Aim : To use google lighthouse tool, to tert the
PWA functioning

Theory :

what's google lighthouse tool ?
It is the tool that lets you audit your web
application based on number of parameters including
performance, based on a number of Meterics Mobile
compatibility. Progressive web App(PWA) implementation
etc. All you have to do is run it on a page
or pass it o URL, sit back for a couple of
Minute and get a very elaborate report, not
much short of one that a professional auditor
could've compiled in about a week

Key features :

Performance : Its an aggregetation of how the Page
fared in aspects such as loading speed,
time taken for loading basic frame

PWA Score : It's a score based on the Baseline
PWA checklist laid down by google which
includes service worker implementation

Accessibility : It's a Measure of how accessible a
website is across a plethora of accessibility

features that can implemented it in your page

conclusion :

Thus we successfully used google lighthouse
PWA Analysis tool for testing the PWA function

METRICS

▲ First Contentful Paint
16.6 s

▲ Largest Contentful Paint
30.6 s

▲ Total Blocking Time
2,620 ms

▲ Cumulative Layout Shift
0.303

▲ Speed Index
16.6 s

⊞ View Treemap

Show audits relevant to: **All** FCP LCP TBT CLS

DIAGNOSTICS

▲ Avoid large layout shifts — 2 layout shifts found

▲ Minimize main-thread work — 12.5 s

▲ Largest Contentful Paint element — 30,640 ms

▲ Reduce JavaScript execution time — 2.8 s

▲ Reduce the impact of third-party code — Third-party code blocked the main thread for 1,130 ms

▲ Enable text compression — Potential savings of 3,723 KiB

▲ Minify JavaScript — Potential savings of 743 KiB

▲ Reduce unused JavaScript — Potential savings of 552 KiB

▲ Eliminate render-blocking resources — Potential savings of 450 ms

▲ Preconnect to required origins — Potential savings of 320 ms

▲ Page prevented back/forward cache restoration — 1 failure reason

■ Reduce unused CSS — Potential savings of 14 KiB

📅 Captured at Apr 11, 2025,
10:32 PM GMT+5:30
⏱ Initial page load

💻 Emulated Moto G Power with
Lighthouse 12.4.0
📶 Slow 4G throttling

👥 Single page session

🌐 Using Chromium 135.0.0.0 with
devtools

Generated by **Lighthouse** 12.4.0 | File an Issue

Conclusion: Thus we successfully used google Lighthouse PWA Analysis Tool for testing the PWA on various factors such as performance, Accessibility, and SEO.