

Front-End UI/UX Mini Project

1. Title Page

Project Title: Fancy FAQ Accordion

Submitted By:

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Course: LnT Front End UI/UX

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2. Abstract

This report details the development of a Fancy FAQ Accordion, a front-end web component designed to display frequently asked questions in an interactive and user-friendly format. The project features a clean, responsive layout built with HTML and CSS, and utilizes jQuery for dynamic, animated behavior. Key functionalities include a search bar to filter questions in real-time and a custom collapse/expand animation that is distinct from standard Bootstrap behavior. The project showcases skills in customizing third-party libraries and implementing client-side interactivity.

3. Objectives

The primary objective was to create a functional and visually appealing FAQ accordion that is easy to navigate. This was achieved by:

- Designing and implementing a clean user interface with a custom icon animation.
- Developing a search functionality to allow users to filter questions instantly.

- Customizing Bootstrap's default accordion behavior with jQuery for a unique slide animation.
 - Ensuring the layout is responsive and works well on both desktop and mobile devices.
 - Successfully combining HTML, CSS, Bootstrap, and jQuery to create a cohesive and robust web component.
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4. Scope of the Project

- Front-End Development: The project will be a front-end application utilizing HTML, CSS, JavaScript, and jQuery for its functionality.
 - Responsive Design: The layout will be fully optimized for a consistent user experience across desktops, tablets, and mobile devices using the Bootstrap framework.
 - Interactive Features: Include a real-time search filter and custom accordion animations, all managed on the client-side
 - External Libraries: The project will incorporate external libraries, specifically Bootstrap for responsive design and jQuery for simplified scripting.
 - Client-Side Functionality: All features and data management will be handled on the client-side; no server-side or backend development is included in this scope.
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5. Tools & Technologies Used

Tool/Technology	Purpose
HTML5	Markup and structure
CSS3	Styling and layout management
Javascript	Client-side scripting and interactive functionality.
Jquery	A fast, small, and feature-rich JavaScript library for simplified scripting.
Bootstrap	A CSS framework for responsive design and UI components.
VS Code	Code editor
Chrome DevTools	Testing and debugging

6. HTML Structure Overview

The project utilizes a standard Bootstrap accordion structure. Each FAQ item is contained within a `.accordion-item` div, which holds the question in an `.accordion-header` and the answer in an `.accordion-body`. A search input field with the `id="searchInput"` is placed at the top of the container to enable the search functionality.

7. CSS Styling Strategy

The styling strategy focuses on customization to create a unique look and feel.

- The default Bootstrap arrow icon is removed using `::after` pseudo-element.
 - A custom animated icon is created using a `` element with the `faq-icon` class.
 - A CSS transform is used to rotate the icon on click for a smooth visual effect.
 - CSS transitions are used to create a smooth hover effect for the accordion buttons.
 - The `.accordion-body` is initially hidden with `display: none;` to allow jQuery's slide animation to work properly.
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8. Key Features

Feature	Description
Custom Animations	The project uses jQuery to override the default Bootstrap collapse behavior and implement a custom slide animation for the accordion items.
Search Functionality	A search bar is included that allows users to filter the FAQ items in real-time as they type, making it easier to find specific questions.

9. Challenges Faced & Solutions

Challenge	Solution
Customizing the default Bootstrap behavior.	We used jQuery to intercept the click event on the accordion buttons (e.preventDefault()) and implemented a custom slideToggle() animation, completely overriding the default functionality.
Implementing a real-time search filter for the accordion.	We attached a jQuery keyup event to the search bar. This function gets the input value and uses .filter() and .toggle() to show/hide the FAQ items as the user types.
Creating a unique visual design on top of Bootstrap.	We removed the default arrow icon with CSS and implemented our own custom animated icon using CSS transform and a + symbol, creating a visually distinct accordion.

10. Outcome

The final outcome is a fully functional and visually customized FAQ Accordion. The project successfully demonstrates the ability to combine and customize front-end libraries like Bootstrap and jQuery to create unique and interactive web components. The addition of a real-time search filter significantly improves the user experience by making it easy to find specific questions.

11. Future Enhancements

- Dynamic Content Loading: Fetch FAQ content from an external API instead of hardcoding it in the HTML.
- URL Hashing: Add functionality to link directly to a specific FAQ item.

- Accessibility Improvements: Enhance keyboard navigation and screen reader support for better accessibility.
 - Server-side Search: Implement a more robust, server-side search for a very large number of questions.
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12. Sample Code

```
1.<input type="text" id="searchInput" class="form-control" placeholder="Search FAQs...">
<div class="accordion-item">
  <h2 class="accordion-header">
    <button class="accordion-button" type="button">
      <span class="faq-icon">+</span> What is your return policy?
    </button>
  </h2>
  <div class="accordion-collapse">
    <div class="accordion-body">
      Our return policy lasts 30 days...
    </div>
  </div>
</div>
```

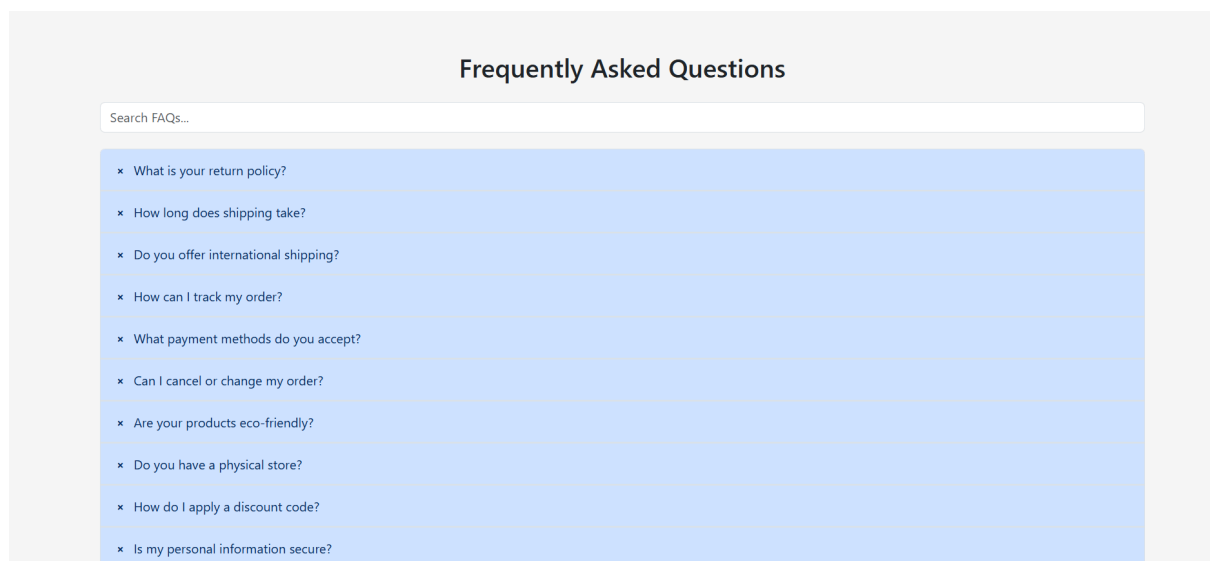
```
2..accordion-button::after {
  display: none;
}
.faq-icon {
  transition: transform 0.3s ease-in-out;
}
.accordion-button:not(.collapsed) .faq-icon {
  transform: rotate(45deg);
}
.accordion-body {
  display: none;
}
```

```
3.$(document).ready(function(){
  $('#faqAccordion .accordion-button').on('click', function(e){
    e.preventDefault();
    var target = $(this).closest('.accordion-item').find('.accordion-body');
    $('#faqAccordion .accordion-body').not(target).slideUp(400);
    target.slideToggle(400);
  });

  $('#searchInput').on('keyup', function(){
    var value = $(this).val().toLowerCase();
    $('#faqAccordion .accordion-item').filter(function(){
      $(this).toggle($(this).text().toLowerCase().indexOf(value) > -1);
    });
  });
});
```

```
});  
});  
});
```

13. Screenshots of Final Output



14. Conclusion

The Fancy FAQ Accordion project successfully delivered a functional and visually enhanced web component. By carefully customizing Bootstrap's default behavior with JavaScript and jQuery, the project provides a smooth and intuitive user experience for a list of frequently asked questions. This project highlights a strong understanding of client-side scripting and UI customization, serving as a solid example of how to build interactive and unique components for the web.

15. References

- W3Schools HTML & CSS & Javascript & JQuery & Bootstrap
- L&T LMS : <https://learn.intedutech.com/Landing/MyCourse>