

CLOUD SECURITY & MANAGEMENT
LAB

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Batch :B7

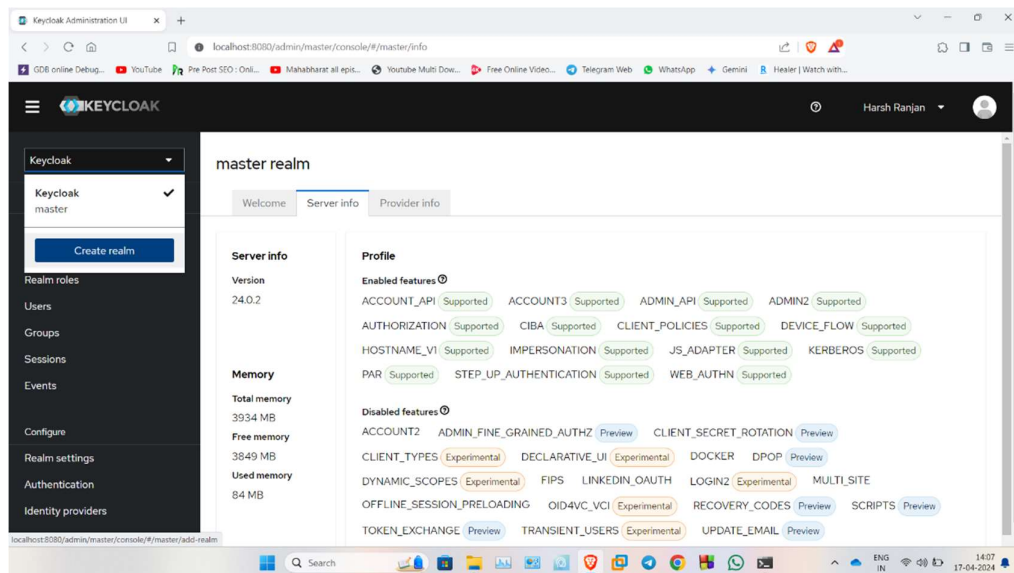
SUBMISSION TO:

Ms. Avita Katal

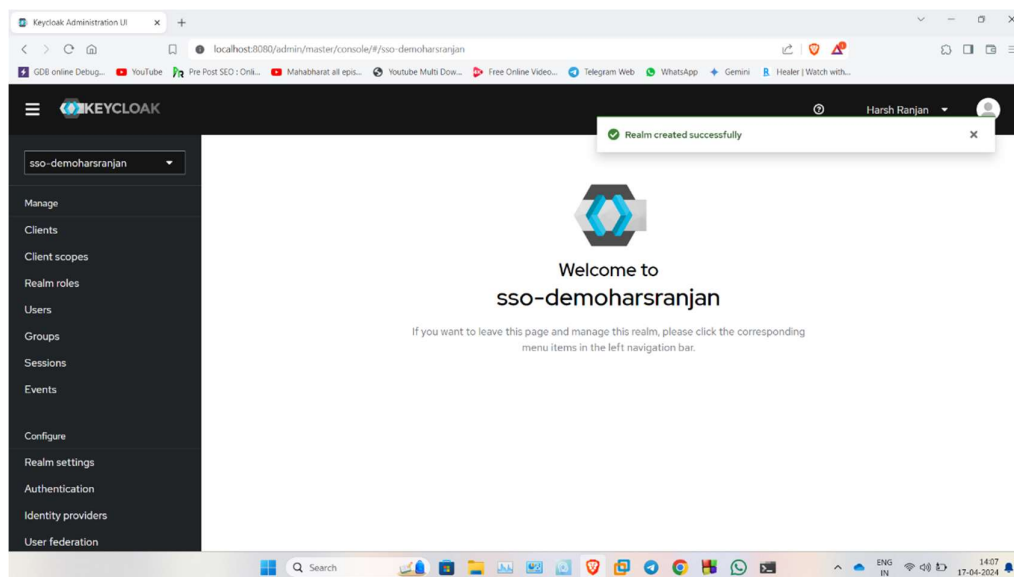
Experiment 7 b) Implementing Single Sign-On (SSO) with Keycloak

STEP 1: To Create a single signon with Keycloak ,open keycloak portal and login to admin portal

STEP 2: Create on create realm.



STEP 3: Assign the name and finish creation of realm.



STEP 4: Go to Client tab and create on create new client and select client type as “OpenID Connect” and name the client ID and per need and click on next.

The screenshot shows the Keycloak Administration UI. The left sidebar has a menu with 'Clients' selected. The main area is titled 'Create client' with a subtitle 'Clients are applications and services that can request authentication of a user.' Below this is a progress indicator with three steps: '1 General settings', '2 Capability config', and '3 Login settings'. The 'General settings' section contains the following fields: 'Client type' (a dropdown menu set to 'OpenID Connect'), 'Client ID' (a text input field containing 'company-portal'), 'Name' (an empty text input field), 'Description' (an empty text area), and 'Always display in UI' (a toggle switch set to 'Off'). At the bottom of the form are three buttons: 'Next' (highlighted in blue), 'Back', and 'Cancel'. The browser's address bar shows the URL 'localhost:8080/admin/master/console/#/sso-demoharsranjan/clients/add-client'.

STEP 5: In Valid redirect URLs tab & in weborigins, enter the url of the first app as company portal in my example.

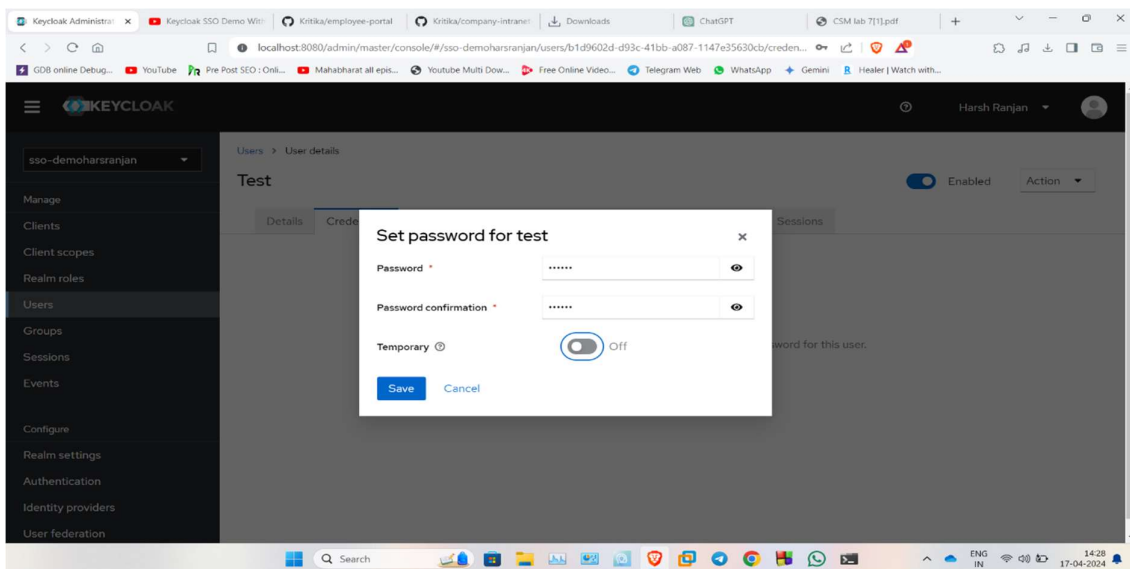
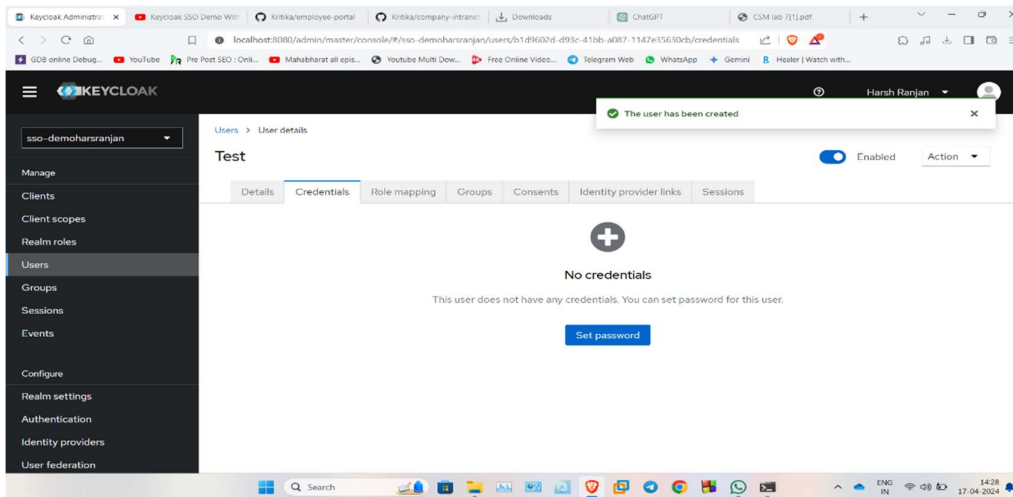
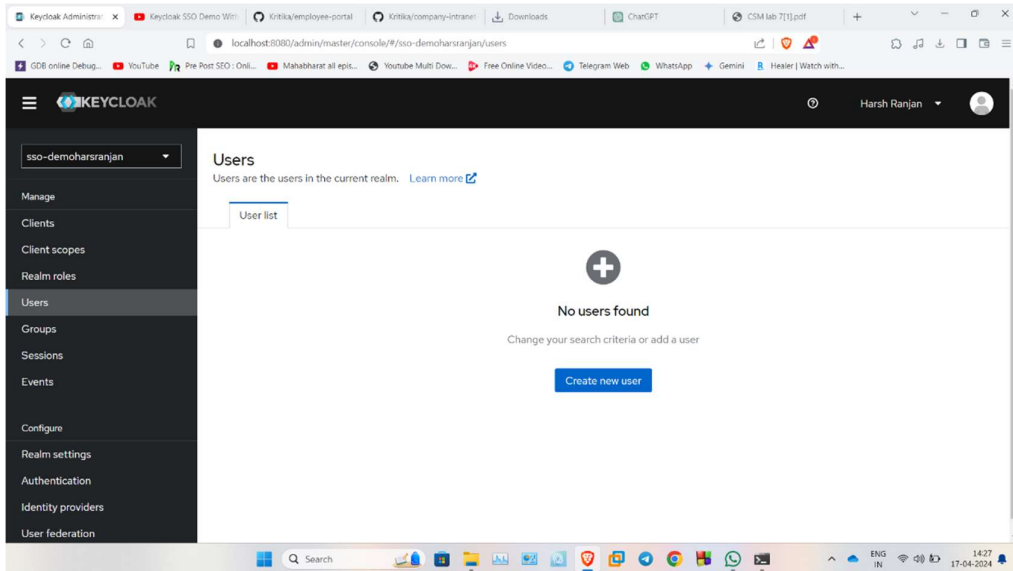
The screenshot shows the 'Access settings' tab in the Keycloak client configuration. The left sidebar is the same as in the previous screenshot. The main area is titled 'Access settings'. It contains several input fields: 'Root URL', 'Home URL', 'Valid redirect URIs' (containing 'http://localhost:3000/*'), 'Valid post logout redirect URIs', 'Web origins' (containing 'http://localhost:3000'), and 'Admin URL'. Each of these fields has a '+' icon and a link to 'Add' more entries. On the right side, there is a 'Jump to section' menu with links to 'General settings', 'Access settings' (which is highlighted), 'Capability config', 'Login settings', and 'Logout settings'. At the bottom of the form are two buttons: 'Save' (highlighted in blue) and 'Revert'.

STEP 6: Repeat the same steps for Second app i.e., Employee Portal

The screenshot shows the Keycloak Admin Console interface. The left sidebar contains a menu with options: Manage, Clients, Client scopes, Realm roles, Users, Groups, Sessions, Events, Configure, Realm settings, Authentication, Identity providers, and User federation. The 'Clients' menu item is selected. The main content area is titled 'Create client' and includes a sub-header 'Clients are applications and services that can request authentication of a user.' Below this, there are three steps: 1. General settings (selected), 2. Capability config, and 3. Login settings. The 'General settings' section contains the following fields: 'Client type' (OpenID Connect), 'Client ID' (employee-portal), 'Name' (employee-portal), 'Description' (empty), and 'Always display in UI' (Off). At the bottom of the form are 'Next', 'Back', and 'Cancel' buttons.

This screenshot shows the 'Login settings' tab for the 'employee-portal' client. The left sidebar is the same as in the previous screenshot. The main content area shows the 'Login settings' step selected. The fields in this section are: 'Root URL' (empty), 'Home URL' (empty), 'Valid redirect URIs' (http://localhost:3002/*), 'Valid post logout redirect URIs' (empty), and 'Web origins' (http://localhost:3002). Each field has a '+' icon to add more values. At the bottom of the form are 'Next', 'Back', and 'Cancel' buttons.

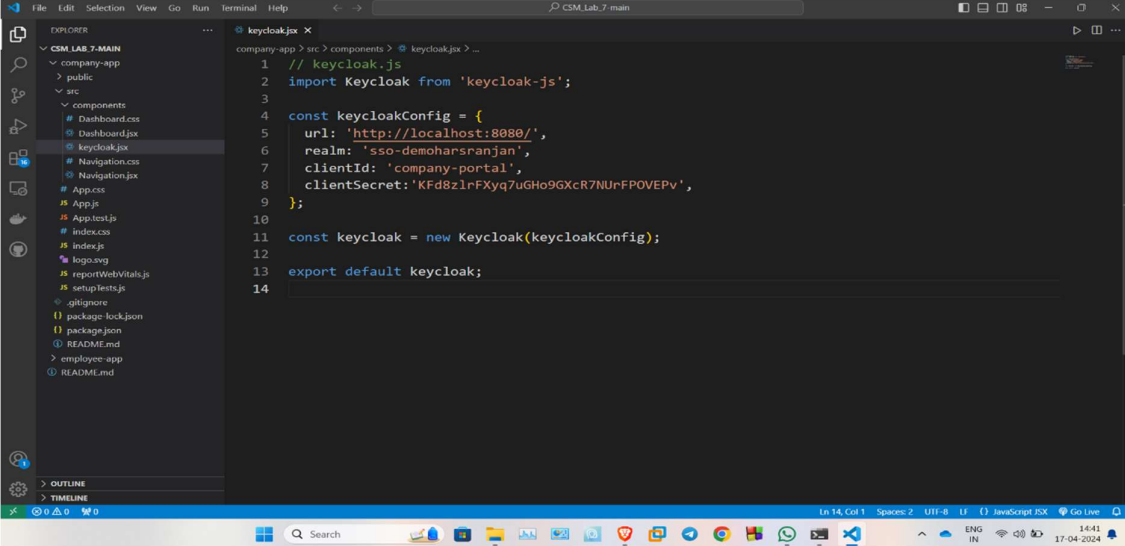
STEP 7: After this go to users tab and create a user named “test” and assign a password for that user to login



STEP 8: Now Open your applications, or import from any two react apps from github as I have done :

https://github.com/Hexton09/CSM_Lab_7

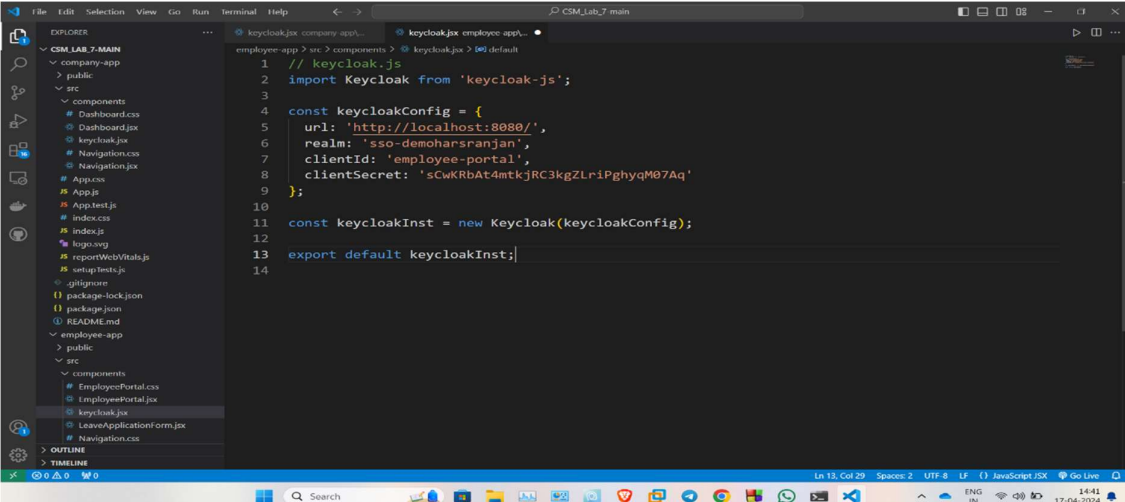
STEP 9: In the First application Company-portal edit src/keycloak.jsx file with the following



```
1 // keycloak.js
2 import Keycloak from 'keycloak-js';
3
4 const keycloakConfig = {
5   url: 'http://localhost:8080/',
6   realm: 'sso-demoharsranjan',
7   clientId: 'company-portal',
8   clientSecret: 'KfD8zlrFXyq7uGHo9GxcR7NURFPOVEPv',
9 };
10
11 const keycloak = new Keycloak(keycloakConfig);
12
13 export default keycloak;
```

- For the URL put your keycloak link , by default it will be `http://localhost:8080/`
- Realm – give whatever realm name you’ve given , here its sso-demo.
- ClientId- give whatever ClientID you’ve given , here its company-portal

STEP 10: Do the same for the Second Application Employee-portal



```
1 // keycloak.js
2 import Keycloak from 'keycloak-js';
3
4 const keycloakConfig = {
5   url: 'http://localhost:8080/',
6   realm: 'sso-demoharsranjan',
7   clientId: 'employee-portal',
8   clientSecret: 'sCwKRbAt4mtkJRC3kgZLr1PghyqM07Aq',
9 };
10
11 const keycloakInst = new Keycloak(keycloakConfig);
12
13 export default keycloakInst;
```

- For the URL put your keycloak link , by default it will be `http://localhost:8080/`
- Realm – give whatever realm name you’ve given , here its sso-demo.
- ClientId- give whatever ClientID you’ve given , here its employee-portal

STEP 11: After configuring both the application, run them both will ask to signin . So, login with the information of user that we have created as “test”

The image displays two screenshots of a web application interface for SSO-DEMOHARSANJAN.

Top Screenshot: Sign in to your account

The form is titled "Sign in to your account". It contains two input fields: "Username or email" with the value "test" and "Password" with a masked value "*****". A blue "Sign In" button is at the bottom.

Bottom Screenshot: Update Account Information

The form is titled "Update Account Information". It contains three input fields: "Email *" with the value "ranjanharsh123@gmail.com", "First name *" with the value "test-harsranjan", and "Last name *" with the value "test-harsranjan". A blue "Submit" button is at the bottom. A red asterisk and the text "* Required fields" are visible at the top right of the form area.

