

```
let contacts = [];  
  
// Load from localStorage  
  
function loadFromStorage() {  
  
    const data = localStorage.getItem("contacts");  
  
    if (data) contacts = JSON.parse(data);  
  
}  
  
// Save to localStorage  
  
function saveToStorage() {  
  
    localStorage.setItem("contacts", JSON.stringify(contacts));  
  
}  
  
// Render contacts table  
  
function renderContacts(list = contacts) {  
  
    const tbody = document.getElementById("contactList");  
  
    tbody.innerHTML = "";  
  
    list.forEach((c, index) => {  
  
        const row = `|  
            <td>${c.name}</td>  
            <td>${c.email}</td>  
            <td>${c.phone}</td>  
            <td class="actions">  
                <button onclick="editContact(${index})">Update</button>  
                <button onclick="deleteContact(${index})">Delete</button>  
            </td>  
        </tr>`;  
  
        tbody.innerHTML += row;  
  
    });  
  
}  
  
// CREATE / UPDATE  
  
function addOrUpdateContact() {  
  
    const name = document.getElementById("name").value.trim();

```

```
const email = document.getElementById("email").value.trim();

const phone = document.getElementById("phone").value.trim();

const editIndex = document.getElementById("editIndex").value;

if (!name || !email || !phone) {

    alert("Please fill all fields");

    return;

}

if (editIndex) {

    // Update existing contact

    contacts[editIndex] = { name, email, phone };

    document.getElementById("editIndex").value = "";

} else {

    // Add new contact

    contacts.push({ name, email, phone });

}

saveToStorage();

renderContacts();

clearForm();

}

// EDIT

function editContact(index) {

    const c = contacts[index];

    document.getElementById("name").value = c.name;

    document.getElementById("email").value = c.email;

    document.getElementById("phone").value = c.phone;

    document.getElementById("editIndex").value = index;

}

// DELETE

function deleteContact(index) {

    if (confirm("Are you sure?")) {
```

```
contacts.splice(index, 1);

saveToStorage();

renderContacts();

}

}

// CLEAR FORM

function clearForm() {

  document.getElementById("name").value = "";

  document.getElementById("email").value = "";

  document.getElementById("phone").value = "";

  document.getElementById("editIndex").value = "";

}

// READ ALL

function readContacts() {

  renderContacts();

}

// SEARCH

function searchContacts() {

  const query = document.getElementById("searchInput").value.toLowerCase().trim();

  if (!query) {

    renderContacts();

    return;

  }

  const filtered = contacts.filter(c =>

    c.name.toLowerCase().includes(query) ||

    c.email.toLowerCase().includes(query) ||

    c.phone.toLowerCase().includes(query)

  );

  renderContacts(filtered);

}
```

```
// EXPORT JSON
```

```
function exportJSON() {  
  
  if (contacts.length === 0) { alert("No contacts to export"); return; }  
  
  const blob = new Blob([JSON.stringify(contacts, null, 2)], { type: "application/json" });  
  
  const url = URL.createObjectURL(blob);  
  
  const a = document.createElement("a");  
  
  a.href = url;  
  
  a.download = "contacts.json";  
  
  a.click();  
  
  URL.revokeObjectURL(url);  
  
}
```

```
// IMPORT JSON
```

```
function importJSON(event) {  
  
  const file = event.target.files[0];  
  
  if (!file) return;  
  
  const reader = new FileReader();  
  
  reader.onload = e => {  
  
    try {  
  
      contacts = JSON.parse(e.target.result);  
  
      saveToStorage();  
  
      renderContacts();  
  
    } catch (err) {  
  
      alert("Invalid JSON file");  
  
    }  
  
  };  
  
  reader.readAsText(file);  
  
}
```

```
// On page load
```

```
window.onload = () => {  
  
  loadFromStorage(); renderContacts(); };
```