

# WEB APPLICATION

## LAB 3

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### Task 1.1: Interactive Form Validator

### Sign Up

**Username**

**Email**

**Password**

**Confirm**

Sign Up

### Sign Up

**Username**

**Email**

**Password**

**Confirm**

Sign Up

Đăng ký thành công!

## All validation functions work correctly:

```
/* JS: hàm validate kiểm tra mọi trường, cập nhật lỗi và bật/tắt nút submit */
function validate(){
  const vu = reUser.test(u.value.trim());
  const ve = reEmail.test(e.value.trim());
  const vp = rePass.test(p.value);
  const vm = p.value && p.value === c.value;

  setErr(uerr, u.value && !vu ? '4-20 chars, letters/numbers/_ only' : '');
  setErr(eerr, e.value && !ve ? 'Email không hợp lệ' : '');
  setErr(perr, p.value && !vp ? '≥8, 1 uppercase, 1 number' : '');
  setErr(cerr, c.value && !vm ? 'Không khớp mật khẩu' : '');

  s.disabled = !(vu && ve && vp && vm);
}
```

Nếu không hợp lệ => hiển thị:

## Sign Up

**Username**

cv

4-20 chars, letters/numbers/\_ only

**Email**

ntn

Email không hợp lệ

**Password**

.....

≥8, 1 uppercase, 1 number

**Confirm**

....

Không khớp mật khẩu

Sign Up

## Real-time validation on input

### Sign Up

**Username**

cv

4-20 chars, letters/numbers/\_ only

**Email**

ntn

Email không hợp lệ

**Password**

....

≥8, 1 uppercase, 1 number

**Confirm**

....

Không khớp mật khẩu

Sign Up

## Visual feedback

### Sign Up

**Username**

NgoThiThuong

**Email**

ITCSIU21160@student.hcmiu.edu.vn

**Password**

....

≥8, 1 uppercase, 1 number

**Confirm**

....

Không khớp mật khẩu

Sign Up

## Submit button enable/disable logic

### Sign Up

**Username**

NgoThiThuong

**Email**

ITCSIU21160@student.hcmiu.edu.vn

**Password**

.....

**Confirm**

.....



Sign Up

### Sign Up

**Username**

NgoThiThuong

**Email**

ITCSIU21160@student.hcmiu.edu.vn

**Password**

.....

**Confirm**

.....

Không khớp mật khẩu

Sign Up

## Clean, readable code:

### What I did to keep code clean:

```
function validate(){
  const vu = reUser.test(u.value.trim());
  const ve = reEmail.test(e.value.trim());
  const vp = rePass.test(p.value);
  const vm = p.value && p.value === c.value;

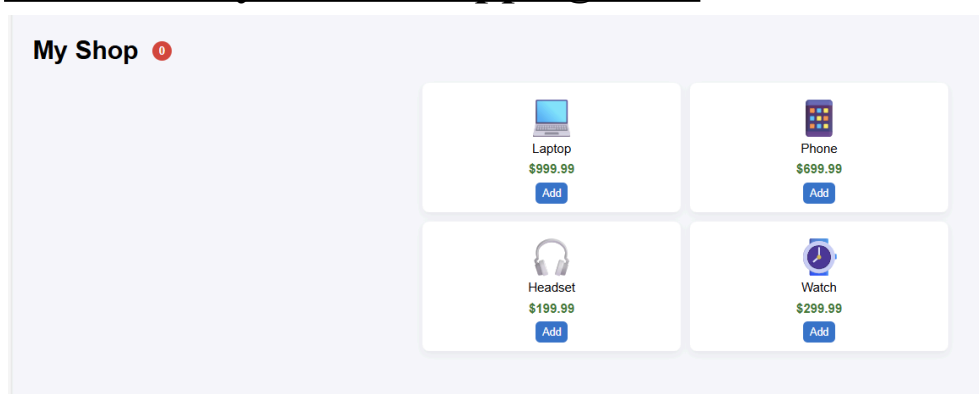
  setErr(uerr, u.value && !vu ? '4-20 chars, letters/numbers/_ only' : '');
  setErr(terr, e.value && !ve ? 'Email không hợp lệ' : '');
  setErr(perr, p.value && !vp ? '≥8, 1 uppercase, 1 number' : '');
  setErr(cerr, c.value && !vm ? 'Không khớp mật khẩu' : '');

  s.disabled = !(vu && ve && vp && vm);
}


/* JS: lắng nghe input để chạy validate theo thời gian thực khi người dùng gõ */
[u,e,p,c].forEach(i => i.addEventListener('input', validate));

/* JS: chặn submit mặc định, hiển thị thông báo thành công và reset form khi hợp lệ */
document.getElementById('f').addEventListener('submit', (ev)=>{
  ev.preventDefault();
  if (!s.disabled){
    ok.hidden = false;
    setTimeout(()=>{
      ok.hidden = true;
      ev.target.reset();
      validate();
    },1200);
  }
});
```


## Task 1.2: Dynamic Shopping Cart




## My Shop 3




Laptop  
\$999.99  
[Add](#)



Phone  
\$699.99  
[Add](#)






Headset  
\$199.99  
[Add](#)




Watch  
\$299.99  
[Add](#)


### Cart

	Laptop	\$999.99	-	1	+	<a href="#">Remove</a>
	Phone	\$699.99	-	1	+	<a href="#">Remove</a>
	Headset	\$199.99	-	1	+	<a href="#">Remove</a>
		<b>Total: \$1899.97</b>				


## My Shop 2




Laptop  
\$999.99  
[Add](#)



Phone  
\$699.99  
[Add](#)





Headset  
\$199.99  
[Add](#)




Watch  
\$299.99  
[Add](#)


### Cart

	Laptop	\$999.99	-	1	+	<a href="#">Remove</a>
	Headset	\$199.99	-	1	+	<a href="#">Remove</a>
		<b>Total: \$1199.98</b>				


## My Shop 5




Laptop  
\$999.99  
[Add](#)



Phone  
\$699.99  
[Add](#)







Headset  
\$199.99  
[Add](#)




Watch  
\$299.99  
[Add](#)

### Cart


	Laptop	\$999.99	-	1	+	<a href="#">Remove</a>
	Headset	\$399.98	-	2	+	<a href="#">Remove</a>
	Watch	\$299.99	-	1	+	<a href="#">Remove</a>
	Phone	\$699.99	-	1	+	<a href="#">Remove</a>
		<b>Total: \$2399.95</b>				

## Add to cart functionality


## My Shop 5




Laptop  
\$999.99  
[Add](#)



Phone  
\$699.99  
[Add](#)







Headset  
\$199.99  
[Add](#)




Watch  
\$299.99  
[Add](#)


### Cart

	Laptop	\$999.99	-	1	+	<a href="#">Remove</a>
	Headset	\$399.98	-	2	+	<a href="#">Remove</a>
	Watch	\$299.99	-	1	+	<a href="#">Remove</a>
	Phone	\$699.99	-	1	+	<a href="#">Remove</a>
		<b>Total: \$2399.95</b>				


## Quantity increase/decrease




Laptop  
\$999.99  
[Add](#)



Phone  
\$699.99  
[Add](#)




Headset  
\$199.99  
[Add](#)



Watch  
\$299.99  
[Add](#)

### Cart

	Phone	\$699.99	-	1	+	<a href="#">Remove</a>
-----------------------------------------------------------------------------------	-------	----------	---	---	---	------------------------

**Total: \$699.99**



Laptop  
\$999.99  
[Add](#)



Phone  
\$699.99  
[Add](#)



Headset  
\$199.99  
[Add](#)



Watch  
\$299.99  
[Add](#)

### Cart

	Phone	\$1399.98	-	2	+	<a href="#">Remove</a>
-----------------------------------------------------------------------------------	-------	-----------	---	---	---	------------------------

**Total: \$1399.98**



Laptop  
\$999.99  
[Add](#)



Phone  
\$699.99  
[Add](#)



Headset  
\$199.99  
[Add](#)



Watch  
\$299.99  
[Add](#)


### Cart

	Phone	\$1399.98	-	2	+	<a href="#">Remove</a>
	Headset	\$199.99	-	1	+	<a href="#">Remove</a>


**Total: \$1599.97**

=> Tăng sản phẩm + thêm sản phẩm => giá tiền thay đổi


## Remove from cart




Laptop  
\$999.99  
[Add](#)



Phone  
\$699.99  
[Add](#)





Headset  
\$199.99  
[Add](#)

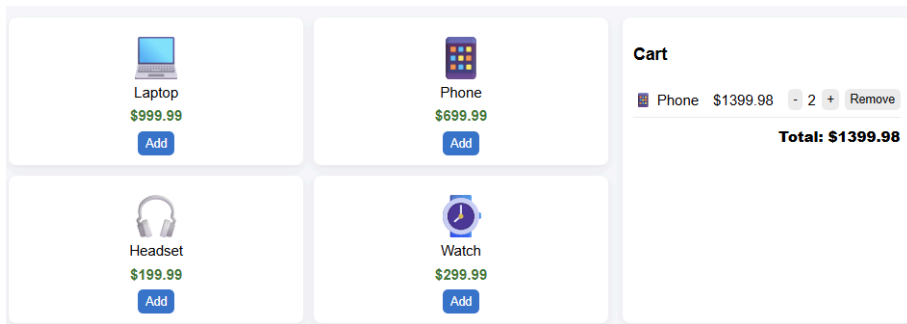


Watch  
\$299.99  
[Add](#)

### Cart

	Phone	\$1399.98	-	2	+	<a href="#">Remove</a>
	Headset	\$199.99	-	1	+	<a href="#">Remove</a>

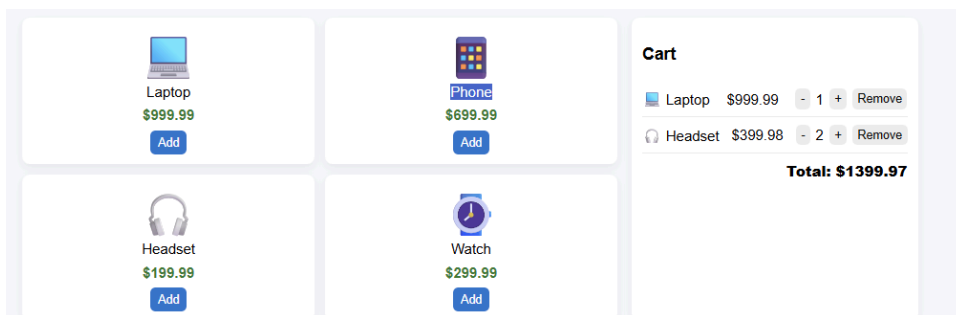
**Total: \$1599.97**



=> Remove Headset, tiền giảm

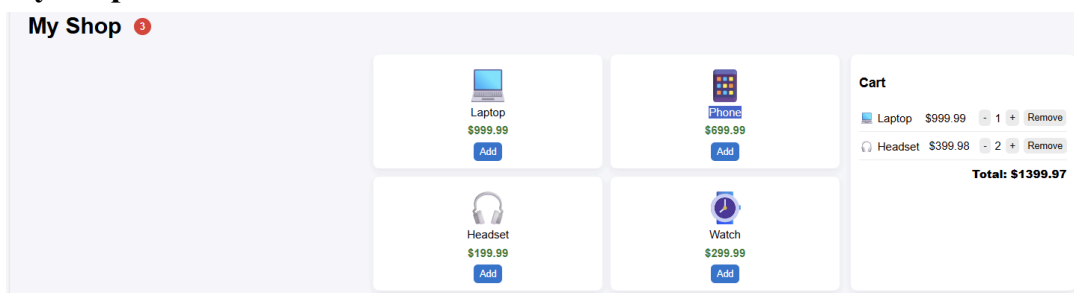
### Total calculation

$1 \times 999.99 = 999.99$   
 $2 \times 199.99 = 399.98$ ,  
 => Total = 1399.97

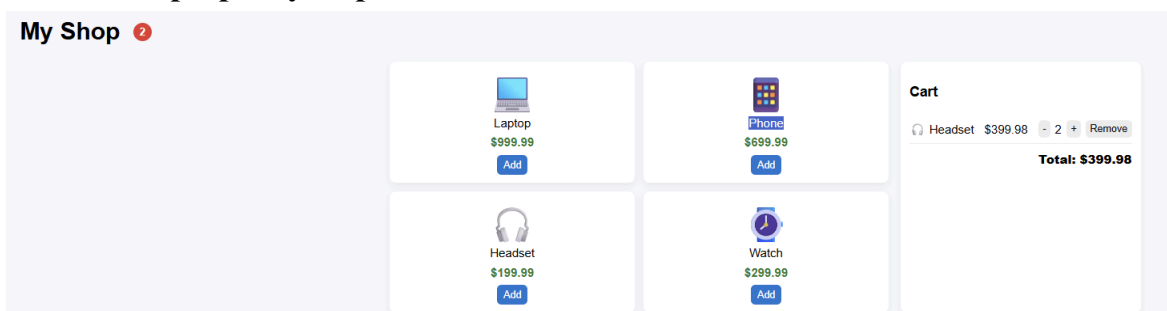


### Cart count badge updates

My shop có 3



Remove Laptop, Myshop có 2:





## Clean UI and code:

```
const products = [
  {id:1,name:'Laptop',price:999.99,icon:'💻'},
  {id:2,name:'Phone',price:699.99,icon:'📱'},
  {id:3,name:'Headset',price:199.99,icon:'🎧'},
  {id:4,name:'Watch',price:299.99,icon:'🕒'}
];

/* JS: mảng lưu trạng thái giỏ hàng (mỗi item lưu id và quantity)
*/
let cart = [];

/* JS: chọn các phần tử DOM để cập nhật giao diện (products,
items, badge, cart, total) */
const productsEl = document.getElementById('products'),
      itemsEl = document.getElementById('items'),
      badge = document.getElementById('badge'),
      cartEl = document.getElementById('cart'),
      totalEl = document.getElementById('total');

/* JS: render danh sách sản phẩm ra DOM và gán sự kiện nút Add
cho từng sản phẩm */
function renderProducts(){
  productsEl.innerHTML = products.map(p => `
    <div class="prod">
      <div class="icon">${p.icon}</div>
      <div>${p.name}</div>
      <div class="price">${p.price.toFixed(2)}</div>
      <button onclick="add(${p.id})">Add</button>
    </div>
  `).join('');
}

/* JS: thêm sản phẩm vào cart hoặc tăng quantity nếu đã tồn tại
*/
function add(id){
  const it = cart.find(x=>x.id===id);
  if(it) it.q++;
  else cart.push({id, q:1});
  renderCart();
}
```

```

/* JS: remove xóa mục khỏi cart theo id */
function remove(id){
  cart = cart.filter(x=>x.id!==id);
  renderCart();
}

/* JS: change thay đổi số lượng (tăng/giảm) và xóa khi qty <= 0 */
function change(id, delta){
  const it = cart.find(x=>x.id===id);
  if(!it) return;
  it.q += delta;
  if(it.q<=0) remove(id);
  renderCart();
}

/* JS: renderCart hiển thị các mục trong cart, tính tổng và cập nhật badge; ẩn giỏ khi rỗng */
function renderCart(){
  if(cart.length===0){ cartEl.hidden=true; badge.textContent='0'; totalEl.textContent='0.00'; itemsEl.innerHTML=''; return; }
  cartEl.hidden=false;
  badge.textContent = cart.reduce((s,i)=>s+i.q,0);
  itemsEl.innerHTML = cart.map(ci=>{
    const p = products.find(x=>x.id===ci.id);
    return `
      <div class="item">
        <div>${p.icon} ${p.name}</div>
        <div>${(p.price*ci.q).toFixed(2)}</div>
        <div class="ctrl">
          <button onclick="change(${ci.id},-1)">-</button>
          <span>${ci.q}</span>
          <button onclick="change(${ci.id},1)">+</button>
          <button onclick="remove(${ci.id})">Remove</button>
        </div>
      </div>
    `;
  }).join('');
  totalEl.textContent = cart.reduce((s,ci)=>{

```

```
    const p = products.find(x=>x.id===ci.id); return s +  
p.price*ci.q;  
    },0).toFixed(2);  
}  
  
/* JS: khởi tạo hiển thị sản phẩm khi trang load */  
renderProducts();
```