Intro to
Progressive
Web Apps

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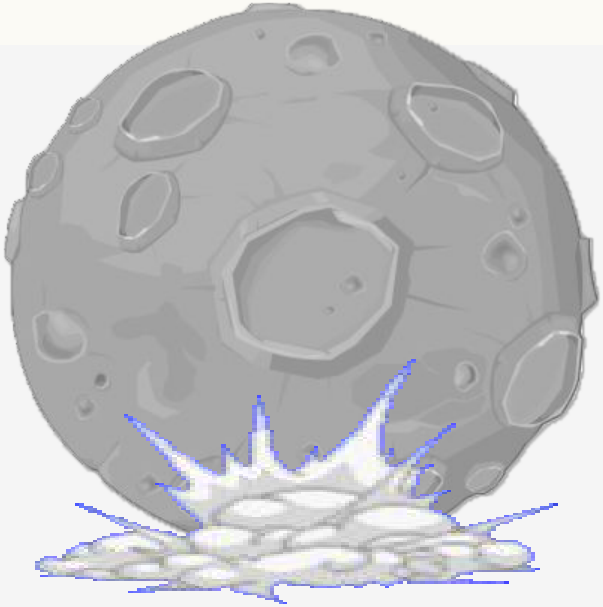
PROGRESSIVE



Brief History Lesson

Static Pages → Dynamic Sites (AJAX) → Single Page Apps

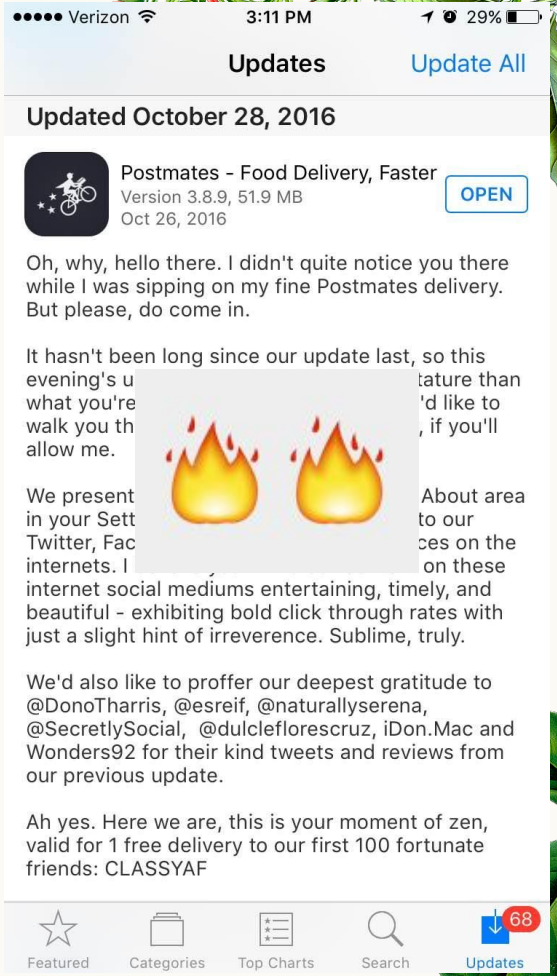
What are PWA's?

Web Apps that feel like Native Apps

Today's Problems

- App Distribution & Support
- Global Cellular Networks
- Zombie Apps

App Distribution & Support



Global Cellular Networks

Zombie Apps

What are PWA's?

- Add to Home Screen
- Push Notifications
- Work Offline
- Fast Interactivity

Add to Home Screen

```
{
  "name": "HackerWeb",
  "short_name": "HackerWeb",
  "start_url": ".",
  "display": "standalone",
  "background_color": "#fff",
  "description": "A simply readable Hacker News app.",
  "icons": [{
    "src": "images/touch/homescreen48.png",
    "sizes": "48x48",
    "type": "image/png"
  }, {
    "src": "images/touch/homescreen72.png",
    "sizes": "72x72",
    "type": "image/png"
  }, {
    "src": "images/touch/homescreen96.png",
    "sizes": "96x96",
    "type": "image/png"
  }, {
    "src": "images/touch/homescreen144.png",
    "sizes": "144x144",
    "type": "image/png"
  }, {
    "src": "images/touch/homescreen168.png",
    "sizes": "168x168",
    "type": "image/png"
  }, {
    "src": "images/touch/homescreen192.png",
    "sizes": "192x192",
    "type": "image/png"
  }],
  "related_applications": [{
    "platform": "web"
  }, {
    "platform": "play",
    "url": "https://play.google.com/store/apps/details?id=cheeaun.hackerweb"
  }]
}
```

Push Notifications

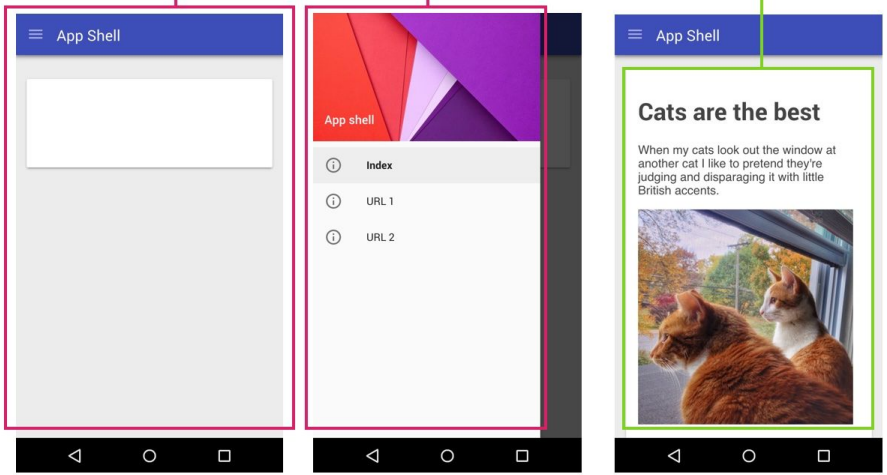
Work Offline

- Content Caching w/ LocalStorage or IndexedDB
- Service Workers

Fast Interactivity

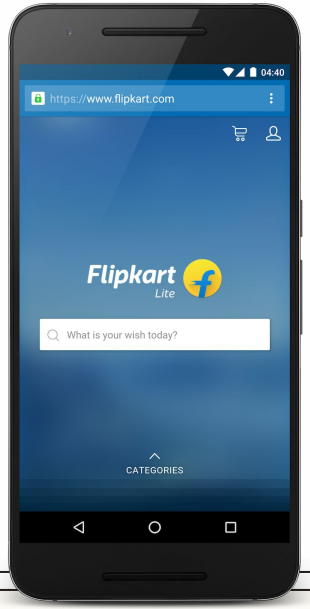
application shell

content



Cached shell loads **instantly** on repeat visits.

Dynamic content then populates the view



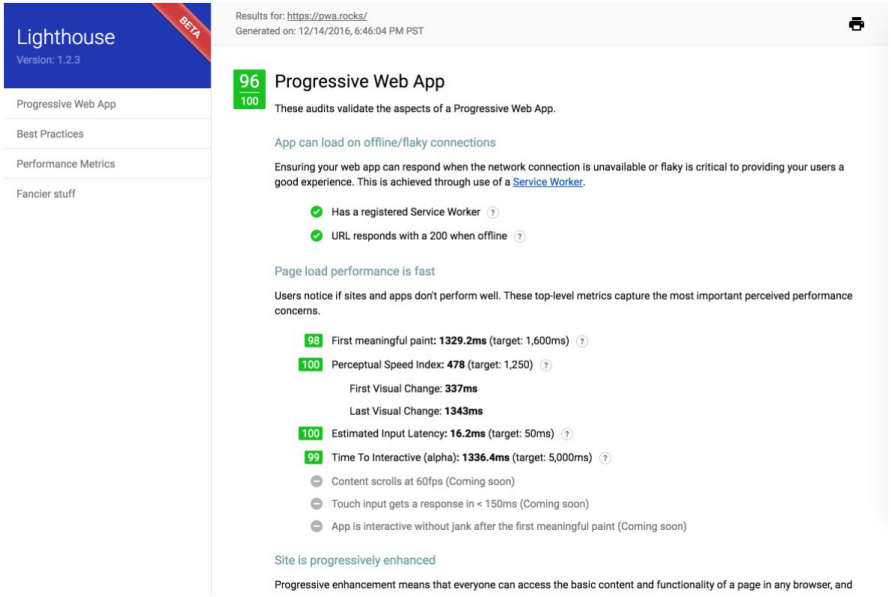
PRPL

Tools

Lighthouse build passing coverage 81%

> Lighthouse analyzes web apps and web pages, collecting modern performance metrics and insights on developer best practices.

HTML report:



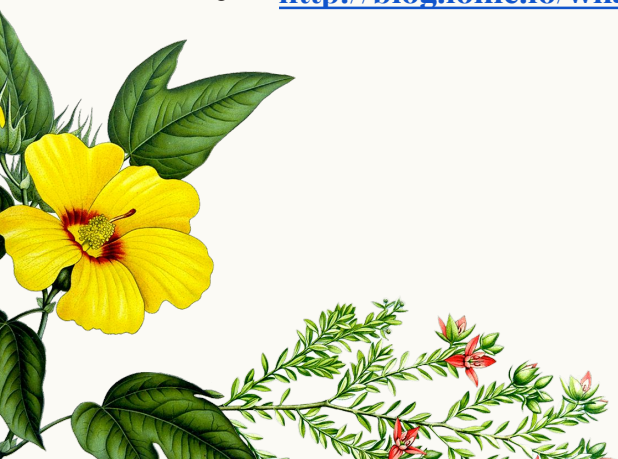
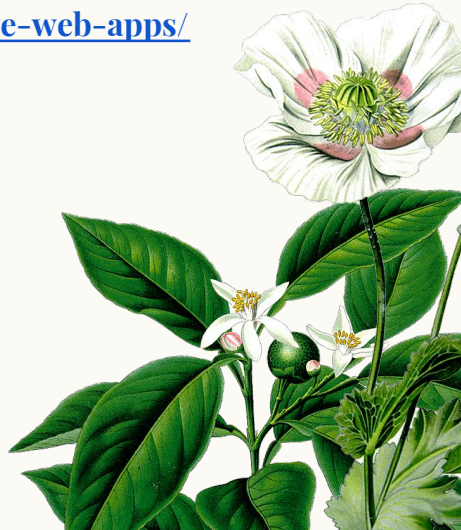
Examples

Addy Osmani

- https://www.youtube.com/watch?v=srdKqoDckXQ
- https://www.youtube.com/watch?v=e8XejNt5SZo
- https://addyosmani.com/blog/progressive-web-apps-with-react/

More Resources

- https://developers.google.com/web/progressive-web-apps/
- https://www.smashingmagazine.com/2016/08/a-beginners-guide-to-progressive-web-apps/
- http://blog.ionic.io/what-is-a-progressive-web-app/

Questions?

Credits

Special thanks to all the people who made and released these awesome resources for free:

- Presentation template by SlidesCarnival
- Plant illustrations from Köhler's Medizinal-Pflanzen in naturgetreuen at BHL