

WEB TECHNOLOGIES LAB - JQUERY QUESTIONS & ANSWERS

Q1: 1. Change Text on Button Click

Suppose you have a webpage with a button and a paragraph. When the user clicks the button, the text inside the paragraph should change to a new message (like "Hello, World!").

Hint: Use `.click()` and `.text()`.

```
<html>
<head>
  <title>Question 1</title>
  <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
</head>
<body>
  <p id="msg">Iam sanjay currently studying in vit chennai.</p>
  <button id="btn">Click Me</button>

  <script>
    $("#btn").click(function(){
      $("#msg").text("Hello, World!");
    });
  </script>
</body>
</html>
```

Q2: Hide and Show Paragraph

Imagine a webpage with some description text. Add two buttons labelled "Hide" and "Show". When "Hide" is clicked, the paragraph should disappear, and when "Show" is clicked, it should reappear.

Hint: Use `.hide()` and `.show()`.

```
<html>
<head>
  <title>Question 2</title>
  <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
</head>
<body>
  <p id="para">This is a description text.</p>
  <button id="hideBtn">Hide</button>
  <button id="showBtn">Show</button>

  <script>
    $("#hideBtn").click(function(){
      $("#para").hide();
    });
    $("#showBtn").click(function(){
      $("#para").show();
    });
  </script>
</body>
</html>
```

Q3: 3. Toggle an Image

Create a webpage with an image and a button. Each time the user clicks the button, the image should toggle between being visible and hidden. This is useful in real apps like showing/hiding ads or banners.

Hint: Use `.toggle()`.

```
<html>
<head>
  <title>Question 3</title>
  <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
```

```
</head>
<body>
  Toggle Image</button>

  <script>
    $("#toggleBtn").click(function(){
      $("#pic").toggle();
    });
  </script>
</body>
</html>
```

Q4: 4. Change Background Color

Design a div (box) on the page. When a button is clicked, the background color of the box should change to another color, like blue or red. This simulates color themes or highlight effects.

Hint: Use `.css("background-color", "blue")`.

```
<html>
<head>
  <title>Question 4</title>
  <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
</head>
<body>
  <div id="box" style="width:150px; height:100px; background-color:lightgray;"></div>
  <br>
  <button id="colorBtn">Change Color</button>

  <script>
    $("#colorBtn").click(function(){
      $("#box").css("background-color","blue");
    });
  </script>
</body>
</html>
```

Q5: 5. Add New List Item

Start with an unordered list (ul) that has a few items. Add a button called "Add Item". When clicked, it should insert a new item at the bottom of the list.

Hint: Use `.append("item")`.

```
<html>
<head>
  <title>Question 5</title>
  <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
</head>
<body>
  <ul id="myList">
    <li>Item 1</li>
    <li>Item 2</li>
  </ul>
  <button id="addBtn">Add Item</button>

  <script>
    $("#addBtn").click(function(){
      $("#myList").append("<li>New Item</li>");
    });
  </script>
</body>
</html>
```

Q6: 6. Fade In and Fade Out

Create an image on the page with two buttons: "Fade In" and "Fade Out". Clicking each button should smoothly show or hide the image with fading animation.

Hint: Use `.fadeIn()` and `.fadeOut()`.

```
<html>
<head>
  <title>Question 6</title>
  <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
</head>
<body>
  
  <br><br>
  <button id="fadeInBtn">Fade In</button>
  <button id="fadeOutBtn">Fade Out</button>

  <script>
    $("#fadeInBtn").click(function(){
      $("#pic").fadeIn();
    });
    $("#fadeOutBtn").click(function(){
      $("#pic").fadeOut();
    });
  </script>
</body>
</html>
```

```
});  
</script>  
</body>  
</html>
```

Q7: 7. Simple Form Alert

Add a form with a text input and a submit button. When the form is submitted, show the entered text in an alert popup without actually submitting the form to the server.

Hint: Use `.submit()` and `.val()`.

```
<html>
<head>
  <title>Question 7</title>
  <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
</head>
<body>
  <form id="myForm">
    <input type="text" id="myInput" placeholder="Type something">
    <button type="submit">Submit</button>
  </form>

  <script>
    $("#myForm").submit(function(e) {
      e.preventDefault();
      alert($("#myInput").val());
    });
  </script>
</body>
</html>
```

Q8: 8. Change Image Source

Build a small gallery with one large image and a few small thumbnails. When a thumbnail is clicked, the large image should change to match the thumbnail.

Hint: Use `.attr("src")`.

```
<html>
<head>
  <title>Question 8</title>
  <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
</head>
<body>
  
    $(".thumb").click(function() {
      let newSrc = $(this).attr("src");
      $("#bigImg").attr("src", newSrc);
    });
  </script>
</body>
</html>
```

Q9: 9. Hover Effect

Write a paragraph of text on your page. When the user hovers the mouse over it, the color should change (say from black to red). When the mouse moves away, it should return to normal.

Hint: Use `.hover()` with two functions

```
<html>
<head>
  <title>Question 9</title>
  <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
</head>
<body>
  <p id="text">Hover over this text to see the effect.</p>

  <script>
    $("#text").hover(
```

```
        function(){ $(this).css("color","red"); },
        function(){ $(this).css("color","black"); }
    );
</script>
</body>
</html>
```

Q10: 10. Slide Up and Slide Down

Create a simple menu (like a drop-down). When clicked, it should expand downwards showing the hidden items. When clicked again, it should slide back up.

Hint: Use `.slideToggle()`.

```
<html>
<head>
  <title>Question 10</title>
  <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
</head>
<body>
  <button id="menuBtn">Menu</button>
  <ul id="menuItems" style="display:none;">
    <li>Home</li>
    <li>About</li>
    <li>Contact</li>
  </ul>

  <script>
    $("#menuBtn").click(function(){
      $("#menuItems").slideToggle();
    });
  </script>
</body>
</html>
```

Q11: 1. Form Validation (Required Fields)

Build a signup form with fields like Name and Email. Before submission, check that none of the fields are empty and that the email is in the correct format. Show a warning message if validation fails.

Hint: Use `.each()` and `regex` for email validation

```
<html>
<head>
  <title>Question 1</title>
  <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
</head>
<body>
  <form id="signupForm">
    <input type="text" id="name" placeholder="Name"><br><br>
    <input type="text" id="email" placeholder="Email"><br><br>
    <button type="submit">Sign Up</button>
  </form>
  <p id="msg" style="color:red;"></p>

  <script>
    $("#signupForm").submit(function(e){
      e.preventDefault();
      let valid = true;
      let emailPattern = /^[^ ]+@[^ ]+\.[a-z]{2,3}$/;

      $("input").each(function(){
        if($(this).val().trim() === "") valid = false;
      });

      if(!emailPattern.test($("#email").val())) valid = false;

      if(valid){
        $("#msg").text("Form submitted!").css("color","green");
      }else{
        $("#msg").text("Please fill all fields correctly.");
      }
    });
  </script>
</body>
</html>
```

Q12: 2. Accordion for FAQ Section

Create a list of frequently asked questions. When a user clicks on a question, the answer should slide down. If another question is clicked, the previous answer should close.

Hint: Use `.slideToggle()` and `.not()`.

```
<html>
<head>
  <title>Question 2</title>
  <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
  <style>
    .answer{display:none; margin-left:20px;}
  </style>

</head>
<body>
  <p class="q">Q1: What is jQuery?</p>
  <p class="answer">It's a JS library for DOM, events, effects.</p>

  <p class="q">Q2: What is HTML?</p>
  <p class="answer">It's a markup language for webpages.</p>

  <script>
    $(".q").click(function(){
      $(".answer").not($(this).next()).slideUp();
      $(this).next().slideToggle();
    });
  </script>
</body>
</html>
```


Q13: 3. Character Counter in Textarea

Add a textarea for typing (like posting a tweet). Below it, display how many characters are remaining out of 100. Update the counter as the user types.

Hint: Use .keyup() and .val().length.

```
<html>
<head>
  <title>Question 3</title>
  <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
</head>
<body>
  <textarea id="msg" maxlength="100"></textarea><br>
  <span id="count">100</span> characters left

  <script>
    $("#msg").keyup(function(){
      let left = 100 - $(this).val().length;
      $("#count").text(left);
    });
  </script>
</body>
</html>
```

Q14: 4. Scroll-to-Top Button

On long pages, add a "Scroll to Top" button that only appears after the user scrolls down a few hundred pixels. When clicked, it smoothly scrolls the page back to the top.

Hint: Use .scroll() and .animate().

```
<html>
<head>
  <title>Question 4</title>
  <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
  <style>
    #topBtn{display:none; position:fixed; bottom:20px; right:20px;}
  </style>
</head>
<body style="height:2000px;">
  <button id="topBtn">Top</button>

  <script>
    $(window).scroll(function(){
      if($(this).scrollTop()>200) $("#topBtn").fadeIn();
      else $("#topBtn").fadeOut();
    });
    $("#topBtn").click(function(){
      $("html, body").animate({scrollTop:0},500);
    });
  </script>
</body>
</html>
```

Q15: 5. Tab Navigation

Build a tab system with multiple tabs like "Home", "About", "Contact". Clicking each tab should display its related content while hiding the others.

Hint: Use .hide() / .show() with tab selectors.

```
<html>
<head>
  <title>Question 5</title>
```

```

<script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
<style>
    .tabContent{display:none;}
</style>
</head>
<body>
    <button class="tab" data-target="#home">Home</button>
    <button class="tab" data-target="#about">About</button>
    <button class="tab" data-target="#contact">Contact</button>

    <div id="home" class="tabContent">Welcome to Home</div>
    <div id="about" class="tabContent">About Us Info</div>
    <div id="contact" class="tabContent">Contact Details</div>

    <script>
        $(".tab").click(function(){
            $(".tabContent").hide();
            $($ (this).data("target")).show();
        });
    </script>
</body>
</html>

```

Q16: 6. Disable Submit Until Terms Checked

On a signup form, add a "Terms and Conditions" checkbox. The "Submit" button should stay disabled until the checkbox is selected.

Hint: Use `.prop("disabled", true/false)` inside `.change()`.

```

<html>
<head>
    <title>Question 6</title>
    <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
</head>
<body>
    <form>
        <input type="checkbox" id="terms"> I agree to Terms<br><br>
        <button id="submitBtn" disabled>Submit</button>
    </form>

    <script>
        $("#terms").change(function(){
            $("#submitBtn").prop("disabled", !this.checked);
        });
    </script>
</body>
</html>

```

Q17: 7. Dynamic Table Filter

Create an employee table with columns like Name, Department, and Email. Above the table, add a search box. As the user types in the box, show only the rows that match the text.

Hint: Use `.filter()` and `.toggle()`.

```

<html>
<head>
    <title>Question 7</title>
    <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
</head>
<body>
    <input type="text" id="search" placeholder="Search..."><br><br>
    <table border="1" id="empTable">
        <tr><td>John</td><td>HR</td><td>john@mail.com</td></tr>
        <tr><td>Amy</td><td>IT</td><td>amy@mail.com</td></tr>
        <tr><td>Sam</td><td>Finance</td><td>sam@mail.com</td></tr>
    </table>

    <script>
        $("#search").keyup(function(){
            let value = $(this).val().toLowerCase();
            $("#empTable tr").filter(function(){
                $(this).toggle($(this).text().toLowerCase().indexOf(value) > -1);
            });
        });
    </script>

```

```
</script>  
</body>  
</html>
```

Q18: 8. Shopping Cart Calculation

Design a shopping cart table with product names, prices, and quantity input boxes. When the quantity changes, automatically recalculate and update the total cost.

Hint: Use `.change()` on inputs and `.text()` to update totals.

```
<html>
<head>
  <title>Question 8</title>
  <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
</head>
<body>
  <table border="1">
    <tr><td>Item A</td><td class="price">100</td><td><input type="number" class="qty" value="1"></td>
    <tr><td>Item B</td><td class="price">200</td><td><input type="number" class="qty" value="1"></td>
  </table>
  <p>Total: <span id="total">0</span></p>

  <script>
    function calcTotal() {
      let sum=0;
      $("tr").each(function() {
        let price = parseInt($(this).find(".price").text()) || 0;
        let qty = parseInt($(this).find(".qty").val()) || 0;
        sum += price * qty;
      });
      $("#total").text(sum);
    }
    $(".qty").change(calcTotal);
    calcTotal();
  </script>
</body>
</html>
```

Q19: 9. Simple AJAX Call

Add a button "Load Users". When clicked, fetch a JSON list of users (like name and email) from a file or API and display them in a list on the page.

Hint: Use `$.getJSON()` and `.append()`.

```
<html>
<head>
  <title>Question 9</title>
  <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
</head>
<body>
  <button id="loadBtn">Load Users</button>
  <ul id="userList"></ul>

  <script>
    $("#loadBtn").click(function() {
      $.getJSON("https://jsonplaceholder.typicode.com/users", function(data) {
        $("#userList").empty();
        $.each(data, function(i, user) {
          $("#userList").append("<li>" + user.name + " - " + user.email + "</li>");
        });
      });
    });
  </script>
</body>
</html>
```

Q20: 10. Dark Mode Toggle

Add a switch button that lets the user switch between light and dark themes for the page. Change background and text colors accordingly.

Hint: Use `.toggleClass("dark-mode")`.

```
<html>
<head>
  <title>Question 10</title>
```

```
<script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
<style>
  body.dark-mode{background:black; color:white;}
</style>
</head>
<body>
  <button id="modeBtn">Toggle Dark Mode</button>

  <p>This is some text.</p>

  <script>
    $("#modeBtn").click(function(){
      $("body").toggleClass("dark-mode");
    });
  </script>
</body>
</html>
```

