Table
Action Status
Object
2 - Ask For Approval
Approval State
Choice
Action Status
Object
Status: Published
Application: Global
Search
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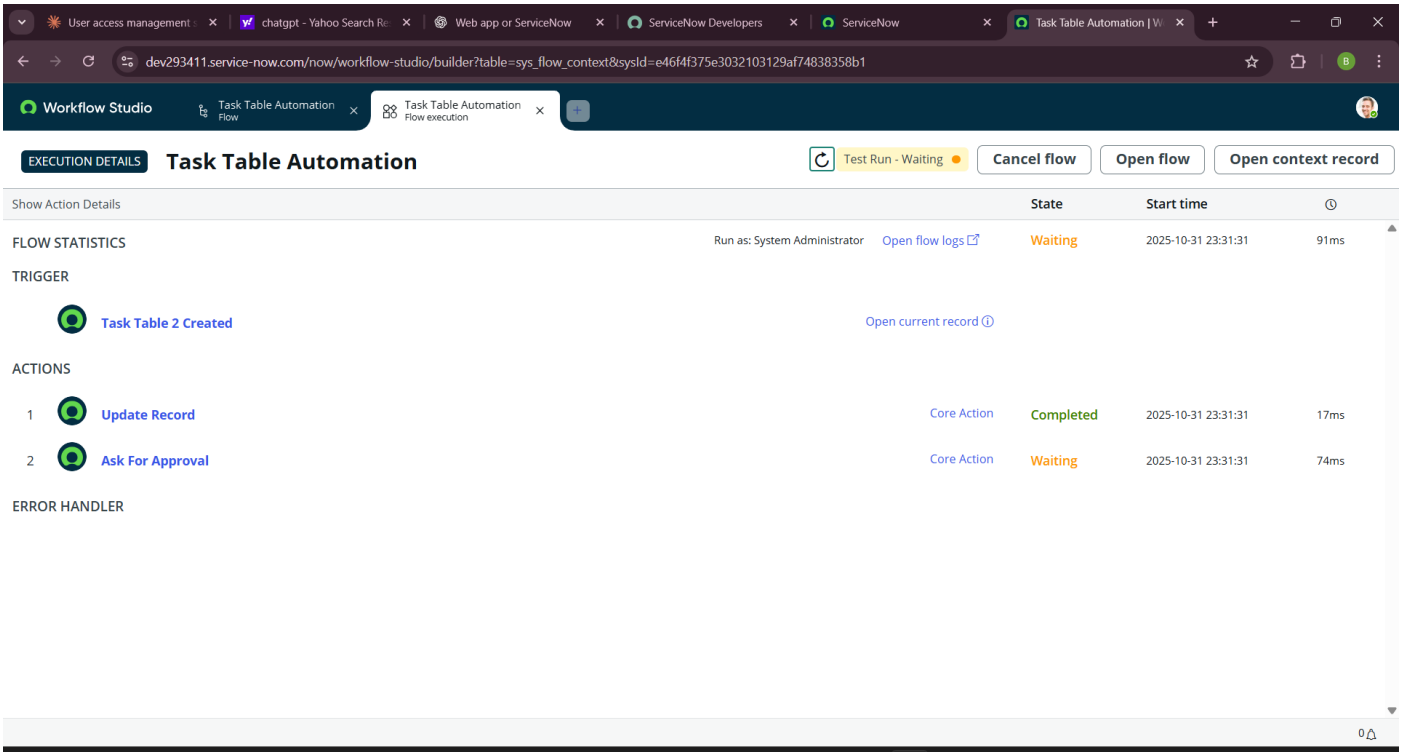
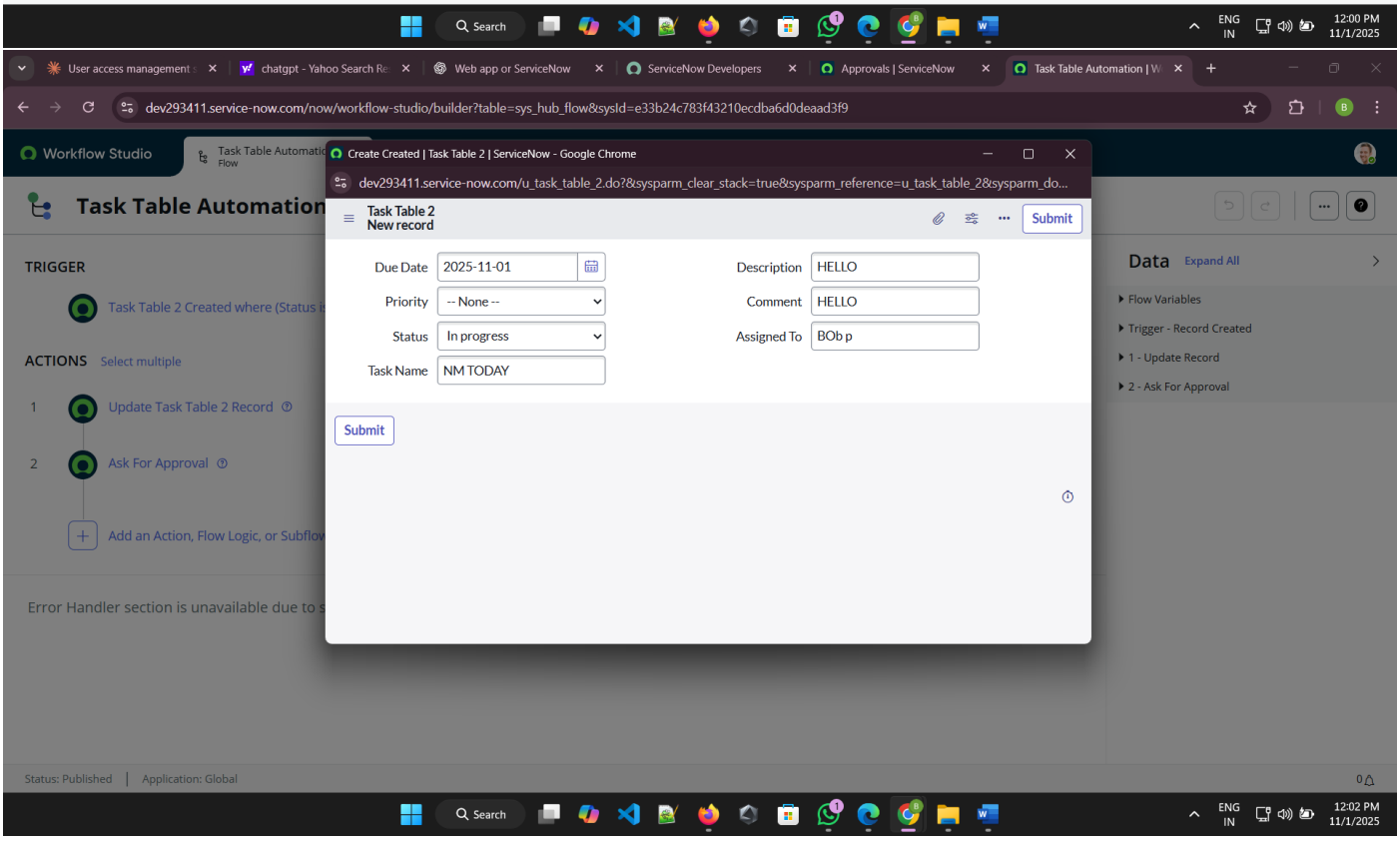
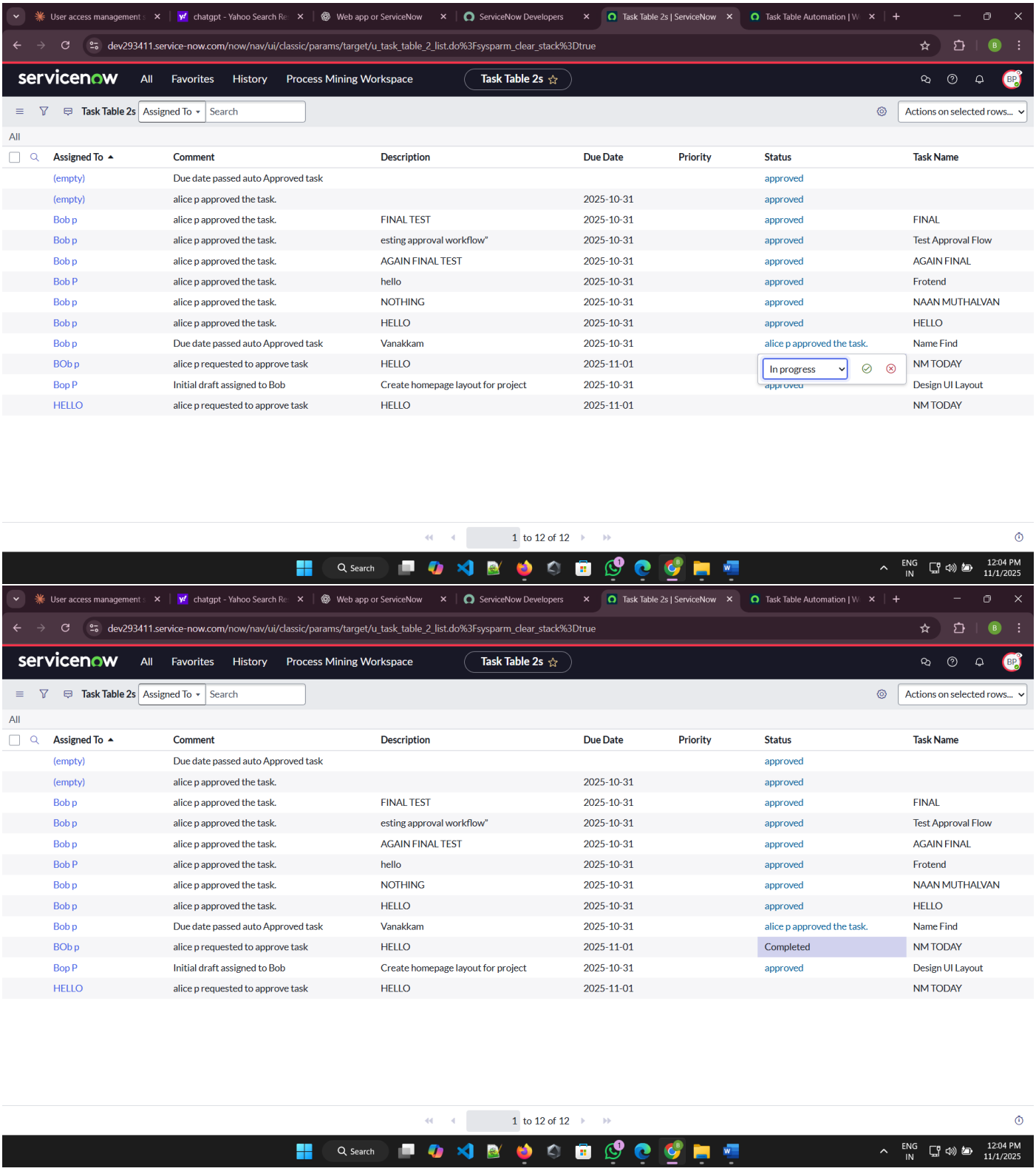

Workflow Studio
Task Table Automation
Flow
Task Table Automation
Flow execution
EXECUTION DETAILS
Task Table Automation
Test Run - Waiting
Cancel flow
Open flow
Open context record
Show Action Details
State
Start time
FLOW STATISTICS
Run as: System Administrator
Open flow logs
Waiting
2025-10-31 23:31:31
91ms
TRIGGER
Task Table 2 Created
Open current record
ACTIONS
1
Update Record
Core Action
Completed
2025-10-31 23:31:31
17ms
2
Ask For Approval
Core Action
Waiting
2025-10-31 23:31:31
74ms
ERROR HANDLER


Workflow Studio
Task Table Automation
Flow
Create Created | Task Table 2 | ServiceNow - Google Chrome
Task Table 2
New record
Submit
Due Date
2025-11-01
Priority
-- None --
Status
In progress
Task Name
NM TODAY
Description
HELLO
Comment
HELLO
Assigned To
BOb p
Submit
Task Table Automation
TRIGGER
ACTIONS
Select multiple
1
Update Task Table 2 Record
2
Ask For Approval
Add an Action, Flow Logic, or Subflow
Error Handler section is unavailable due to s
Data
Expand All
Flow Variables
Trigger - Record Created
1 - Update Record
2 - Ask For Approval
Status: Published
Application: Global


User access management
chatgpt - Yahoo Search Re
Web app or ServiceNow
ServiceNow Developers
Task Table 2s | ServiceNow
Task Table Automation | W
dev293411.service-now.com/now/nav/ui/classic/params/target/u_task_table_2_list.do%3Fsysparm_clear_stack%3Dtrue
servicenow
All
Favorites
History
Process Mining Workspace
Task Table 2s
Task Table 2s
Assigned To
Search
Actions on selected rows...
All
Assigned To
Comment
Description
Due Date
Priority
Status
Task Name
(empty) Due date passed auto Approved task approved
(empty) alice p approved the task. 2025-10-31 approved
Bob p alice p approved the task. FINAL TEST 2025-10-31 approved FINAL
Bob p alice p approved the task. esting approval workflow" 2025-10-31 approved Test Approval Flow
Bob p alice p approved the task. AGAIN FINAL TEST 2025-10-31 approved AGAIN FINAL
Bob P alice p approved the task. hello 2025-10-31 approved Frotend
Bob p alice p approved the task. NOTHING 2025-10-31 approved NAAN MUTHALVAN
Bob p alice p approved the task. HELLO 2025-10-31 approved HELLO
Bob p Due date passed auto Approved task Vanakkam 2025-10-31 alice p approved the task. Name Find
BOb p alice p requested to approve task HELLO 2025-11-01 In progress NM TODAY
Bop P Initial draft assigned to Bob Create homepage layout for project 2025-10-31 Design UI Layout
HELLO alice p requested to approve task HELLO 2025-11-01 NM TODAY
1 to 12 of 12
Search
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User access management
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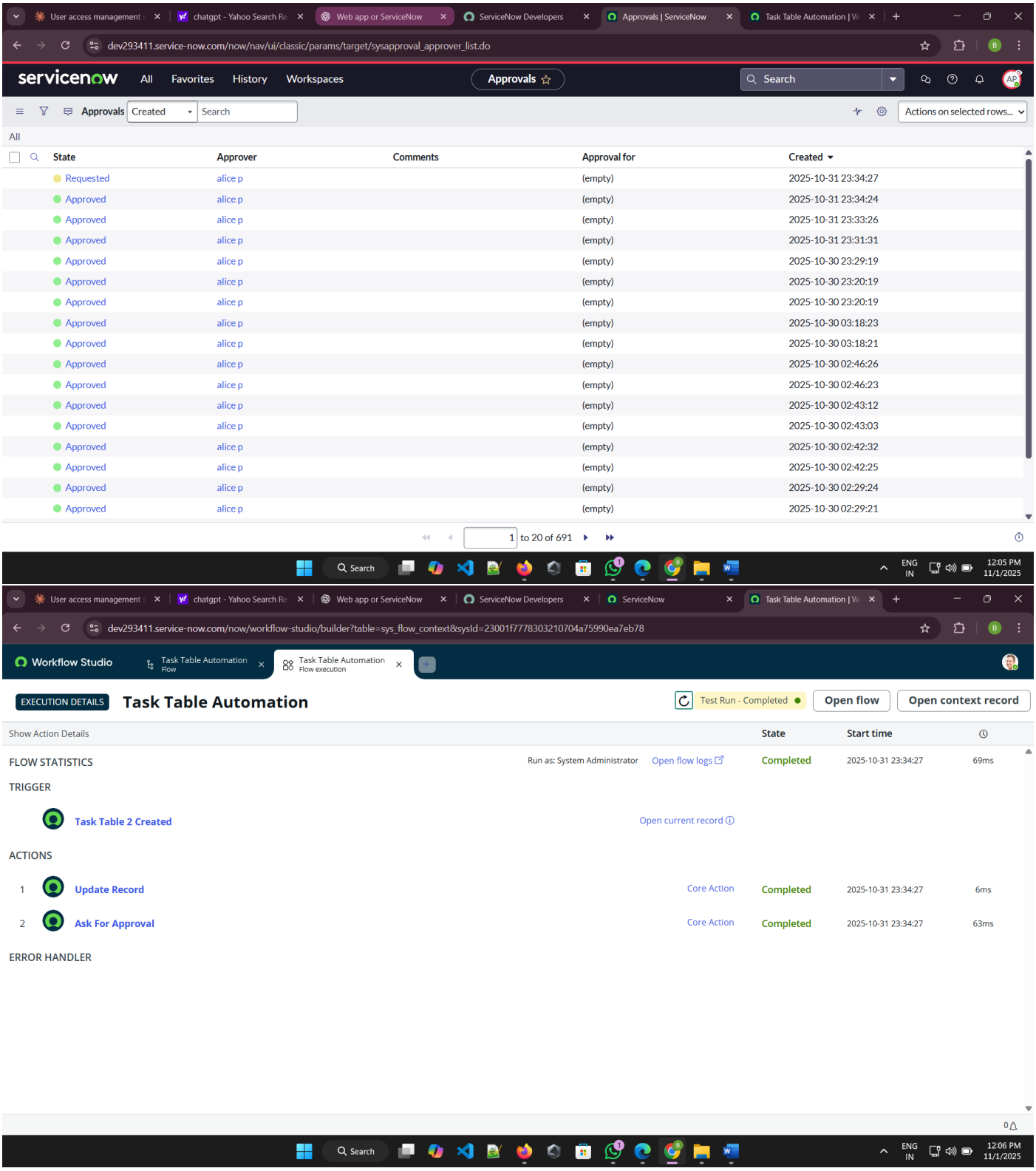
Web app or ServiceNow
ServiceNow Developers
Task Table 2s | ServiceNow
Task Table Automation | W
dev293411.service-now.com/now/nav/ui/classic/params/target/u_task_table_2_list.do%3Fsysparm_clear_stack%3Dtrue
servicenow
All
Favorites
History
Process Mining Workspace
Task Table 2s
Task Table 2s
Assigned To
Search
Actions on selected rows...
All
Assigned To
Comment
Description
Due Date
Priority
Status
Task Name
(empty) Due date passed auto Approved task approved
(empty) alice p approved the task. 2025-10-31 approved
Bob p alice p approved the task. FINAL TEST 2025-10-31 approved FINAL
Bob p alice p approved the task. esting approval workflow" 2025-10-31 approved Test Approval Flow
Bob p alice p approved the task. AGAIN FINAL TEST 2025-10-31 approved AGAIN FINAL
Bob P alice p approved the task. hello 2025-10-31 approved Frotend
Bob p alice p approved the task. NOTHING 2025-10-31 approved NAAN MUTHALVAN
Bob p alice p approved the task. HELLO 2025-10-31 approved HELLO
Bob p Due date passed auto Approved task Vanakkam 2025-10-31 alice p approved the task. Name Find
BOb p alice p requested to approve task HELLO 2025-11-01 Completed NM TODAY
Bop P Initial draft assigned to Bob Create homepage layout for project 2025-10-31 approved Design UI Layout
HELLO alice p requested to approve task HELLO 2025-11-01 NM TODAY
1 to 12 of 12
Search
ENG IN
12:04 PM 11/1/2025



Suggested screenshot:

- A table showing FR1–FR9 and NFR1–NFR7 mapped to "Test ID" or "Flow Step".
- Example:
    - FR5 → “Flow Trigger: Record Created/Updated”
    - FR6 → “Ask for Approval (Alice)”
    - FR7 → “My Approvals → Approved → Flow Complete”

6. Traceability

Requirement	Implementation Component	Verification
FR1–FR3	User & Role Module	Check users/roles under System Security
FR4	ACL Configuration	Impersonate Bob and validate restricted fields
FR5–FR6	Flow Designer	View execution logs
FR7–FR8	My Approvals Module	Alice's approval visible
FR9	Table Data	u_task_table_2 records persist correctly
NFR2–NFR7	ServiceNow System Logs	Verify via audit and response times

7. Conclusion

The requirement analysis confirms that the system must focus on *role-based task management, secure access, and automated workflows*.
ServiceNow's native ACLs, Flow Designer, and Approval engine fully meet these needs.
This foundation ensures accurate task tracking, efficient approvals, and minimal administrative overhead.