Test Cases and BDD for Customizing Redmine and Superset for Automatic Login with Gmail through Keycloak

Test Case 1: Verify Keycloak Configuration

BDD:

- **Given** Keycloak is installed and running
- **When** the admin configures Keycloak with the Gmail provider
- **Then** Keycloak should accept the Gmail provider configuration

Test Case 2: Verify Redmine Configuration for Keycloak

BDD:

- **Given** Redmine is installed and running
- **When** the admin configures Redmine to use Keycloak for authentication
- **Then** Redmine should successfully save the Keycloak configuration

Test Case 3: Verify Superset Configuration for Keycloak

BDD:

- **Given** Superset is installed and running
- **When** the admin configures Superset to use Keycloak for authentication
- **Then** Superset should successfully save the Keycloak configuration

Test Case 4: Gmail Login Button Visibility on Redmine

BDD:

- **Given** a user is on the Redmine login page
- **When** the page loads
- **Then** the Gmail login button should be visible

Test Case 5: Gmail Login Button Visibility on Superset

BDD:

- **Given** a user is on the Superset login page
- **When** the page loads
- **Then** the Gmail login button should be visible

Test Case 6: Redirect to Keycloak from Redmine

BDD:

- **Given** a user clicks the Gmail login button on Redmine
- **When** the button is clicked
- **Then** the user should be redirected to the Keycloak login page

Test Case 7: Redirect to Keycloak from Superset

BDD:

- **Given** a user clicks the Gmail login button on Superset
- **When** the button is clicked
- **Then** the user should be redirected to the Keycloak login page

Test Case 8: Gmail Authentication Success in Keycloak

BDD:

- **Given** a user is on the Keycloak login page
- **When** the user logs in with a valid Gmail account
- **Then** the authentication should be successful

Test Case 9: Gmail Authentication Failure in Keycloak

BDD:

- **Given** a user is on the Keycloak login page
- **When** the user logs in with an invalid Gmail account
- **Then** the authentication should fail with an error message

Test Case 10: Automatic Login to Redmine After Keycloak Authentication

BDD:

- **Given** a user is authenticated through Keycloak using Gmail
- **When** the authentication is successful
- **Then** the user should be automatically logged into Redmine

Test Case 11: Automatic Login to Superset After Keycloak Authentication

BDD:

- **Given** a user is authenticated through Keycloak using Gmail
- **When** the authentication is successful
- **Then** the user should be automatically logged into Superset

Test Case 12: Logout from Redmine

BDD:

- **Given** a user is logged into Redmine through Keycloak
- **When** the user logs out from Redmine
- **Then** the session should end and the user should be redirected to the Keycloak logout page

Test Case 13: Logout from Superset

BDD:

- **Given** a user is logged into Superset through Keycloak
- **When** the user logs out from Superset
- **Then** the session should end and the user should be redirected to the Keycloak logout page

Test Case 14: Session Timeout in Redmine

BDD:

- **Given** a user is logged into Redmine through Keycloak
- **When** the session times out
- **Then** the user should be redirected to the Keycloak login page

Test Case 15: Session Timeout in Superset

BDD:

- **Given** a user is logged into Superset through Keycloak
- **When** the session times out
- **Then** the user should be redirected to the Keycloak login page

Test Case 16: Invalid Token Handling in Redmine

BDD:

- **Given** a user is logged into Redmine through Keycloak
- **When** the token becomes invalid
- **Then** the user should be prompted to log in again

Test Case 17: Invalid Token Handling in Superset

BDD:

- **Given** a user is logged into Superset through Keycloak
- **When** the token becomes invalid
- **Then** the user should be prompted to log in again

Test Case 18: User Role Mapping in Redmine

BDD:

- **Given** a user logs into Redmine through Keycloak
- **When** the user is authenticated
- **Then** the appropriate roles should be mapped and assigned in Redmine

Test Case 19: User Role Mapping in Superset

BDD:

- **Given** a user logs into Superset through Keycloak
- **When** the user is authenticated
- **Then** the appropriate roles should be mapped and assigned in Superset

Test Case 20: Multi-Factor Authentication (MFA) in Keycloak

BDD:

- **Given** a user logs into Keycloak with Gmail
- **When** MFA is enabled
- **Then** the user should be prompted to complete MFA before accessing Redmine or Superset

Test Case 21: User Profile Sync in Redmine

BDD:

- **Given** a user logs into Redmine through Keycloak
- **When** the user is authenticated
- **Then** the user's profile information should be synced from Keycloak to Redmine

Test Case 22: User Profile Sync in Superset

BDD:

- **Given** a user logs into Superset through Keycloak
- **When** the user is authenticated
- **Then** the user's profile information should be synced from Keycloak to Superset

Test Case 23: Error Handling for Keycloak Unavailability in Redmine

BDD:

- **Given** a user attempts to log into Redmine through Keycloak
- **When** Keycloak is unavailable
- **Then** the user should receive an appropriate error message

Test Case 24: Error Handling for Keycloak Unavailability in Superset

BDD:

- **Given** a user attempts to log into Superset through Keycloak
- **When** Keycloak is unavailable
- **Then** the user should receive an appropriate error message

Test Case 25: Audit Logging for Login Attempts in Redmine

BDD:

- **Given** a user logs into Redmine through Keycloak
- **When** the login is successful or fails
- **Then** the attempt should be logged for audit purposes

Test Case 26: Audit Logging for Login Attempts in Superset

BDD:

- **Given** a user logs into Superset through Keycloak
- **When** the login is successful or fails
- **Then** the attempt should be logged for audit purposes

Test Case 27: Security of User Data in Transit

BDD:

- **Given** a user logs into Redmine or Superset through Keycloak
- **When** the data is transmitted
- **Then** it should be encrypted and secure

Test Case 28: Consistent User Interface for Login

BDD:

- **Given** a user logs into Redmine or Superset through Keycloak
- **When** the login page is displayed
- **Then** the UI should be consistent and user-friendly

Test Case 29: Compatibility with Different Browsers

BDD:

- **Given** a user logs into Redmine or Superset through Keycloak
- **When** the login process is performed on different browsers
- **Then** the process should be smooth and consistent across all browsers

Test Case 30: Redirection After Successful Login

BDD:

- **Given** a user logs into Redmine or Superset through Keycloak
- **When** the login is successful
- **Then** the user should be redirected to their intended destination within the application