\*\*\*\*\*\*\*\* LOCAL STORAGE USING JS \*\*\*\*\*\*\*\*

Here’s how the password is being saved in localStorage step by step:

**1. Retrieving Existing Data**

javascript

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let passwords = localStorage.getItem("passwords");

console.log(passwords);

* **Action**: The code checks if a key named "passwords" exists in localStorage.
* **Outcome**:
  + If "passwords" does not exist (null), it means no passwords have been saved yet.
  + If it exists, its value is retrieved as a JSON string.

**2. When No Passwords Are Saved (passwords == null):**

javascript

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if(passwords == null) {

let json = [];

json.push({username : username.value, password : password.value});

localStorage.setItem("passwords", JSON.stringify(json));

}

* **What Happens**:
  1. A new empty array (json = []) is created.
  2. The entered username and password are added to this array as an object:

javascript

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{username: username.value, password: password.value}

* 1. The array is converted to a JSON string using JSON.stringify(json).
  2. The string is saved in localStorage under the key "passwords":

javascript

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localStorage.setItem("passwords", JSON.stringify(json));

**3. When Passwords Already Exist:**

javascript

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else {

let json = JSON.parse(localStorage.getItem("passwords"));

json.push({username : username.value, password : password.value});

localStorage.setItem("passwords", JSON.stringify(json));

}

* **What Happens**:
  1. The existing JSON string stored under "passwords" is retrieved using:

javascript

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localStorage.getItem("passwords");

* 1. The string is converted back to an array of objects using:

javascript

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JSON.parse(localStorage.getItem("passwords"));

* 1. The new username and password are added to the array as an object.
  2. The updated array is converted back to a JSON string using JSON.stringify.
  3. The updated JSON string is saved back to localStorage under the same key:

javascript

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localStorage.setItem("passwords", JSON.stringify(json));

**Example of Stored Data in localStorage:**

After saving two sets of credentials:

javascript

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[

{username: "user1", password: "pass1"},

{username: "user2", password: "pass2"}

]

This data is stored as a JSON string in localStorage:

json

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'[{"username":"user1","password":"pass1"},{"username":"user2","password":"pass2"}]'

**Summary of Password Saving:**

* **First Save**: Creates a new array, adds the credentials, and stores it as a JSON string under the "passwords" key.
* **Subsequent Saves**: Retrieves the existing array, adds new credentials, and saves the updated array back to localStorage.