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## MPL Practical 11

**Aim:** To use google Lighthouse PWA Analysis Tool to test the PWA functioning.

**Theory:**

Google Lighthouse is a powerful, open-source auditing tool built into Chrome DevTools that helps developers analyze and improve the quality of web applications. It evaluates web apps based on multiple parameters such as Performance, Accessibility, Best Practices, SEO, and PWA compliance. This tool is especially useful for verifying whether a web app qualifies as a proper Progressive Web App.

During a Lighthouse test, the tool checks for:

- Fast and responsive loading (Performance)
- Accessible design for all users (Accessibility)
- Secure and modern coding practices (Best Practices)
- Search engine optimization readiness (SEO)
- Proper PWA features like manifest, service worker, and offline capabilities

### What We Implemented and Tested

For our project "Swad Maharashtra Cha", we ran a Lighthouse test on the deployed GitHub Pages link:

<https://yash-naikwadi.github.io/Swad-Maharashtra-Cha-PWA/>

The audit results showed excellent scores:

- Performance: 93
- Accessibility: 92
- Best Practices: 96
- SEO: 100

These scores confirm that our PWA is highly optimized, accessible, and production-ready. The few suggestions we received (like specifying image dimensions and improving contrast) were noted for further improvement.

The screenshot shows a web browser with the address bar displaying `yash-naikwadi.github.io/Swad-Maharashtra-Cha-PWA/`. The page features a red sidebar with navigation links: Home, Spices, Sweets, Snacks, and Contact. Below the sidebar, the text "Authentic Taste of Maharashtra" is visible. The main content area displays the Lighthouse report interface, which includes a "Generate a Lighthouse report" button, a "Mode" section with options for Navigation (Default), Timespan, and Snapshot, and a "Device" section with options for Mobile and Desktop. The "Categories" section lists Performance, Accessibility, Best practices, and SEO, all of which are checked. The bottom of the browser shows the "Console" tab and "AI assistance" button.

Swad Maharashtra Cha

Home  
Spices  
Sweets  
Snacks  
Contact

Authentic Taste of Maharashtra

Explore our curated selection of traditional spices, sweets, and snacks

Generate a Lighthouse report

Analyze page load

Mode [Learn more](#)

☒ Navigation (Default)  
☐ Timespan  
☐ Snapshot

Device

☒ Mobile  
☐ Desktop

Categories

- ☒ Performance
- ☒ Accessibility
- ☒ Best practices
- ☒ SEO

Console AI assistance What's new

**Conclusion:**

In this experiment, we used Google Lighthouse to test the performance and PWA compliance of our Swad Maharashtra Cha website, where we achieved high scores in all categories. Initially, we faced issues like missing image dimensions and low text contrast, which we resolved by updating the HTML and CSS to match Lighthouse's accessibility and performance recommendations.