

Web Application Development Assignment

Department of Information Technology

Subject: Web Application Development (2024–25)

Topic: Cheerio

Student Name: Rohit Chopade

Roll Number: 13

Q.1) Illustrate the need for Cheerio package

Cheerio is a fast, flexible, and lean implementation of core jQuery designed specifically for server-side use. It makes it easy to manipulate and traverse HTML documents using a familiar jQuery-like syntax. Cheerio is often used for web scraping and server-side DOM manipulation.

The need for Cheerio arises due to:

- **Server-Side HTML Parsing:** Enables developers to work with HTML data without a browser.
- **Lightweight and Fast:** Processes HTML efficiently compared to full browser environments like Puppeteer.
- **Familiar Syntax:** Uses jQuery-like syntax, making it easier for developers already familiar with jQuery.
- **Effective Web Scraping:** Helps extract and manipulate data from web pages.
- **Integration with Other Tools:** Can be easily combined with libraries like Axios or Request for scraping dynamic websites.

Thus, Cheerio is essential for projects involving server-side HTML manipulation and efficient web scraping.

Q.2) Implement a small application which will make use of the mentioned package (I/p, O/p)

Here's a simple example of using Cheerio to extract data from an HTML snippet.

Step 1: Install Required Packages

```
npm install cheerio axios
```

Step 2: Create a JavaScript File (scrape.js)

```
const axios = require('axios');
const cheerio = require('cheerio');

axios.get('https://example.com')
  .then(response => {
    const $ = cheerio.load(response.data);
    const title = $('title').text();
    console.log('Page Title:', title);
  })
  .catch(error => {
    console.error('Error fetching the page:', error);
  });
```

Step 3: Run the Script

```
node scrape.js
```

Expected Output:

```
Page Title: Example Domain
```

Q.3) Illustrate the need for code of ethics

A code of ethics is a set of professional standards that guides developers to act responsibly, fairly, and with respect for all users and stakeholders. It ensures that technology is created and used in a way that benefits society.

The need for a Code of Ethics:

- **Respect User Privacy:** Developers must protect sensitive information from misuse or leaks.
- **Transparency:** Honest disclosure of how software collects and uses data.
- **Accountability:** Being responsible for the effects and outcomes of created software.
- **Fairness:** Ensuring applications are free from biases and accessible to all users.
- **Avoid Harm:** Anticipating and preventing negative impacts of software on individuals and communities.

By adhering to a strong ethical code, developers help maintain trust, safety, and fairness in the digital world.

