

В статті розглядається технологія Progressive Web Apps, що є найбільш сучасною тенденцією в програмуванні мобільних веб-додатків. Все більше великих компаній додають підтримку даної технології в своїх основних ресурсах в тому чи іншому вигляді. В статті розглянуто основні принципи роботи даної технології, висвітлено переваги перед «нативними» додатками мобільних пристроїв.

Ключові слова: PWA, прогресивний веб-додаток, новітня технологія, висока швидкодія, оптимізація, автономний додаток, мобільний додаток, гаджет, веб-розробка.

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REVIEW AND ANALYSIS OF ADVANCED ARCHITECTURE OF WEB APPLICATIONS

In the article we review a new technology as call a Progressive Web Apps. This format for creating mobile sites attracted attention due to the relative ease of development and almost instantaneous interaction with the user. The primary purpose of PWA is to increase conversions, number of users, and the convenience of using Web-based applications on mobile devices. It is the most current trend in programming of mobile web applications. More and more big companies added support of this technology in their main websites The proposal to install a progressive application is only displayed when the web application meets certain criteria and the user has shown interest by re-visiting the site. Installing the application is instantaneous. All components that require a long boot already have been installed in the cache when the user first visits the site. Progressive applications are much smaller in size, since they effectively use browser capabilities. Pop-up messages, offline work and many other advanced features will work even if the visitor has never installed it. This article discusses the basic principles of this technology, highlighted the benefits to the "native" mobile applications.

Keywords: PWA, progressive web apps, progressive technology, high-speed mobile web, optimization, offline application, mobile application, gadget, web development.

[2].
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Google.
[4, 5].
Progressive Web Apps (PWA) Google 2015
2016 Google I / O The Washington Post
Web- (JS + HTML + CSS) PWA [3]. Web
Web- PWA –
Progressive Web Apps Accelerated Mobile Pages.
AMP AMP, PWA.
PWA.
« » « ».
(- iOS Android).
push-
. Progressive Web App
?
whatwebcando.today, API,
PWA.
2015 marketingland.com
80%
Facebook,
Instagram, 20% 2016
PWA?

Google, App Store. PWA, «Progressive Web Apps» PWA. HTML5 JavaScript, Google PWA Architecture (Service Workers Application Shell). AppCache, Service Workers, Service Worker, JavaScript, AppCache; Service Worker (Offline First). Service worker JavaScript- Service worker JavaScript, worker, DOM service worker. Service workers HTTPS worker service worker (service worker, worker service worker (Service workers: CoffeeScript, less, CJS / AMD); service worker

service workers web- ,

Architecture () – HTML, CSS JavaScript, Application Shell

(Application Shell) « » API.

JavaScript, ? PWA

3G- ,

PWA

GET- PWA, PWA,

Cache with fallback to network – « ».

Network with fallback to Cache – « ».

Cache and Network race – « ».

Facebook Twitter.

HTML- : JSON.

<link rel="manifest" href="/manifest.json">

JSON-

push-

```

{
  "lang": "ua",
  "dir": "ltr",
  "name": " ",
  "description": " - ",
  "short_name": " ",
  "icons": [{
    "src": "icon/lowres.webp",
    "sizes": "64x64",
    "type": "image/webp"
  },
  {
    "src": "icon/hd_hi",

```

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    "sizes": "128x128"
  }],
  "scope": "/test/",
  "start_url": "/test/start.html",
  "display": "fullscreen",
  "orientation": "landscape",
  "theme_color": "aliceblue",
  "background_color": "red",
  "screenshots": [{
    "src": "screenshots/test.jpg",
    "sizes": "640x480",
    "type": "image/jpeg"
  }
}

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name short_name.

```

{
  "name": "
  "short_name": "
}
short_name
(
,
).
name
,
«
»
«
-
»,
<meta name = "application-name">,
<title>.
:
«
-
».
icons.
,
,
,
: <link rel = "icon">,
<favicon.ico>
,
,
,
{
  "display": "fullscreen",
  "orientation": "landscape"
}
start_url
{
  "start_url": "/start.html"
}
:
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gmail.com docs.google.com
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robots.txt.
robots.txt.
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SEO-

```

JS-SEO, Angular, React, Angular.JS, React, Google, Google, « » JS-HTML, PWA, <script>, CSS JS, <code> src, JS () CSS (), Progressive Web App, Google Play Store, IOS App Store

1. () / " ", 2006. – 350 .
2. web- []. – <http://sites.znu.edu.ua/webprog/lect/1191.ukr.html>
3. web- []. – <http://it-ua.info/news/2016/08/15/progresivna-zavantazhennya-web-dodatkv-za-dopomogyu-podlu-kodu.html>

References

1. Pasichnyk V.V. Hlobalni informatsiini systemy ta tekhnolohii (modeli efektyvnoho analizu, opratsiuvannia ta zakhystu danykh) / Pasichnyk V.V., Zhezhnych P.I., Kravets R.B., Peleshchyshyn A.M. Tarasov D.M. – Lviv : Vyd-vo Natsionalnoho universytetu "Lvivska politekhnik", 2006. – 350 p.
 2. Features of web-applications [Electronic resource]. - <http://sites.znu.edu.ua/webprog/lect/1191.ukr.html>
 3. Progressive download of web-applications [Electronic resource]. – <http://it-ua.info/news/2016/08/15/progresivna-zavantazhennya-web-dodatkv-za-dopomogyu-podlu-kodu.html>

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