

User Authentication

Advance Web Development

Time: 60 mins

Introduction

In this class, the student/s will read the user credentials from the local storage, verify it for sign-in and add the sign-out functionality for the VR Gamers website..

JavaScript Commands & DOM Methods Introduced

- `storage.removeItem(keyName)` Removes or deletes the “keyName” from the specified “storage”.

Vocabulary

- **User Authentication** is a process in which we verify that someone who is attempting to access services and applications is who they claim to be.

Learning Objectives

Student/s should be able to:

- **Recall** the steps to check the local storage and create JavaScript Objects.
- **Explain** what is the authentication.
- **Implement** authentication of username and password for a website before signing in.
- **Illustrate** the sign out functionality.

Activities

1. Class Narrative: (2 mins)

- Brief the student/s that the existing users should be able to sign-in and sign-out of their accounts. User credentials of existing users should be verified to let the user sign-in.

2. Concept Introduction Activity: (6 mins)

- Let the student/s play the explore-activity and observe that the authenticated users with correct sign-in details can sign in while the users with wrong password get an error message.
Note: ask students to enter the correct and incorrect user details while signing in to make them notice the authentication.
- Make them notice that the home page loads on clicking on the sign-out button.
- Using the slides, explain how:
 - Read User Credentials from local Storage
 - Verify User Credentials

- Add Sign-out Functionality

3. Activity 1: Read User Credentials from Local Storage: (8 mins)

Student Activity: (8 mins)

- Explain the process of how authentication works by verifying the user inputs with the local storage.
- Recall the steps to validate the user details with the local storage.
- Guide the student/s to read the user credentials from the local storage.

4. Activity 2: Verify User Credentials: (23 mins)

Teacher Activity: (8 mins)

- Lead the students to understand that the allUsers should be present and username should exist in allUsers within the local storage.
- Explain that if the above condition is satisfied then store the username entered by the user else print a message "Username not found. Please Sign Up!"

Student Activity: (15 mins)

- Guide the student/s to sign in on authenticating both username and password.

Probing question: Which operator can be used to verify if the password matches with the stored password in local storage?

Expected answer: "==" operator

5. Activity 3: Add Sign Out Functionality: (8 mins)

Student Activity: (8 mins)

- Explain to the students that to sign out the user the current user must be removed from the local storage.
- Guide the students to add the sign-out functionality and remove the current user details on signing out.

6. Introduce the Post class project: (2 min)

- Debug the authentication for the vendor e-commerce website..

7. Test and Summarize the class learnings: (5 mins)

- Check for understanding through quizzes and summarize learning after respective missions.
- Summarize the overall class learning towards the end of the class.

8. Additional activities:

- Encourage the student/s to validate the username to check if it exists or not during sign up for unique username validation.
- Encourage the student/s to add an input field for captcha verification and if it's correct then allow the user to sign in.

9. State the Next Class Objective: (2 min)

- We will learn to authenticate the users before allowing them to book the game slots at a studio of your choice through VR Gamers website.

U.S. Standards:

Links Table		
Activity	Activity Name	Link
Class Presentation	User Authentication	https://s3-whjr-curriculum-uploads.whjr.online/cc380557-8e43-4157-a777-b235be240b35.html
Explore Activity	User Authentication: Explore-activity link	https://tynker.com/code/project/63c65d9f4dbe4b7d2f4a7c72
Student Activity 1	Read User Credentials from Local Storage	https://tynker.com/code/project/63c653b3ae759a0561383fa2
Teacher Reference: Student Activity 1 Solution	Read User Credentials from Local Storage - Solution	https://tynker.com/code/project/63c64f786a47d806310559a2
Teacher Activity 2	Verify User Credentials	https://tynker.com/code/project/63c6554c6207dc2f56284a72
Teacher Activity 2 Solution	Verify User Credentials - Solution	https://tynker.com/code/project/63c6551ee5618915825fd962
Student Activity 2	Verify User Credentials	https://tynker.com/code/project/63c65912e8aad4104a336252
Teacher Reference: Student Activity 2 Solution	Verify User Credentials - Solution	https://tynker.com/code/project/63c656647028534d8e556d42
Student Activity 3	Add Sign-out Functionality	https://tynker.com/code/project/63c65edd525b760a2f16db62
Teacher Reference: Student Activity 3 Solution	Add Sign-out Functionality - Solution	https://tynker.com/code/project/63c65d9f4dbe4b7d2f4a7c72
Student's Additional Activity 1	Validate Username	https://tynker.com/code/project/63d789cd293260593203fa02
Teacher Reference: Student's Additional Activity 1 Solution	Validate Username - Solution	https://tynker.com/code/project/63ce00ee9a90f96e7459982b
Student's Additional Activity 2	Verify the CAPTCHA	https://tynker.com/code/project/63d78a20222d39561c6bc1a2
Teacher Reference: Student's Additional Activity 2 Solution	Verify the CAPTCHA - Solution	https://tynker.com/code/project/63d78702e5447608ba7e1402
Post Class Project	Debug The Authentication	https://tynker.com/code/project/63c680d7a7d8f616be58df02
Teacher Reference: Post Class Project Solution	Debug The Authentication - Solution	https://tynker.com/code/project/63c67c8c3b40320db2295462

