

**INSTITUTE OF COMPUTER TECHNOLOGY**  
**B-TECH COMPUTER SCIENCE ENGINEERING 2025-26**  
**SUBJECT: IDENTITY ACCESS MANAGEMENT**

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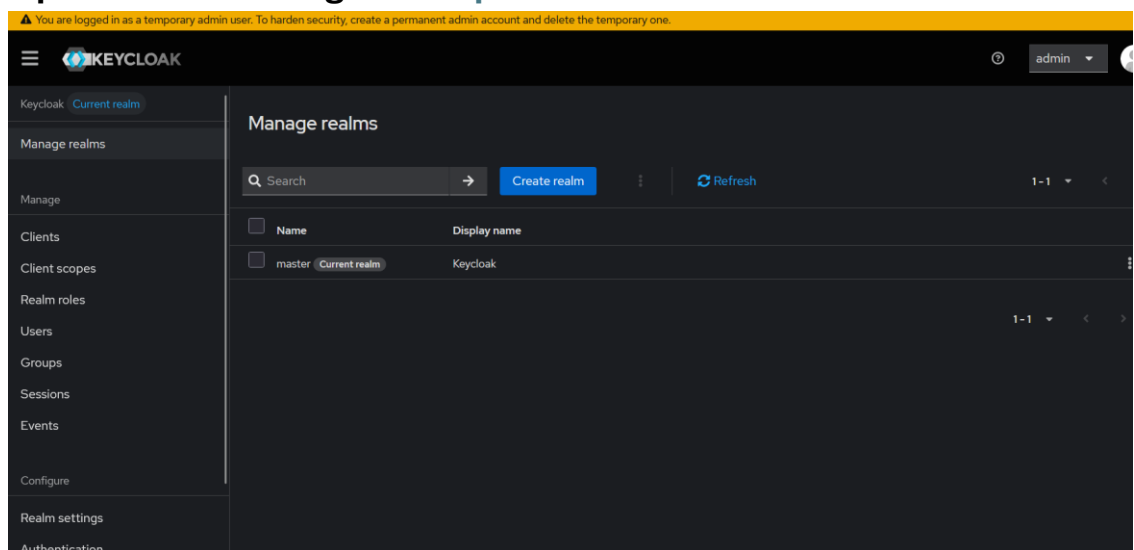
BRANCH: CYBER SECURITY

BATCH: 52

**Lab 5: Realm Management and Client Management**

**STEP\_1:Start Container**

- ➔ Open docker desktop.
- ➔ Start container.
- ➔ Open browser and go to: <http://localhost.com:8080>



**STEP\_2:Create Realm**

- ➔ Login as admin.
- ➔ Go to manage realm → create realm.
- ➔ Enter realm name and Save.

## Create realm

A realm manages a set of users, credentials, roles, and groups. A user belongs to and logs into a realm. Realms are isolated from one another and can only manage and authenticate the users that they control.

Resource file

Drag a file here or browse to upload

Browse...Clear

Upload a JSON file

Realm name \*

my\_realm

Enabled

☒ On

Create

Cancel

### STEP\_3:Create Client

- ➔ Navigate to clients ➔ create client.
- ➔ Configure authentication,redirect URLs and Save.

1 General settings

2 Capability config

3 Login settings

Client type ⓘ

OpenID Connect

Client ID \* ⓘ

my\_app\_1

Name ⓘ

rahul

Description ⓘ

Always display in UI ⓘ

☐ Off

Back

Next

Cancel

### STEP\_4:Create Client Role

- ➔ Go to the create client ➔roles
- ➔ Create a role with name & description

Clients > Client details > Role details

## manager

Details

Associated roles

Attributes

Users in role

Admin events

Role name

manager

Description

developer team's manager

Save

Cancel

## Step\_5:Assign Client Role

- ➔ Go to Users ➔ Role Mappings.
- ➔ Assign the client role to user.

Assign Client roles to rahulbhai

<input type="checkbox"/>	delete-account	account	role_delete-account
<input type="checkbox"/>	manage-account	account	role_manage-account
<input type="checkbox"/>	manage-account-links	account	role_manage-account-links
<input type="checkbox"/>	manage-consent	account	role_manage-consent
<input type="checkbox"/>	view-applications	account	role_view-applications
<input type="checkbox"/>	view-consent	account	role_view-consent
<input type="checkbox"/>	view-groups	account	role_view-groups
<input type="checkbox"/>	view-profile	account	role_view-profile
<input type="checkbox"/>	read-token	broker	role_read-token
<input checked="" type="checkbox"/>	manager	my_app_1	developer team's manager

1 - 10

<

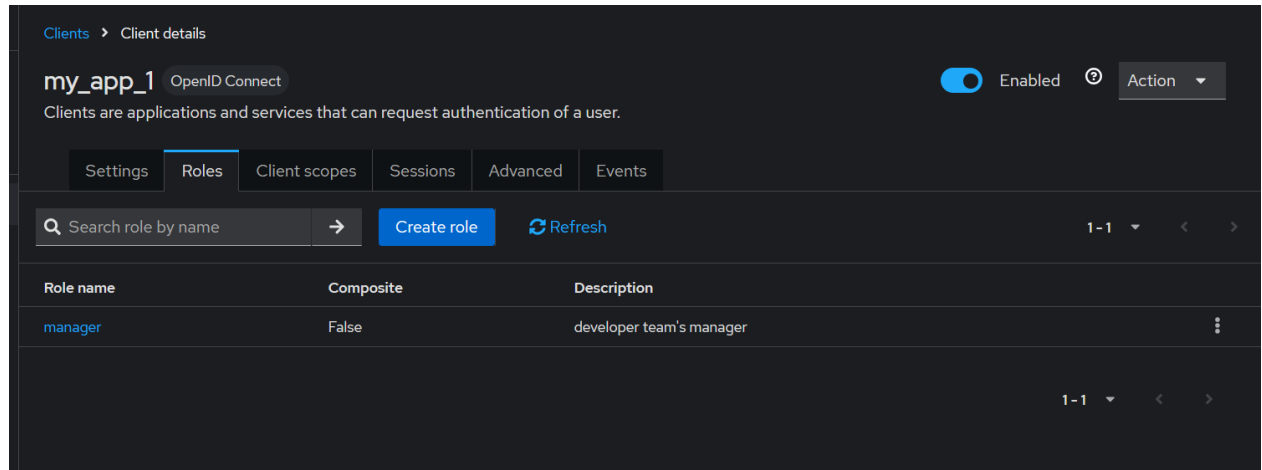
>

Assign

Cancel

## STEP\_6:Verify Assigned Roles

- ➔ Go to clients → Roles → Users in role.
- ➔ Check assigned user.



## Explanation of Commands/Steps

**Realm** – A space where you can manage users, roles, and applications.

**Client** – An app or service that uses Keycloak for login and access.

**Client Role** – A role that belongs to a specific client (app/service).

**Role Mapping** – Connecting a user to a role so they have certain permissions.

## Conclusion

In this lab, we did the following:

- Launched a Keycloak container using Docker.
- Created a Realm to manage user access and permissions.
- Set up a Client (app/service) to handle authentication.
- Created and assigned a role to the client.
- Checked that users and roles were linked properly.