How to Optimize Overall Frontend App Performance

- **Code Splitting**: Break your code into smaller chunks and load them on demand.
- **Lazy Loading**: Load images, components, and data only when they are needed.
- **Minify Assets**: Compress CSS, JavaScript, and HTML files to reduce size.
- **Image Optimization**: Use compressed formats like WebP or tools like TinyPNG.
- **Use CDN**: Serve assets through a Content Delivery Network for faster delivery.
- **Reduce HTTP Requests**: Combine CSS/JS files and use image sprites.
- **Caching**: Implement browser and server caching to avoid reloading unchanged resources.
- **Tree Shaking**: Remove unused JavaScript code during the build process.
- **Preload and Prefetch**: Use `<link>` tags to load resources faster.
- **Optimize Rendering**: Minimize DOM manipulations and critical rendering paths.
- **Use Efficient CSS**: Avoid complex selectors and limit unused styles.
- **Monitor Performance**: Regularly test with tools like Lighthouse or Chrome DevTools.