- Repaint: This happens when changes are made to the appearance of elements that do not affect their layout, such as changing the background colour or visibility. The browser simply repaints the affected elements without recalculating their positions.
- Reflow: This occurs when changes are made that affect the layout of the page, such as adding or removing elements, changing dimensions, or modifying the content. The browser recalculates the positions and sizes of elements, which can be an expensive operation in terms of performance.

- How JavaScript Affects Page Load Speed and Performance

- Download Time: Large JavaScript files can increase the time it takes for a page to load, especially on slower connections.
- Parsing and Execution: JavaScript must be parsed and executed by the browser, which can delay the rendering of the page. Long-running scripts can block the main thread, making the page unresponsive.
- Rendering Performance: JavaScript can trigger reflows and repaints, which can be costly in terms of performance. Optimising JavaScript to minimise these operations can improve the user experience.

- Minification is the process of removing all unnecessary characters from the source code without changing its functionality. This includes removing whitespace, comments, and shortening variable names.
- Benefits

- Reduced File Size: Smaller files download faster, improving page load times.
- Improved Performance: Less code to parse and execute can lead to better performance.
- Bandwidth Savings: Reduced file sizes mean less data to transfer, saving bandwidth.

- A JS Web Workeris a JavaScript feature that allows you to run scripts in the background, separate from the main execution thread of a webpage.
- Use Cases:

- Heavy Computations: Offloading complex calculations to a web worker can keep the main thread free, ensuring the UI remains responsive.
- Real-time Data Processing: Web workers can handle tasks like fetching and processing large datasets or real-time data updates without blocking the main thread.
- Background TaskS: Tasks such as prefetching data, periodic updates, and other background operations can be handled by web workers to improve performance and user experience.

- https://www.explainthis.io/en/swe/repaint-and-reflow
- https://developer.mozilla.org/en-US/blog/fix-javascript-performance/
- https://kinsta.com/blog/minify-javascript/