

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

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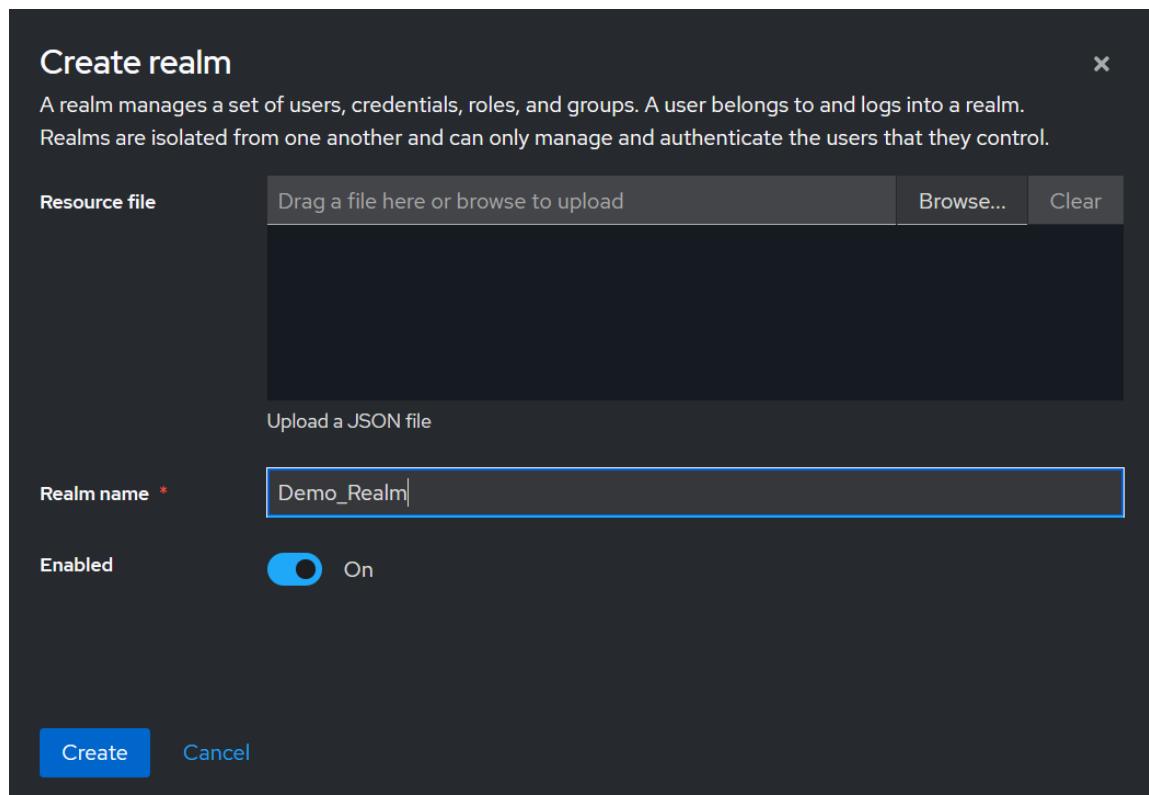
BRANCH: CYBER SECURITY

BATCH: 52

Internal Practical Exam Sep-2025

STEP_1:Create Demo Realm

- Go to manage realms.
- Click on create realm.
- Enter Realm Name ‘Demo_Realm’



The screenshot shows a 'Create realm' dialog box. At the top, it says 'Create realm'. Below that, a descriptive text states: '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.' On the left, there's a 'Resource file' section with a placeholder 'Drag a file here or browse to upload' and buttons for 'Browse...' and 'Clear'. In the center, there's a field labeled 'Realm name *' containing 'Demo_Realm'. Below it, there's a 'Enabled' switch set to 'On'. At the bottom, there are 'Create' and 'Cancel' buttons.

STEP_2:Role Creation

- Go to realm roles.
- Click on 'create role'.
- Enter role name and description.

The screenshot shows a 'Create role' form. At the top, it says 'Realm roles > Create role'. Below that is the title 'Create role'. There are two input fields: 'Role name *' which contains 'IT', and 'Description' which contains 'Development team'. At the bottom are two buttons: a blue 'Save' button and a white 'Cancel' button.

STEP_3:User creation

- Go to users.
- Click on 'create new user'
- Enter username and save.
 - Similarly create all 3 users.

The screenshot shows a 'Create user' form. At the top, it says 'Users > Create user'. Below that is the title 'Create user'. There are several input fields: 'Required user actions' with a 'Select action' dropdown, 'Email verified' with a toggle switch set to 'Off', and sections for 'General', 'Email', 'First name', and 'Last name'. The 'Username' field contains 'IT', 'Email' is empty, 'First name' contains 'Vraj', and 'Last name' contains 'Patel'. At the bottom are two buttons: a blue 'Create' button and a white 'Cancel' button.

STEP_4:Assign roles

- ➔ Go to Realm roles.
- ➔ Navigate to associate roles.
- ➔ Click on 'assign role' and then 'client roles'.

Assign Client roles to HR

realm-management	role_manage-realm
<input checked="" type="checkbox"/> manage-users	realm-management
<input type="checkbox"/> query-clients	realm-management
<input type="checkbox"/> query-groups	realm-management
<input type="checkbox"/> query-realms	realm-management
<input type="checkbox"/> query-users	realm-management
<input type="checkbox"/> realm-admin	realm-management
<input type="checkbox"/> view-authorization	realm-management
<input type="checkbox"/> view-clients	realm-management
<input type="checkbox"/> view-events	realm-management
<input type="checkbox"/> view-identity-providers	realm-management
<input type="checkbox"/> view-realm	realm-management
<input checked="" type="checkbox"/> view-users	realm-management

Assign Cancel

Assign Client roles to IT

realm-management	role_manage-realm
<input type="checkbox"/> query-clients	realm-management
<input type="checkbox"/> query-groups	realm-management
<input type="checkbox"/> query-realms	realm-management
<input type="checkbox"/> query-users	realm-management
<input type="checkbox"/> realm-admin	realm-management
<input type="checkbox"/> view-authorization	realm-management
<input type="checkbox"/> view-clients	realm-management
<input checked="" type="checkbox"/> view-events	realm-management
<input type="checkbox"/> view-identity-providers	realm-management
<input type="checkbox"/> view-realm	realm-management
<input type="checkbox"/> view-users	realm-management

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Assign Cancel

Assign Client roles to Sales		
<input type="checkbox"/> view-profile	account	role_view-profile
<input type="checkbox"/> read-token	broker	role_read-token
<input checked="" type="checkbox"/> create-client	realm-management	role_create-client
<input type="checkbox"/> impersonation	realm-management	role_impersonation
<input type="checkbox"/> manage-authorization	realm-management	role_manage-authorization
<input type="checkbox"/> manage-clients	realm-management	role_manage-clients
<input type="checkbox"/> manage-events	realm-management	role_manage-events
<input type="checkbox"/> manage-identity-providers	realm-management	role_manage-identity-providers
<input type="checkbox"/> manage-realm	realm-management	role_manage-realm
<input type="checkbox"/> manage-users	realm-management	role_manage-users
<input type="checkbox"/> query-clients	realm-management	role_query-clients
<input type="checkbox"/> query-groups	realm-management	role_query-groups
<input type="checkbox"/> query-realms	realm-management	role_query-realms
<input type="checkbox"/> query-users	realm-management	role_query-users

Assign **Cancel**

STEP_5:

- Go to users and select any user.
- In user's page click on impersonate.
- As admin ,he is logged in as a that user.

You are logged in as a temporary admin user. To harden security, create a permanent admin account and delete the temporary one.

KEYCLOAK

Demo_Realm Current realm

Manage realms

Clients

Realm roles

Users

Groups

Sessions

Events

Configure

Realm settings

Authentication

Identity providers

User federation

Users > User details

hr_user

ID: 46dc8b04-2316-4fab-b51e-63c8213c3ffb

Created at: 9/15/2025, 12:01:24 PM

Required user actions: Select action

Email verified: Off

General

Username: hr_user

Email:

Enabled: Enabled

Action: Action ▾

Impersonate

Delete

Users > User details

hr_user

ID: 46dc8b04-2316-4fab-b51e-63c8213c3ffb

Created at: 9/15/2025, 12:01:24 PM

Required user actions: Select

Email verified: Off

General

Username: hr_user

Email:

Enabled: Enabled

Action: Action ▾

Impersonate

Delete

Impersonate user?

Are you sure you want to log in as this user? If this user is in the same realm with you, your current login session will be logged out before you log in as this user.

Impersonate Cancel

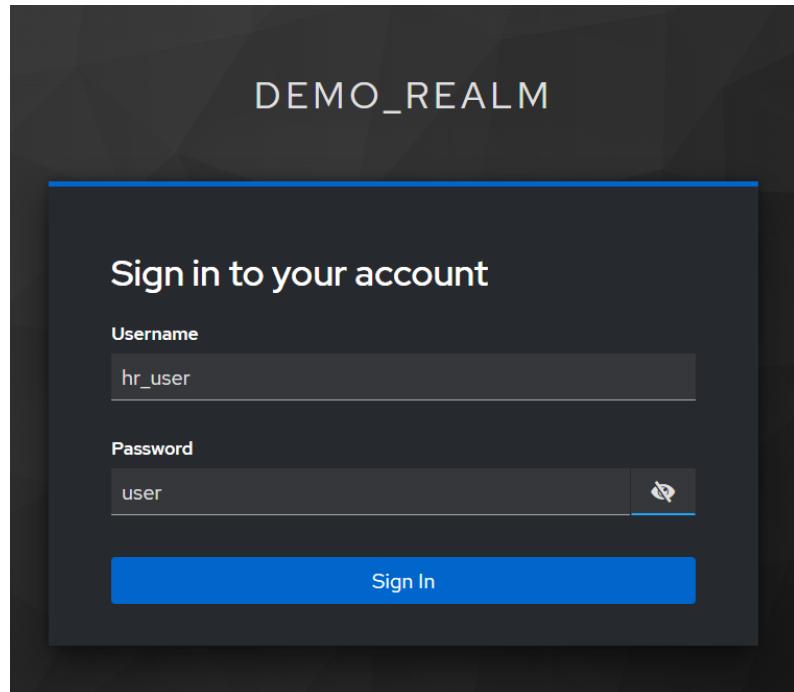
The screenshot shows the 'Personal info' section of the Keycloak interface. On the left, a sidebar has 'Personal info' selected. The main area is titled 'Personal info' with the subtitle 'Manage your basic information'. It shows the following fields:

- General** (selected via a blue vertical bar)
- Username**: hr_user
- Email**: jaymataj@gmail.com
- First name**: Rahul
- Last name**: Prajapati

At the bottom are 'Save' and 'Cancel' buttons.

STEP_6:Login users

- Open browser and go to 'http://localhost:8080/realmms/demo_realm/account'
- Login in as each users hr_user,it_user,sales_user using their credentials.



KEYCLOAK

Rahul Prajapati

Personal info

Manage your basic information

General

Jump to section

Username * hr_user

Email * jaymataji@gmail.com

First name * Rahul

Last name * Prajapati

Save Cancel

KEYCLOAK

Vraj Patel

Personal info

Manage your basic information

General

Jump to section

Username * it_user

Email * rahul2100007@gmail.com

First name * Vraj

Last name * Patel

Save Cancel

KEYCLOAK

Krish Patel

Personal info

Manage your basic information

General

Jump to section

Username * sales_user

Email * krish23@gmail.com

First name * Krish

Last name * Patel

Save Cancel

STEP_7:session manage.

→ In admin console and navigate to sessions.

The screenshot shows the Keycloak Admin Console interface. The left sidebar has a dark theme with white text and icons. The 'Sessions' option is selected under the 'Manage' section. The main content area is titled 'Sessions' and contains a table with the following data:

User	Type	Started	Last access	IP address	Clients
hr_user	REGULAR	9/15/2025, 12:27:56 PM	9/15/2025, 12:34:31 PM	172.17.0.1	account-console
sales_user	REGULAR	9/15/2025, 12:40:35 PM	9/15/2025, 12:40:36 PM	172.17.0.1	account-console
it_user	REGULAR	9/15/2025, 12:39:14 PM	9/15/2025, 12:39:14 PM	172.17.0.1	account-console
hr_user	REGULAR	9/15/2025, 12:35:34 PM	9/15/2025, 12:37:43 PM	172.17.0.1	account-console

→ Go to users and we can see particular users session.

The screenshot shows the 'User details' page for the user 'hr_user'. The left sidebar shows 'hr_user' is selected under the 'Users' section. The main content area shows the user's details and session information. The session table shows two entries:

Started	Last access	IP address	Clients
9/15/2025, 12:27:56 PM	9/15/2025, 12:34:31 PM	172.17.0.1	account-console
9/15/2025, 12:44:30 PM	9/15/2025, 12:44:31 PM	172.17.0.1	account-console

The screenshot shows the 'User details' page for the user 'it_user'. The left sidebar shows 'it_user' is selected under the 'Users' section. The main content area shows the user's details and session information. The session table shows one entry:

Started	Last access	IP address	Clients
9/15/2025, 12:44:10 PM	9/15/2025, 12:44:11 PM	172.17.0.1	account-console

The screenshot shows the 'User details' page for the user 'sales_user'. The left sidebar shows 'sales_user' is selected under the 'Users' section. The main content area shows the user's details and session information. The session table shows one entry:

Started	Last access	IP address	Clients
9/15/2025, 12:43:42 PM	9/15/2025, 12:43:43 PM	172.17.0.1	account-console

STEP_8:event manage

→ In admin console and navigate to events.

The screenshot shows the Keycloak Admin Console with the 'Events' page selected. The left sidebar includes 'Manage realms', 'Clients', 'Client scopes', 'Realm roles', 'Users', 'Groups', 'Sessions', and 'Events'. The main area displays a table of events with columns: Time, User ID, Event saved type, IP address, and Client. The events listed are all from September 15, 2025, at 12:44 PM, involving user '46dc8b04-2316-4fab-b5fe-63c8213c3ff8' and client 'account-console'. The event types include CODE_TO_TOKEN, LOGIN, LOGOUT, and LOGIN_ERROR.

Time	User ID	Event saved type	IP address	Client
September 15, 2025 at 12:44 PM	46dc8b04-2316-4fab-b5fe-63c8213c3ff8	CODE_TO_TOKEN	172.17.0.1	account-console
September 15, 2025 at 12:44 PM	46dc8b04-2316-4fab-b5fe-63c8213c3ff8	LOGIN	172.17.0.1	account-console
September 15, 2025 at 12:44 PM	46dc8b04-2316-4fab-b5fe-63c8213c3ff8	LOGIN	172.17.0.1	account-console
September 15, 2025 at 12:44 PM	No user details	LOGIN_ERROR	172.17.0.1	account-console
September 15, 2025 at 12:44 PM	46dc8b04-2316-4fab-b5fe-63c8213c3ff8	LOGOUT	172.17.0.1	account-console
September 15, 2025 at 12:44 PM	6c05ffef-ca6b-415c-8ff8-d3759c48326	CODE_TO_TOKEN	172.17.0.1	account-console

→ Go to users and we can see particular users event.

The screenshot shows the 'User details' page for 'hr_user'. The top navigation bar includes 'Users > User details' and 'hr_user'. The user is marked as 'Enabled'. The tabs at the top are 'Details', 'Credentials', 'Role mapping', 'Groups', 'Consents', 'Identity provider links', 'Sessions', and 'Events'. The 'Events' tab is selected. Below it, another 'Events' tab is shown. The main area displays a table of events for 'hr_user' with columns: Time, Event saved type, IP address, and Client. The events listed are all from September 15, 2025, at 12:44 PM, involving user '46dc8b04-2316-4fab-b5fe-63c8213c3ff8' and client 'account-console'. The event types include CODE_TO_TOKEN, LOGIN, and LOGOUT.

Time	Event saved type	IP address	Client
September 15, 2025 at 12:44 PM	CODE_TO_TOKEN	172.17.0.1	account-console
September 15, 2025 at 12:44 PM	LOGIN	172.17.0.1	account-console
September 15, 2025 at 12:44 PM	LOGIN	172.17.0.1	account-console
September 15, 2025 at 12:44 PM	LOGOUT	172.17.0.1	account-console

The screenshot shows the 'User details' page for 'it_user'. The top navigation bar includes 'Users > User details' and 'it_user'. The user is marked as 'Enabled'. The tabs at the top are 'Details', 'Credentials', 'Role mapping', 'Groups', 'Consents', 'Identity provider links', 'Sessions', and 'Events'. The 'Events' tab is selected. Below it, another 'Events' tab is shown. The main area displays a table of events for 'it_user' with columns: Time, Event saved type, IP address, and Client. The events listed are all from September 15, 2025, at 12:44 PM, involving user '46dc8b04-2316-4fab-b5fe-63c8213c3ff8' and client 'account-console'. The event types include CODE_TO_TOKEN, LOGIN, and LOGOUT.

Time	Event saved type	IP address	Client
September 15, 2025 at 12:44 PM	CODE_TO_TOKEN	172.17.0.1	account-console
September 15, 2025 at 12:44 PM	LOGIN	172.17.0.1	account-console
September 15, 2025 at 12:44 PM	LOGIN	172.17.0.1	account-console
September 15, 2025 at 12:43 PM	LOGOUT	172.17.0.1	account-console

The screenshot shows the 'User details' page for 'sales_user'. The top navigation bar includes 'Users > User details' and 'sales_user'. The user is marked as 'Enabled'. The tabs at the top are 'Details', 'Credentials', 'Role mapping', 'Groups', 'Consents', 'Identity provider links', 'Sessions', and 'Events'. The 'Events' tab is selected. Below it, another 'Events' tab is shown. The main area displays a table of events for 'sales_user' with columns: Time, Event saved type, IP address, and Client. The events listed are from September 15, 2025, at 12:43 PM, involving user '46dc8b04-2316-4fab-b5fe-63c8213c3ff8' and client 'account-console'. The event types include CODE_TO_TOKEN, LOGIN, LOGIN_ERROR, and LOGOUT.

Time	Event saved type	IP address	Client
September 15, 2025 at 12:43 PM	CODE_TO_TOKEN	172.17.0.1	account-console
September 15, 2025 at 12:43 PM	LOGIN	172.17.0.1	account-console
September 15, 2025 at 12:43 PM	LOGIN	172.17.0.1	account-console
September 15, 2025 at 12:43 PM	LOGIN_ERROR	172.17.0.1	account-console
September 15, 2025 at 12:43 PM	LOGOUT	172.17.0.1	account-console