

OPTIMISING USER, GROUP, AND ROLE MANAGEMENT WITH ACCESS CONTROL AND WORKFLOWS

TEAM ID : NM2025TMID12910

TEAM SIZE : 4

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OPTIMISING USER, GROUP, AND ROLE MANAGEMENT WITH ACCESS CONTROL AND WORKFLOWS

Effective management of users, groups, and roles is critical for ensuring security, compliance, and operational efficiency in any organisation. By implementing optimised access control policies and well-defined workflows, businesses can reduce risks, streamline operations, and ensure that employees have the right level of access to the right resources at the right time

The screenshot displays the 'Smart Internz' Student Project Workspace. The browser address bar shows the URL: `naamudhavan.smartinternz.com/Student/guided_project_workspace/32256`. The interface includes a sidebar with 'Home', 'Projects', and 'Support' links. The main content area is titled 'Project Workspace' and shows project details for 'Optimizing User, Group, and Role Management with Access Control and Workflows'. The project progress is indicated as 90.00%. Below the project details, there is a 'GENERAL INSTRUCTION' section with a 'SHOW' button. Further down, there are buttons for 'Demo Link', 'View Mentor Comments', and 'View Industry Mentor Comments'. The bottom section is divided into three tabs: 'PROJECT DETAILS', 'TASK & PROGRESS', and 'MENTOR REVIEW'. The 'PROJECT DETAILS' tab is active, showing the project title, category, skills required, and a problem statement.

Project Details:

- Project Title: Optimizing User, Group, and Role Management with Access Control and Workflows
- NM Id: 409D5D9B131B004B414E10E9620C211
- Industry Mentor(s) Name: No Mentor has been assigned

Project Progress: 90.00%

GENERAL INSTRUCTION: SHOW

Buttons: Demo Link, View Mentor Comments, View Industry Mentor Comments

Project Details:

- Optimizing User, Group, And Role Management With Access Control And Workflows

Task & Progress: INTERMEDIATE

Mentor Review:

Category: ServiceNow System Administrator

Skills Required: Tensorflow, Oracle DB

Project Description:

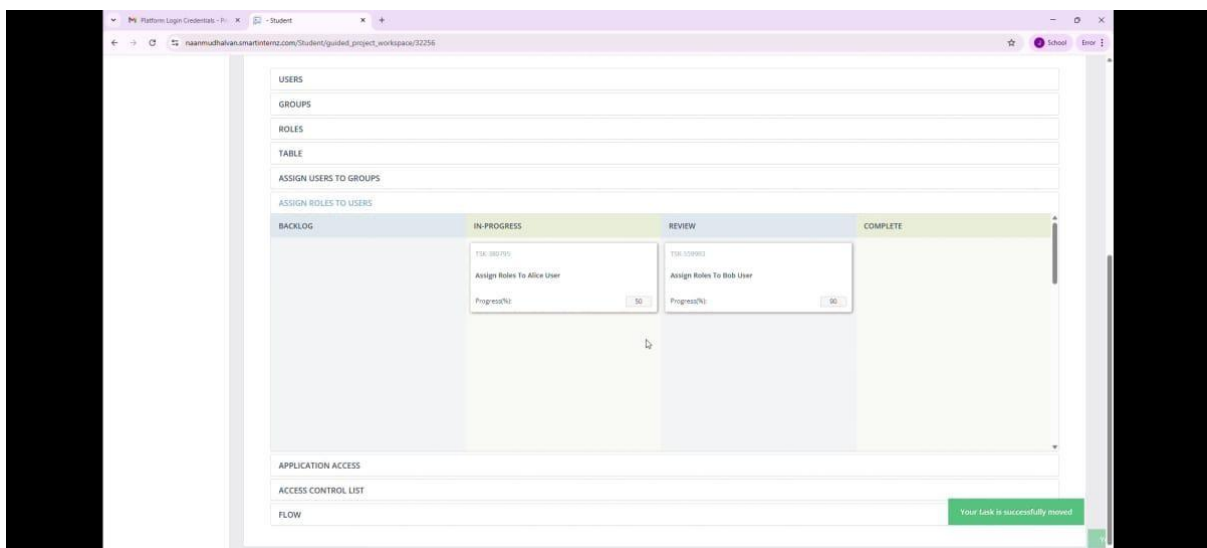
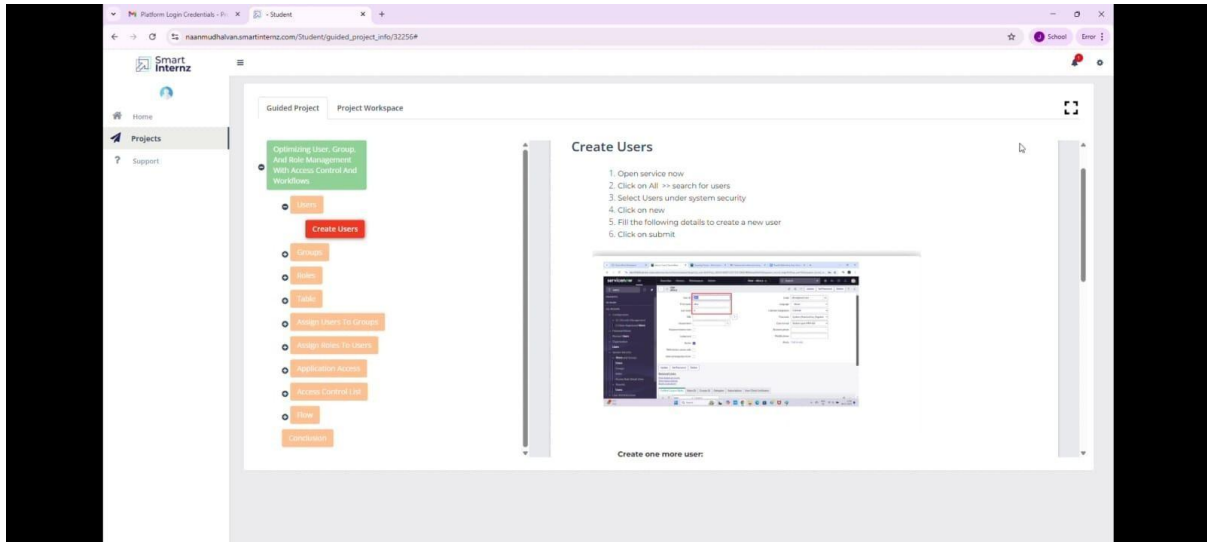
Problem Statement:

In a small project management team consisting of a Project Manager (Alice) and a Team Member (Bob), there is a need to efficiently manage project tasks and ensure accountability throughout the project lifecycle. The current system lacks clear role definitions, access controls, and a structured workflow, leading to confusion regarding task assignments and progress tracking.

1. USER MANAGEMENT

User management involves creating, updating, and maintaining individual user accounts within an organisation's IT systems. Optimisation in user management includes:

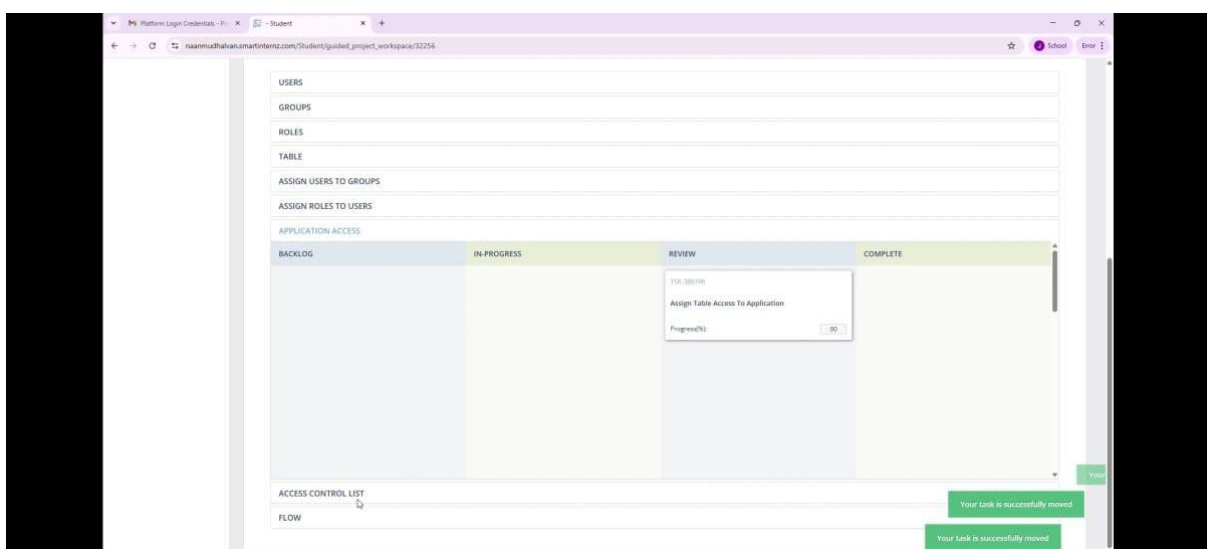
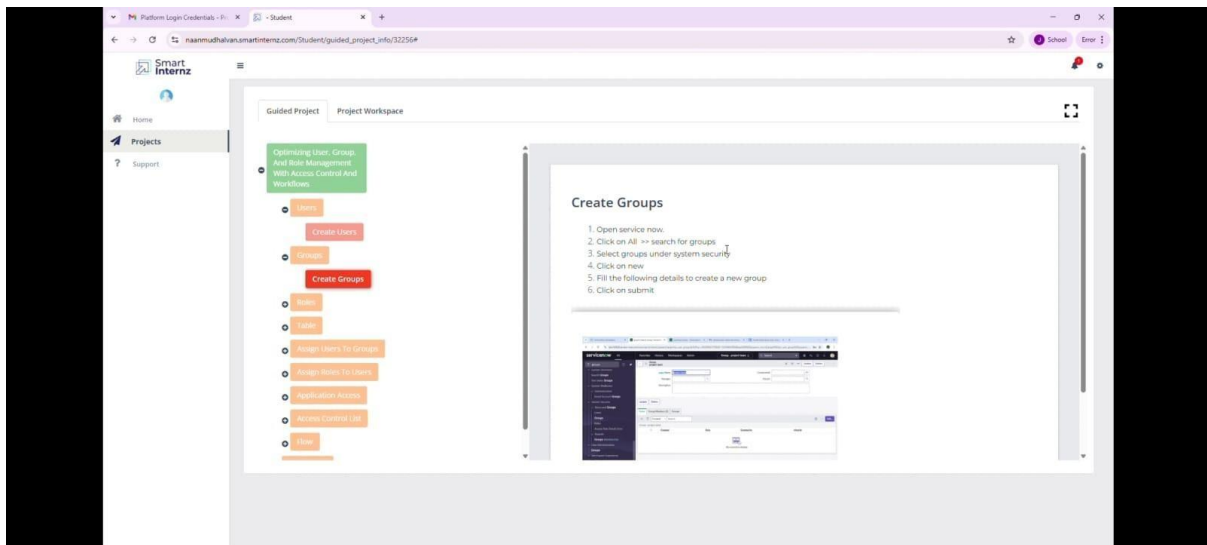
- Automating user provisioning and de-provisioning.
- Implementing self-service password reset mechanisms.
- Enforcing strong authentication methods (e.g., multi-factor authentication).
- Regular audits to review and update user accounts.



2. GROUP MANAGEMENT

Group management simplifies administration by assigning permissions and policies to a collection of users rather than managing them individually. Key optimisation practices include:

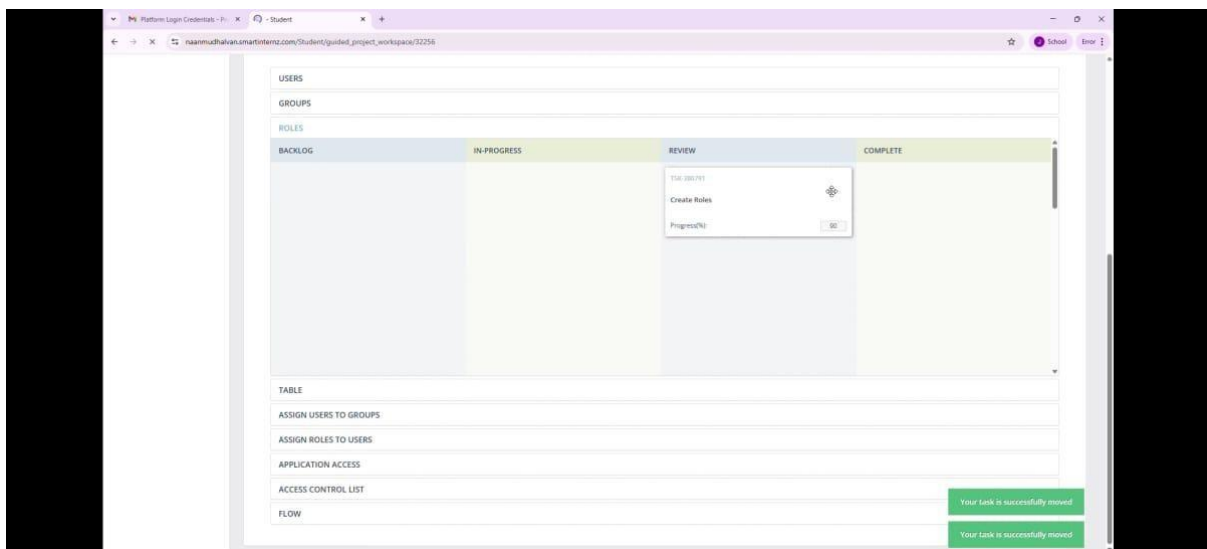
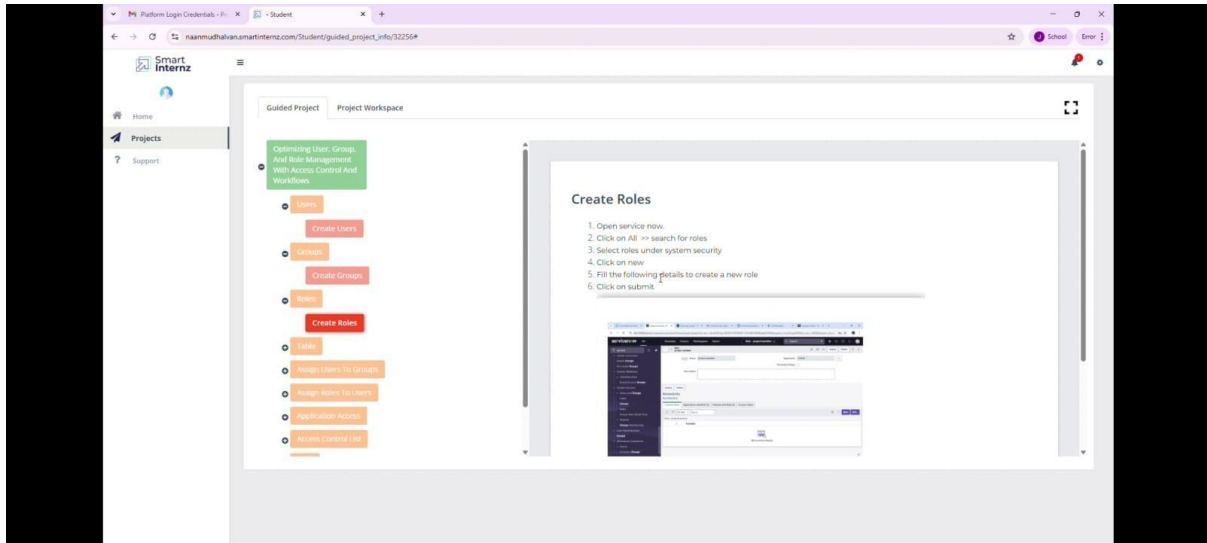
- Creating groups based on job functions or departments.
- Applying role-based access controls (RBAC) through groups.
- Automating group membership through directory services.
- Regularly reviewing group memberships for accuracy.



3. ROLE MANAGEMENT

Role management ensures that access rights are tied to job responsibilities rather than individuals. This reduces administrative overhead and strengthens security. Best practices include:

- Defining roles clearly based on business functions.
- Assigning least privilege permissions to roles.
- Using role hierarchies to manage complex organisational structures.
- Periodic review and adjustment of roles to align with business changes.

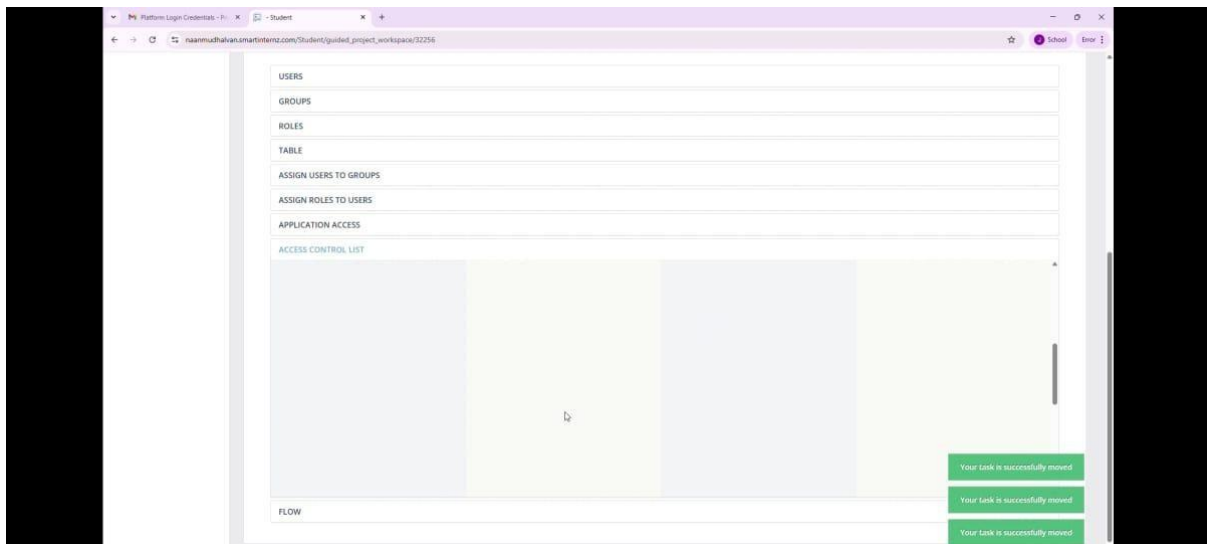
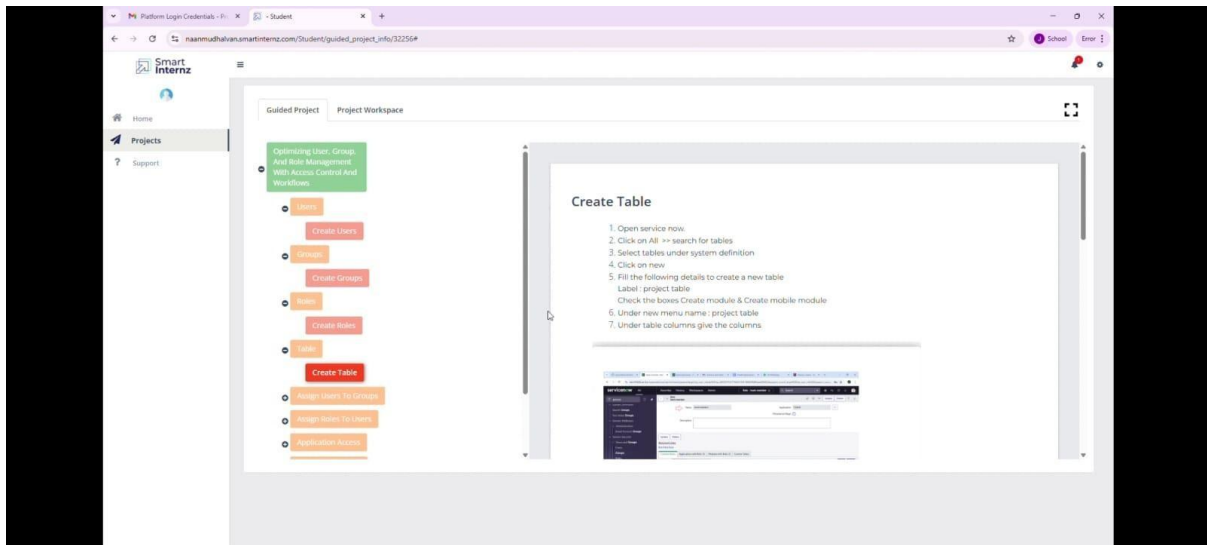


4. ACCESS CONTROL

Access control defines how resources are accessed and by whom.

Optimisation strategies include:

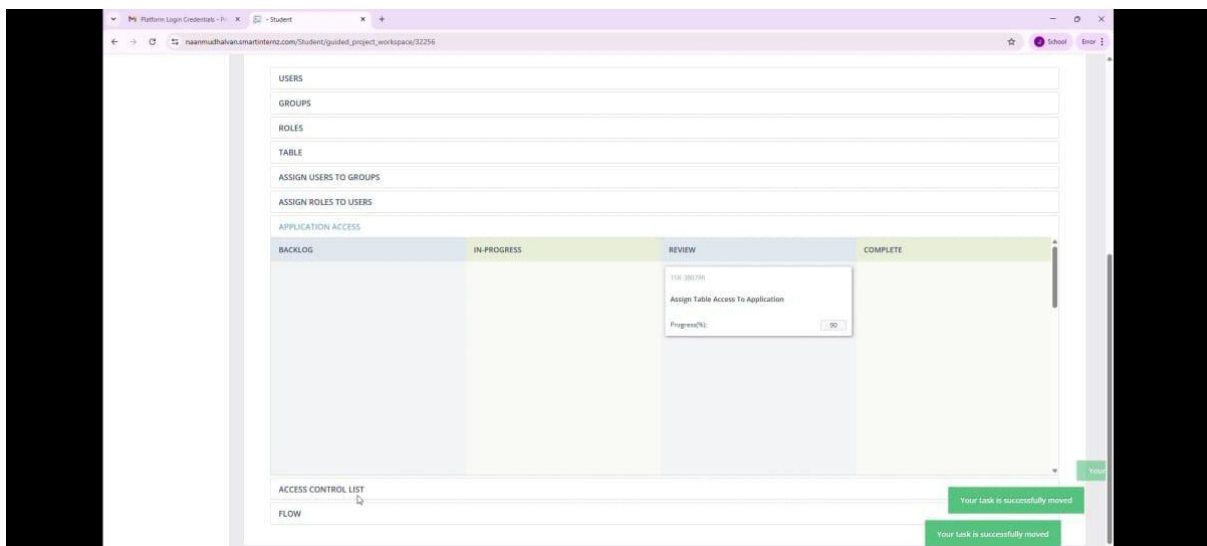
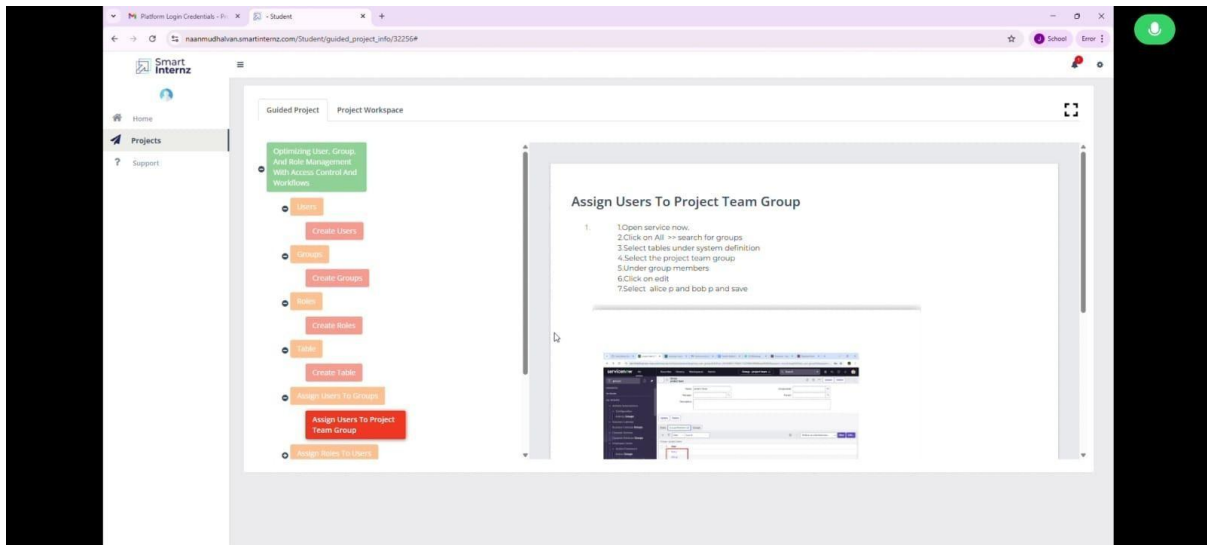
- Implementing Role-Based Access Control (RBAC) or Attribute-Based Access Control (ABAC).
- Using the principle of least privilege to limit access.
- Implementing Just-in-Time (JIT) access for sensitive systems. - Monitoring access logs to detect anomalies.



5. WORKFLOWS

Workflows ensure that user and access management processes are automated, standardised, and auditable. Key workflow optimisations include:

- Automating approval processes for access requests.
- Integrating workflows with HR systems for employee lifecycle management.
- Ensuring compliance with regulatory requirements through approval chains.
- Enabling audit trails for all user and access management activities.



CONCLUSION

Optimising user, group, and role management with effective access control and workflows enhances both security and efficiency within organisations. By adopting automation, strong access policies, and continuous monitoring, businesses can protect sensitive data, reduce operational risks, and support compliance requirements.