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Department of Information Technology

Assignment

Date: 22/04/2025   **Subject:** Web Application Development (2024-25)

Q.1) Illustrate the need Uglify Package

Ans: The Uglify package is essential for optimizing JavaScript code before it is deployed to production. It works by minifying the code — removing unnecessary spaces, comments, and shortening variable names — which significantly reduces the file size. This smaller size helps in faster loading times for websites and applications, improving the overall user experience. Additionally, Uglify also obfuscates the code, making it harder for others to read or reverse-engineer, which provides a basic level of security against casual code theft. By compressing the code, it allows browsers to parse and execute scripts more efficiently, leading to better performance. In professional development environments, using tools like Uglify is a standard best practice to ensure applications are lightweight, fast, and production-ready.

Reason	Explanation
Smaller file size	Removes extra spaces, comments, and shortens variable names, making files tiny.
Faster load time	Smaller files = faster website or app loading for users.
Obfuscation	Makes the code harder to read for anyone trying to copy or hack it.
Better performance	Browsers can parse and execute the code quicker when it's minified.
Professional practice	All modern web apps bundle and uglify code for production.

Q.2) Implement small application which will make use of Uglify package (I/p, O/p)
Ans:

```js
JS input.js > ...
1    function multiply(a, b) {
2        return a * b;
3    }
4
5    console.log(multiply(5, 8));
```

```js
JS uglifyApp.js > ...
1    const fs = require('fs');
2    const UglifyJS = require('uglify-js');
3
4    const code = fs.readFileSync('input.js', 'utf8');
5
6    const result = UglifyJS.minify(code);
7
8
9    if (result.error) {
10        console.error('Error during minification:', result.error);
11    } else {
12
13        fs.writeFileSync('output.js', result.code, 'utf8');
14        console.log('Minification successful! Check output.js');
15    }
16
```

```
> function multiply(n,u){return n*u}console.log(multiply(5,8));
```

Q3) Illustrate the need for code of ethics.

Ans:

A code of ethics is essential for guiding professionals in making moral decisions and maintaining integrity within their field. Here's why it's important:

1. The need for a code of ethics arises from the responsibility professionals have to act with integrity, fairness, and respect towards others.

2. A code of ethics serves as a guiding framework that helps individuals and organizations make the right decisions, especially in difficult or unclear situations.

3. It promotes trust and credibility by setting clear standards for behavior, ensuring that actions are not just legally compliant but also morally sound.

4. In fields like healthcare, engineering, business, and software development, a strong ethical code protects the interests of clients, users, and society as a whole.

5. It also helps prevent misconduct, conflicts of interest, and abuse of power, and encourages accountability and transparency.

6. Overall, a code of ethics is essential for maintaining professionalism, safeguarding reputations, and promoting a healthy and sustainable environment for everyone involved.