



The technical solutions behind Öppna Skolplattformen

How we built a successful app for a hostile API provider...

@ErikHellman - Head of Development @ Iteam Solutions



How I became a parent without having any children....

@ErikHellman - Head of Development @ Iteam Solutions

10 August, 1628



~400 years later...

OECD Open, Useful and Re-usable data (OURdata) Index: 2019

Table 1. Detailed Results OECD 2019 OURdata Index

2019 OURdata Index Rank	Country ¹	Global Score ²		Pillar 1: Data availability ³		Pillar 2: Data accessibility		Pillar 3: Government Support to re-use	
		2019	Change since 2017	2019 score	Change since 2017	2019 score	Change since 2017	2019 score	Change since 2017
1 ▶	Korea	0.93	▼ 0.01	0.31	▼ 0.01	0.29	▶ 0	0.33	▶ 0
2 ▶	France	0.90	▲ 0.05	0.30	▲ 0.02	0.31	▶ 0	0.29	▲ 0.03
3 ▲	Ireland	0.77	▲ 0.24	0.26	▲ 0.09	0.23	▲ 0.02	0.28	▲ 0.13
30 ▼	Chile	0.41	▲ 0.10	0.15	▲ 0.05	0.20	▲ 0.01	0.07	▲ 0.04
31 ▼	Sweden	0.38	▲ 0.06	0.11	▼ 0.02	0.13	▲ 0.04	0.14	▲ 0.05
32 ▶	Lithuania	0.35	▲ 0.03	0.10	▼ 0.04	0.19	▲ 0.02	0.05	▲ 0.05



Stockholms stad

Start

 Sök

 Meny

Other languages Webbplatskarta

[Start](#) / [Förskola och skola](#) / Skolplattformen

Skolplattformen

Skolplattformen är en gemensam digital plattform för Stockholms stads samtliga skolformer: förskola, grundskola, gymnasieskola och vuxenutbildning, inklusive särskolor.

Inloggning och support

Behöver du hjälp med inloggning eller annan support? Välj den skolform du har frågor om.

[Skolplattformen i förskolan](#) >

[Skolplattformen i grundskolan](#) >

[Skolplattformen i gymnasieskolan](#) >

Skolplattformen – Support för vårdnadshavare

🕒 ÖPPET JUST NU

Öppettider

Måndag–torsdag 07.00–16.30
Fredag 07.00–16.00

Avvikande öppettider

1 maj – stängt

Kontakta oss om du har frågor om inloggning eller något annat om hur du använder Skolplattformen. Har du frågor om hur ditt barn använder Skolplattformen ska du i stället kontakta Support för elever.

📞 **Telefon:** [08-508 11 552](tel:08-50811552)
@ **E-post:** support.skolplattformen@stockholm.se

9:46

 Skolplattformen



Stockholms stad



Startsidan

Översikt

Schemavisare

Visa schema för skola.



Elev/Klass-bild

Samlad information om elever



Frånvaro

Anmäla frånvaro

Anmäla frånvaro för barn eller elev



Ansöka om ledighet

Hantera ledighetsansökan för elev



 Hem Frånvaro/Närvaro Snabbänkor

https://etjanst.stockholm.se/varnadshavare/inloggad2/herr

Inloggad:

Stockholms stad

Skolplattformen

MENY

Välj barn

Tekniskt fel

Skolplattformen

MENY

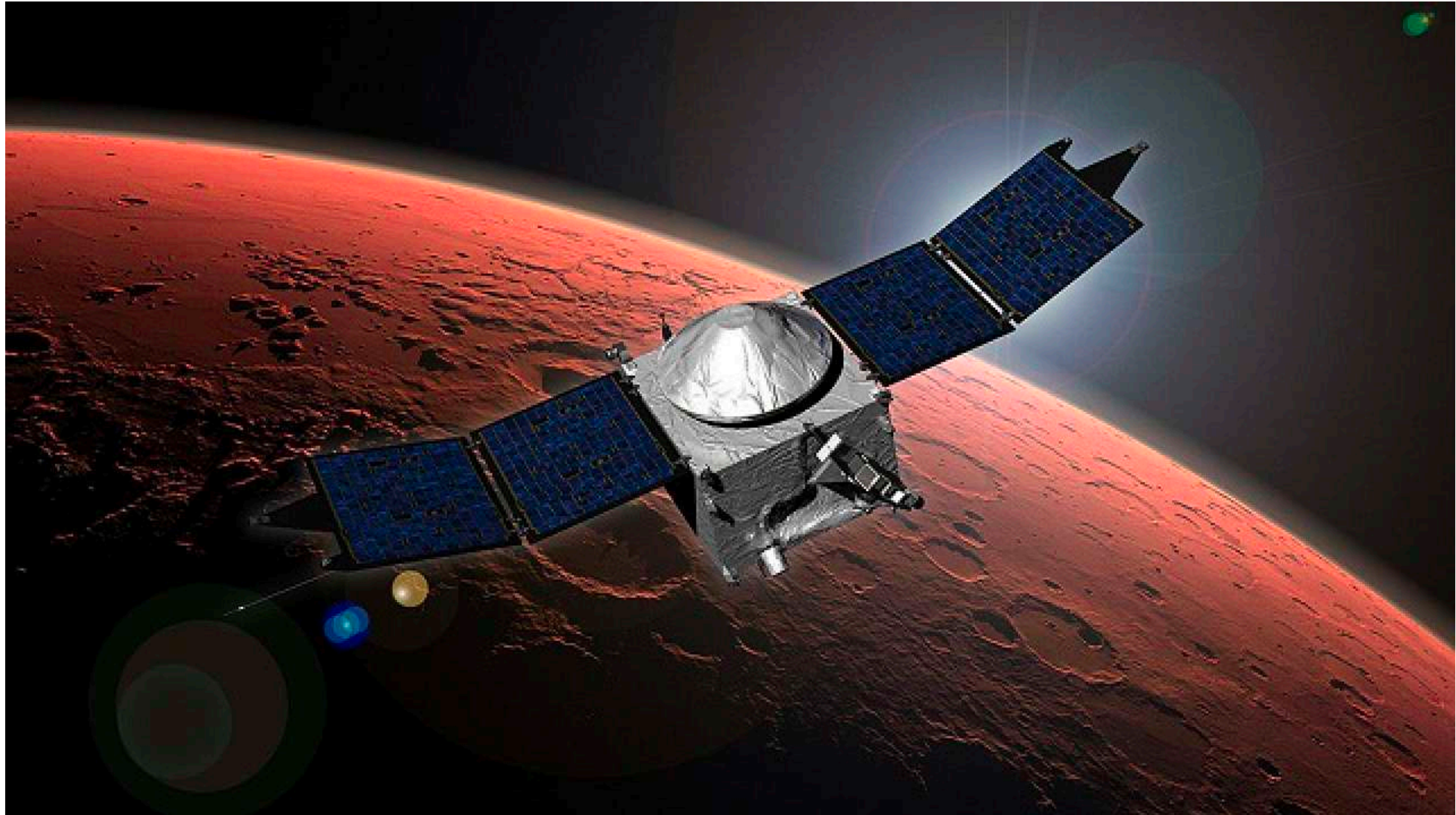
Välj barn

Tekniskt fel

1 billion SEK (until 2020)

(\$117 million)

Mars Orbiter Mission: Mangalyaan



Betyg och recensioner

1,1 av 5

970 betyg

REVIEWS

[Review policy and info](#)





Sarabella Sweden, 2020-08-23

Så här gick det till:

Skolplattformen. Skapad av en orangutang. Vid tillfället med fastkedjade armar, nedsänkt under vatten. Knackar febrilt och ljudlöst på det inplastade tangentbordet med läpparna. Blåser luftbubblor på musen. Lyckas drämma sin handliknande fot på publiceringsknappen innan den simmar upp till ytan igen och ringer en blåsfisk som får agera testgrupp. Blåsfisken säger inget, vilket de räknar som medhåll. Länk skickas ut. DETTA INLÄGG ÄR SPONS RAT AV VALIUM



Makkan91, 2020-11-23

Värre än Corona

Trött på att livet leker? LADDA NER APPEN. Avundsjuk på att alla dina vänner men inte du lider av depression? LADDA NER APPEN. Saknar du den där känslan av ett långsamt framkrypande sammanbrott? LADDA - NER - APPEN.

Den här appen fungerar sämre än mitt förra äktenskap och får mig att må sämre än när Snape dödade Dumbledore. 10/10 sadister rekommenderar.

★ ★ ★ ★ ★ 10 March 2021

5

Tekniskt fel.... have never experienced a worse app . Scrap and redo, would probably get a greater experience and more functional app if they hired kindergarten kids to do the actual programming

★ ★ ★ ★ ★ 26 January 2022

2

It just doesn't work. Its more of a problem than a useful app. If you can manage to logging then good luck trying to figure where devs have hidden the menus. Its a general usability problem



Josef Mann, 2020-08-17

Får mig att ångra att jag ens skaffat barn

Appen är så full av fel att det är omöjligt att ens börja beskriva dem. Slumpartat om jag kan logga in eller om jag skickas till en evig loop mellan webbläsare och app. Överväger att hemundervisa ungarna för att slippa ha med Skolplattformen att göra någonsin igen.

Uppdateringshistorik

1.7.2

24 mars 2022

Förbättringar

1.7.1

20 jan. 2022

Felrättningar

1.7.0

14 dec. 2021

Snabblänkar
Stöd för Freja eID+
Förbättringar

1.6.1

12 maj 2021

Uppdaterad app-beskrivning

1.6.0

27 nov. 2020

Appen uppdaterad pga byte av adress

1.5.0

30 apr. 2020

buggfixar

1.4.6

24 mars 2020

buggfixar

1.4

20 dec. 2019

bankid fix

1.3

10 dec. 2019

buggfix

1.2

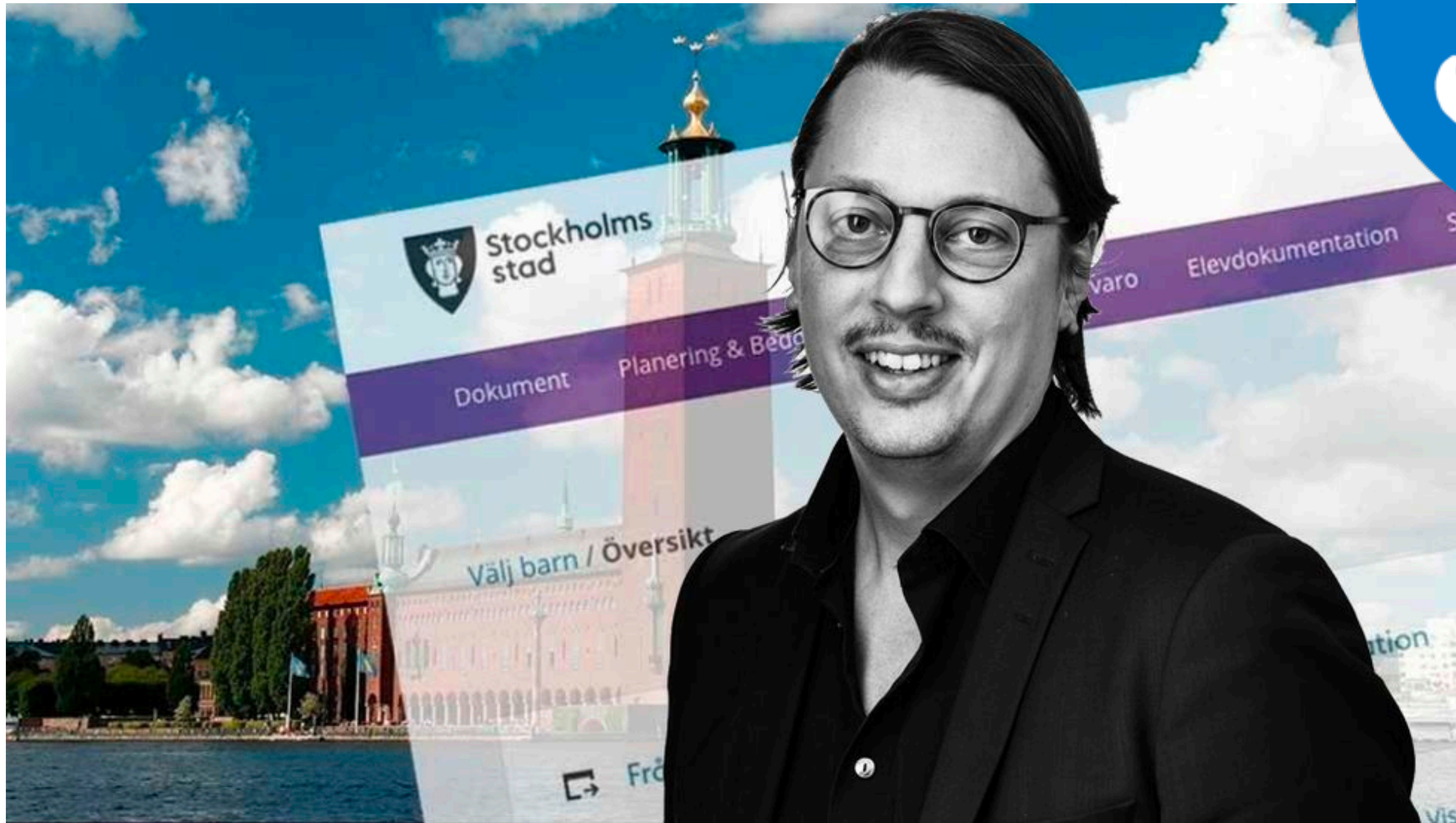
13 sep. 2019

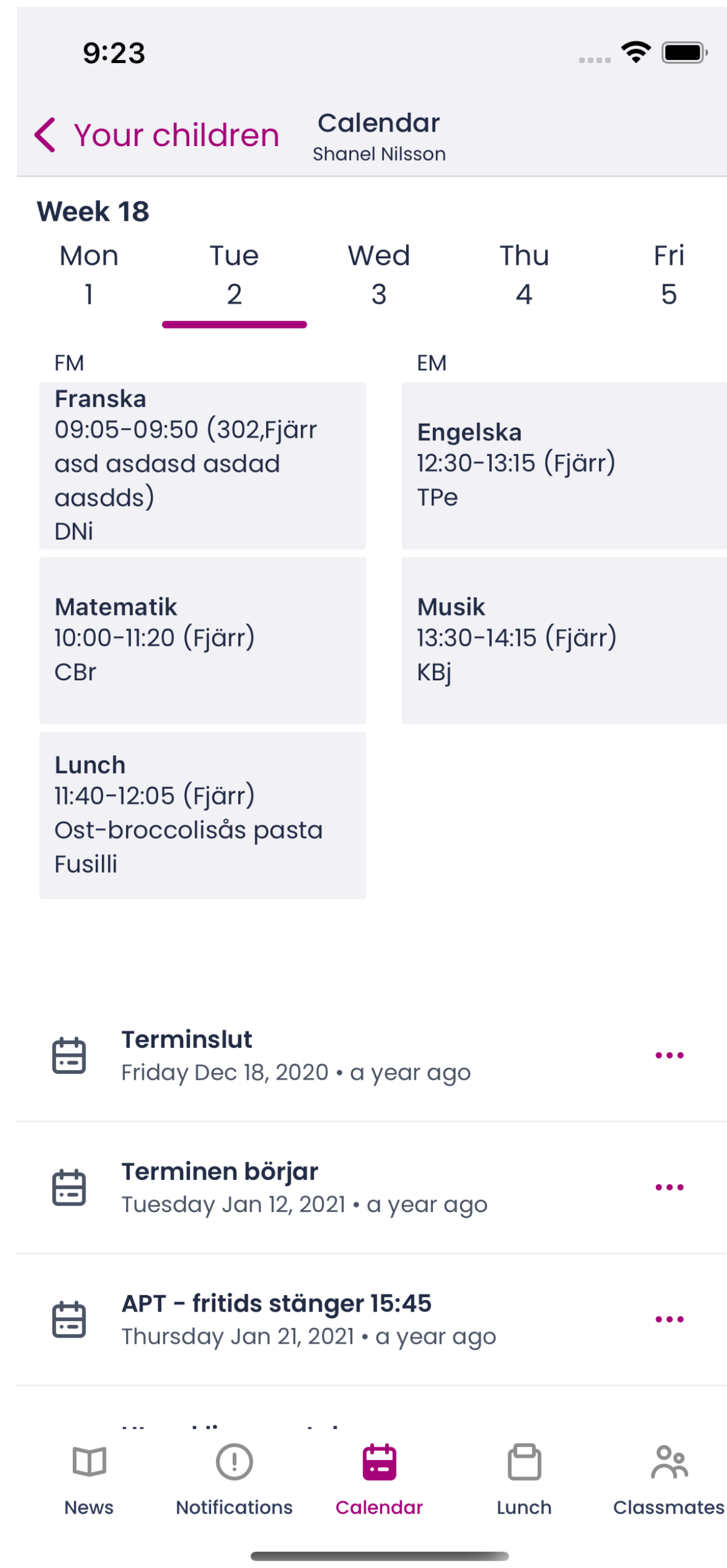
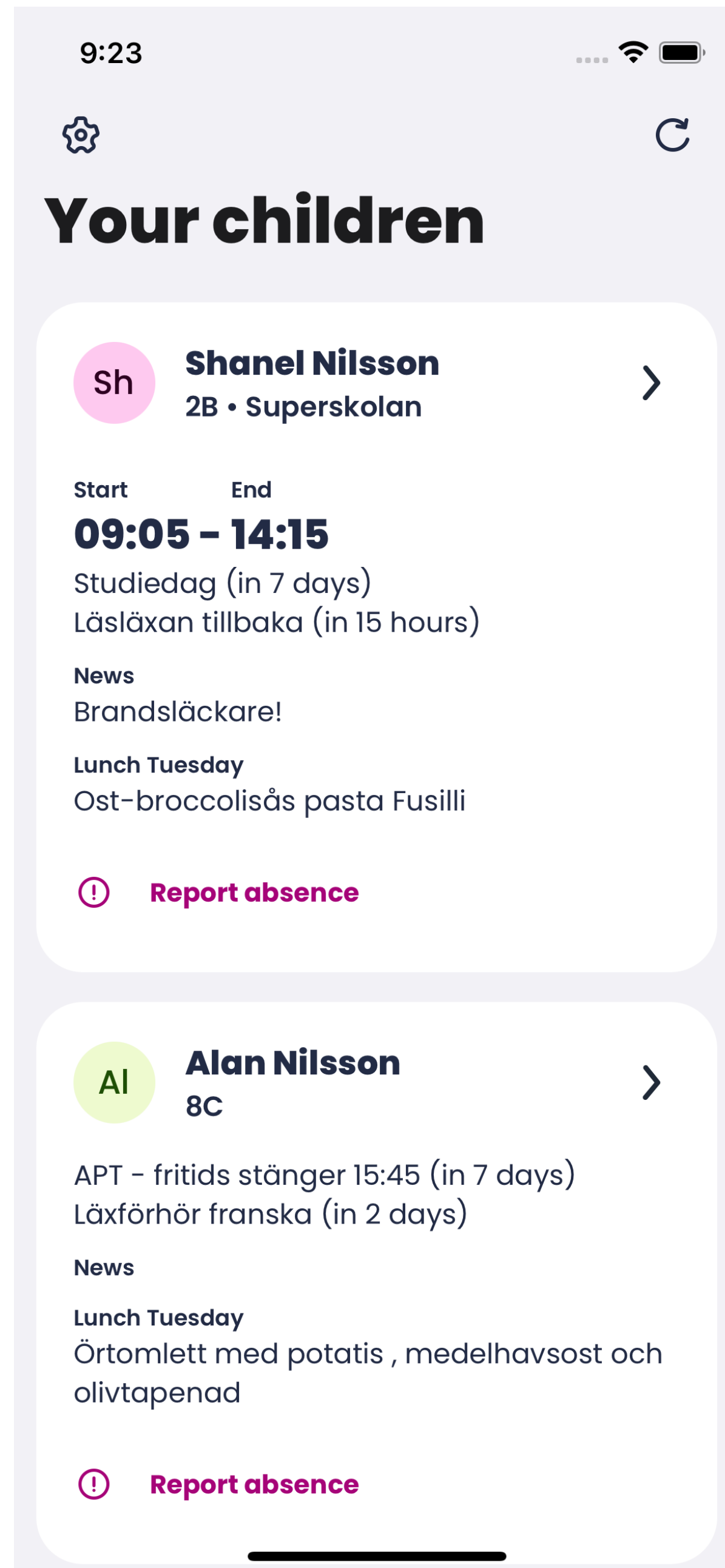
buggfixar

1.0

22 maj 2019

Project Öppna Skolplattformen





Version 1 - February 2021

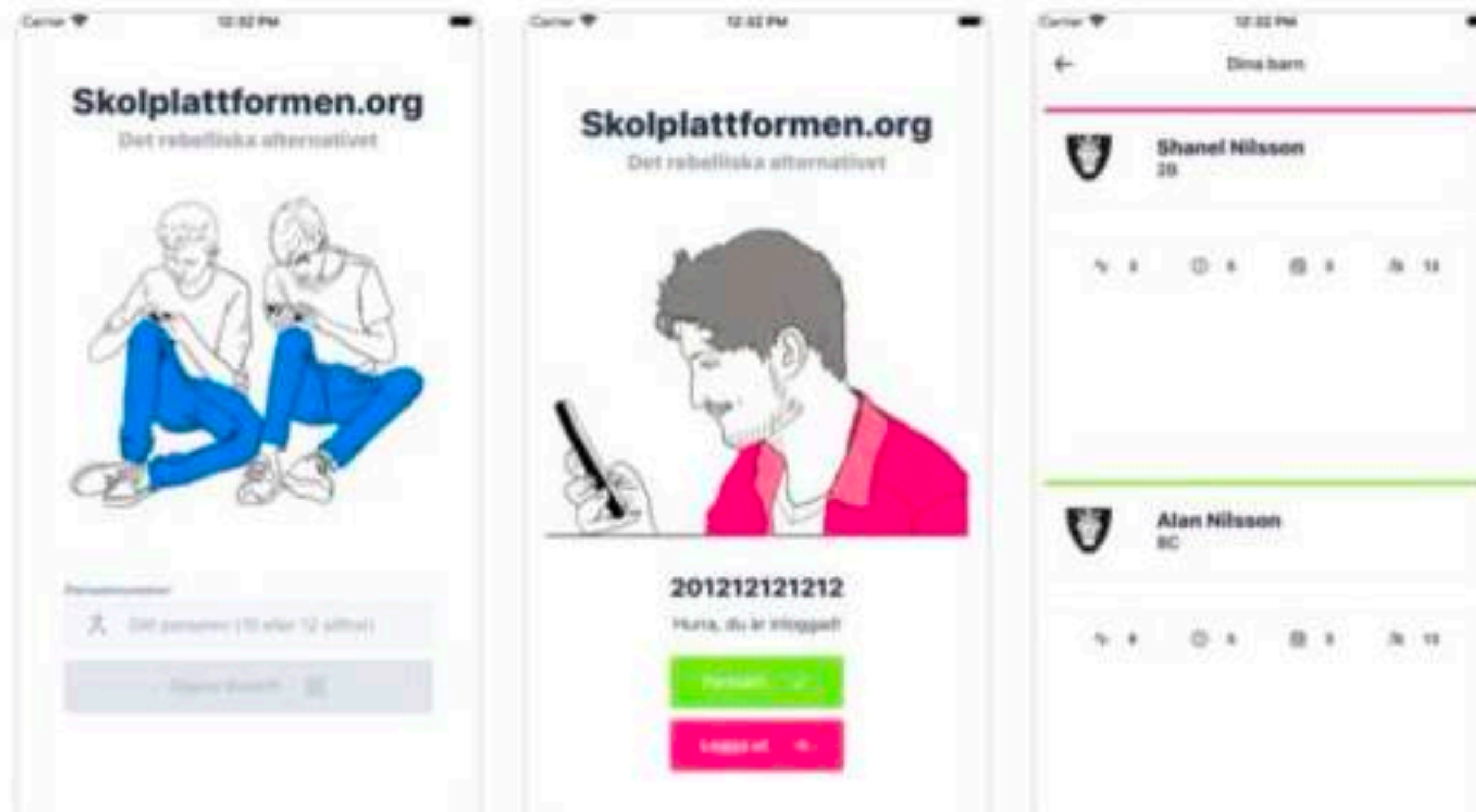


Öppna Skolplattform...

Det efterlängtrade alternati...

★★★★☆ 183

12,00 kr



Version 1 - February 2021

Top Paid Apps

[See All](#)

	1 Öppna Skolplattformen Utilities	12,00 kr
	2 BabyNaps Your personalized nap schedule	35,00 kr
	3 Ta Körkort Education	299,00 kr

Architecture & Design

Erik Daniel

Skolplattformen

Välj barn

Supportinformation

Ring 08-508 11 552

Skicka e-post

support.skolplattformen@stockholm

Mer information om

Skolplattformen

För att nå webbplatskartan och tillgänglighetsredogörelsen måste du först välja ett barn.

Stockholms stad

etjanst.stockholm.se/varnadshavare/inloggad2/hem

navigationContr...=1651561264095

childcontroller...=1651561264095

var childPartialApp = angular.module('childPartialApp', ['ngSanitize', 'an

childPartialApp.controller('ChildController', GetChildren);

childPartialApp.config(['\$locationProvider', function (\$locationProvider)

// In order to get the query string from the

// \$location object, it must be in HTML5 mode.

\$locationProvider.html5Mode(true);

});

childPartialApp.run(function (\$http) {

\$http.defaults.headers.common['X-XSRF-Token'] =

angular.element('input[name="__RequestVerificationToken"]').attr('

//\$http.defaults.headers.common.Authorization = 'Apikey 1234567890abcd

});

function GetChildren(\$scope, \$window, \$http, \$q, \$timeout, \$location, \$anc

\$scope.selectedChild = '';

\$scope.error = {};

\$scope.error.show = false;

\$scope.error.message = '';

\$scope.childrenCount;

\$scope.errorSDSID = false;

\$scope.loading = true;

\$scope.autoRedirect = function () {

if (\$location.search().studentId != null || \$location.search().cla

for (var i = 0; i < \$scope.children.length; i++) {

if (\$location.search().studentId != null && \$location.sear

if (\$scope.children[i].SDSID.toLowerCase() == \$locatio

if (\$scope.pushIsBookingType(\$location.search().pu

\$scope.changeChild(\$scope.children[i].Id, '/va

}

else if (\$scope.pushIsNewsType(\$location.search().

\$scope.changeChild(\$scope.children[i].Id, '/va

}

else {

\$scope.changeChild(\$scope.children[i].Id, '/va

}

}

else if (\$location.search().classId != null && \$location.s

if (\$scope.children[i].Classes != null && \$scope.child

if (\$scope.pushIsBookingType(\$location.search().pu

\$scope.changeChild(\$scope.children[i].Id, '/va

}

else if (\$scope.pushIsNewsType(\$location.search().

}

Line 32, Column 32

Coverage: n/a

Erik Daniel

Skolplattformen

MENY

Välj barn

Supportinformation

Ring 08-508 11 552

Skicka e-post

support.skolplattformen@sto

Mer information om

Skolplattformen

För att nå

webbplatskartan och

tillgänglighetsredogörelsen

måste du först välja ett

etjanst.stockholm.se/vardnadshavare/inloggad2/hem

Network

Filter

10 ms20 ms30 ms40 ms50 ms60 ms70 ms80 ms90 ms100 ms110 ms

getuserdata

GetTechnicalErrorText

GetChildren

getbackendstatus?1651562...

getavailablelanguages?1651...

getacceptcookie?16515625...

getuserdata?1651562515915

GetFooterVH

GetThrottle

GetChildren

1

SuccesstrueErrornullData[]

10 / 38 requests11.2 kB / 390 k

React Native · Learn once, write anywhere

reactnative.dev

React Native

GuidesComponentsAPIArchitectureContributingBlog



 Follow @reactnative

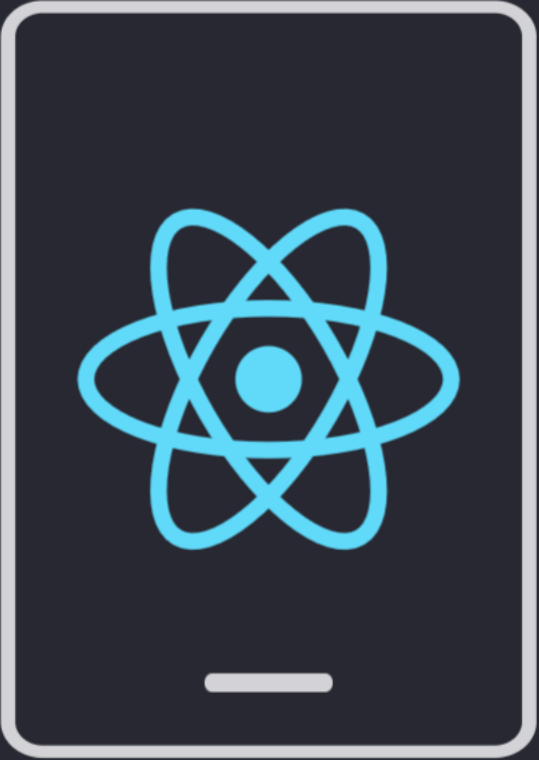
 Star

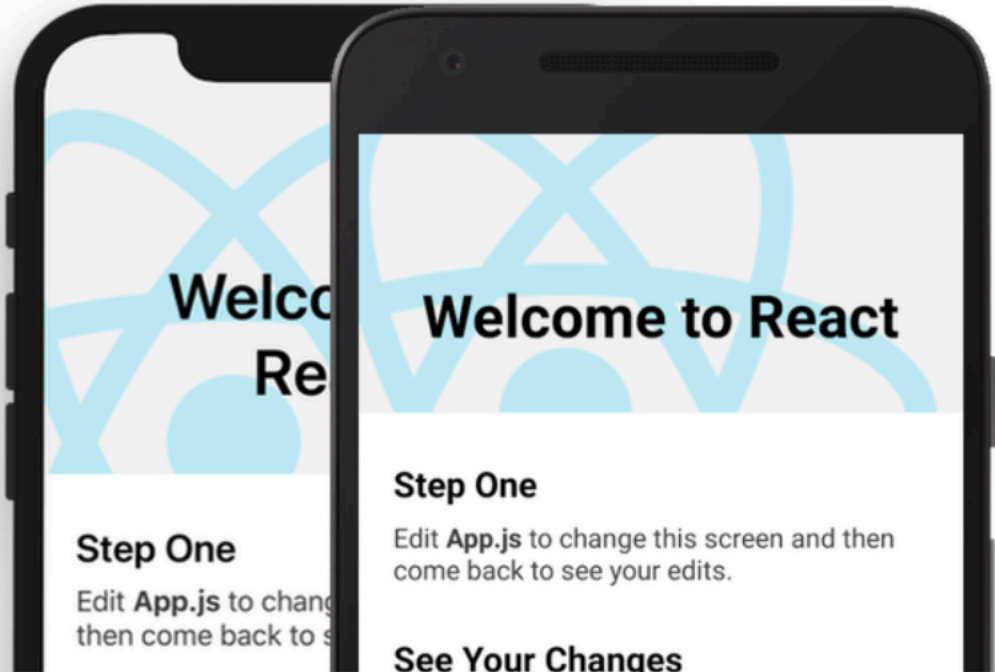
React Native

Learn once, write anywhere.

Get started

Learn basics >

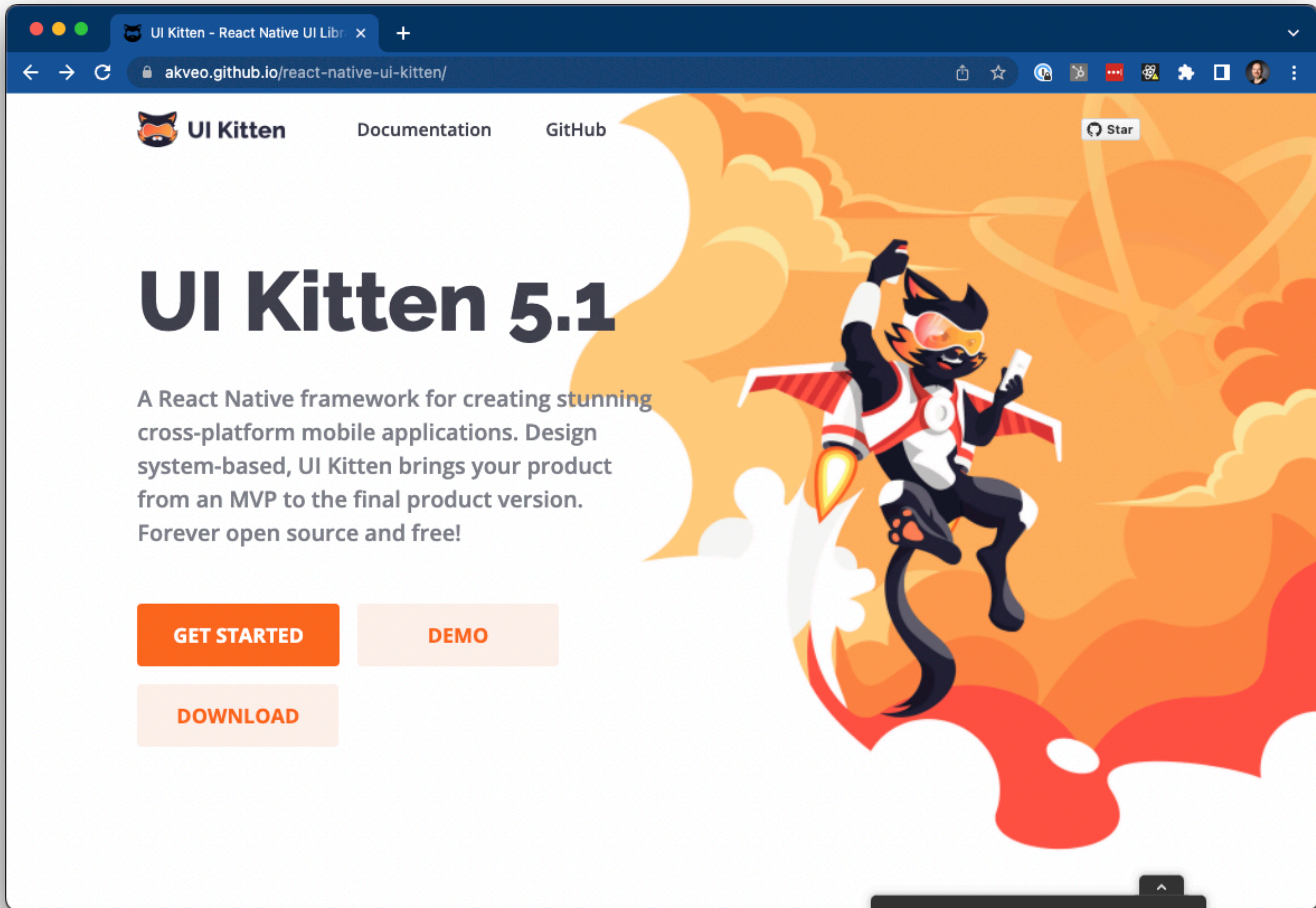




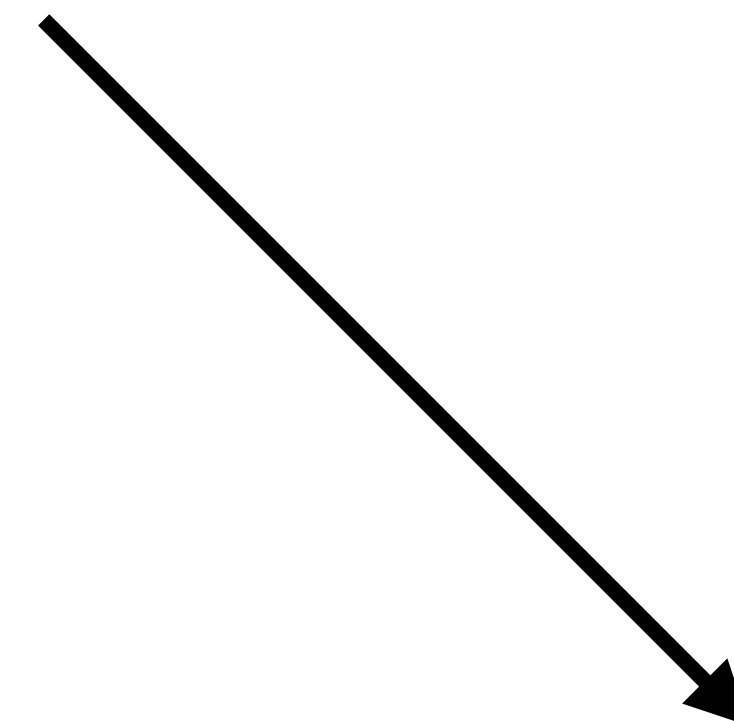
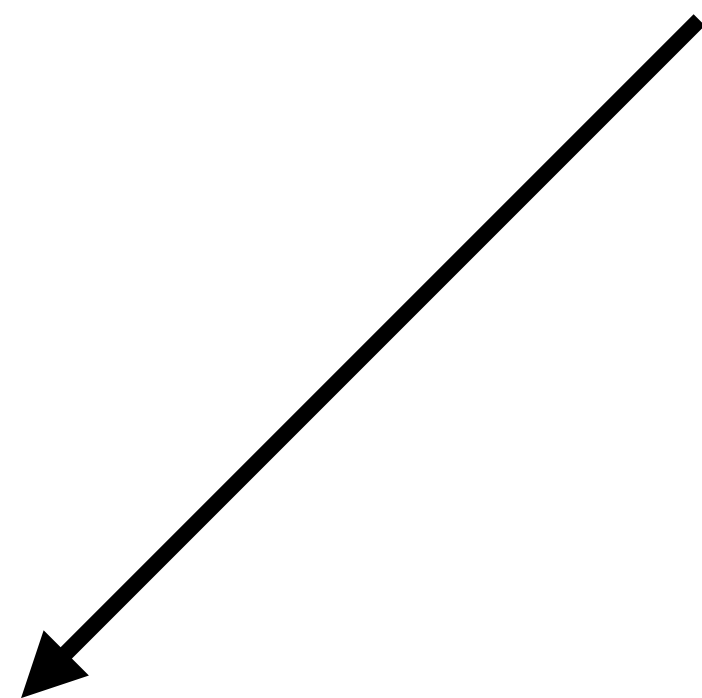
Create native apps for Android and iOS using React

React Native combines the best parts of native development with React, a best-in-class JavaScript library for building user interfaces.

Use a little—or a lot. You can use React Native today in your existing Android and iOS projects or



Öppna Skolplattformen
React Native app



@skolplattformen/embedded-api



@skolplattformen/api-hooks

api-hooks

```
import React from 'react'
import { ApiProvider } from '@skolplattformen/api-hooks'
import init from '@skolplattformen/embedded-api'
import { CookieManager } from '@react-native-community/cookies'
import AsyncStorage from '@react-native-async-storage/async-storage'
import { RootComponent } from './components/root'

const api = init(fetch, () => CookieManager.clearAll())
export default () => (
  <ApiProvider api={api} storage={AsyncStorage}>
    <RootComponent />
  </ApiProvider>
)
```


api-hooks

```
import { useApi } from '@skolplattformen/api-hooks'

export default function LoginController () {
  const { api, isLoggedIn } = useApi()

  api.on('login', () => { /* do login stuff */ })
  api.on('logout', () => { /* do logout stuff */ })

  const [personalNumber, setPersonalNumber] = useState()
  const [bankIdStatus, setBankIdStatus] = useState('')

  const doLogin = async () => {
    const status = await api.login(personalNumber)

    openBankID(status.token)

    status.on('PENDING', () => { setBankIdStatus('BankID app not yet opened') })
    status.on('USER_SIGN', () => { setBankIdStatus('BankID app is open') })
    status.on('OK', () => { setBankIdStatus('BankID signed. NOTE! User is NOT yet logged in!') })
    status.on('ERROR', (err) => { setBankIdStatus('BankID failed') })
  })

  return ( ... )
}
```

Routes - February 2021

```
export const login = (personalNumber: string) =>
  `https://login003.stockholm.se/...&personalNumber=${personalNumber}&_=${Date.now()}`;

export const loginStatus = (order: string) =>
  `https://login003.stockholm.se/...&verifyorder=${order}&_=${Date.now()}`;

export const loginCookie = "https://login003.stockholm.se/...";

export const children = "https://etjanst.stockholm.se/.../GetChildren";

export const calendar = (childId: string) =>
  `https://etjanst.stockholm.se/.../GetSchoolCalender?childId=${childId}&rowLimit=50`;

export const classmates = (childId: string) =>
  `https://etjanst.stockholm.se/.../GetStudentsByClass?studentId=${childId}`;

export const user = "https://etjanst.stockholm.se/.../getuserdata";

export const news = (childId: string) =>
  `https://etjanst.stockholm.se/.../GetNewsOverview?childId=${childId}`;

export const newsDetails = (childId: string, newsId: string) =>
  `https://etjanst.stockholm.se/.../GetNewsArticle?newsItemId=${newsId}&childId=${childId}`;

export const image = (url: string) =>
  `https://etjanst.stockholm.se/varnadshavare/inloggad2/NewsBanner?url=${url}`;

export const notifications = (childId: string) =>
  `https://etjanst.stockholm.se/.../GetNotification?childId=${childId}`;

export const menu = (childId: string) =>
  `https://etjanst.stockholm.se/.../GetMatsedelRSS?childId=${childId}`;

export const schedule = (childId: string, fromDate: string, endDate: string) =>
  `https://etjanst.stockholm.se/.../?childId=${childId}&startDate=${fromDate}&endDate=${endDate}`;
```


Routes - May 2022

```
export const login = (personalNumber?: string) => {
  const baseUrl =
    "https://login003.stockholm.se/...";
  const optionalPersonalNumber =
    personalNumber === undefined ? "" : `&personalNumber=${personalNumber}`;
  return `${baseUrl}&initialize=bankid${optionalPersonalNumber}&_=${Date.now()}`;
};

export const loginStatus = (order: string) =>
  `https://login003.stockholm.se/...&verifyorder=${order}&_=${Date.now()}`;

export const loginCookie =
  "https://login003.stockholm.se/...";

const urlLoggedIn = `https://etjanst.stockholm.se/varnadsnavare/inloggad2`;

export const children = `${urlLoggedIn}/GetChildren`;

export const calendar = (childId: string) =>
  `${urlLoggedIn}/Calender/GetSchoolCalender?childId=${childId}&rowLimit=50`;

export const classmates = (childId: string) =>
  `${urlLoggedIn}/contacts/GetStudentsByClass?studentId=${childId}`;

export const teachers = (childId: string, schoolForm: string) =>
  `${urlLoggedIn}/contacts/GetTeachersByStudent?studentId=${childId}&schoolForm=${schoolForm}`;

export const schoolContacts = (childId: string, schoolId: string) =>
  `${urlLoggedIn}/contacts/GetSchoolContacts?schoolId=${schoolId}&studentId=${childId}&schoolForm=Klasslista`;

export const user =
  "https://etjanst.stockholm.se/varnadsnavare/base/getuserdata";

export const news = (childId: string) =>
  `${urlLoggedIn}/News/GetNewsArchive?bannerImageLimit=5000&childId=${childId}`;

export const newsDetails = (childId: string, newsId: string) =>
  `${urlLoggedIn}/News/GetNewsArticle?newsItemId=${newsId}&childId=${childId}`;

export const image = (url: string) => `${urlLoggedIn}/NewsBanner?url=${url}`;

export const notifications = (childId: string) =>
  `${urlLoggedIn}/notifications/getnotifications?childId=${childId}`;

export const menuRss = (childId: string) =>
  `${urlLoggedIn}/Matsedel/GetMatsedelRSS?childId=${childId}`;

export const menuList = (childId: string) =>
  `${urlLoggedIn}/Matsedel/GetMatsedelList?childId=${childId}`;

export const menuChoice = (childId: string) =>
  `${urlLoggedIn}/Matsedel/GetMatsedelChoice?childId=${childId}`;

export const schedule = (childId: string, fromDate: string, endDate: string) =>
  `${urlLoggedIn}/Calender/GetSchema?childId=${childId}&startDate=${fromDate}&endDate=${endDate}`;

export const cdn = "https://etjanst.stockholm.se/varnadsnavare/base/cdn";

export const auth = "https://etjanst.stockholm.se/varnadsnavare/base/auth";

export const startBundle =
  "https://etjanst.stockholm.se/varnadsnavare/bundles/start";

export const hemPage =
  "https://etjanst.stockholm.se/varnadsnavare/inloggad2/hem";

export const navigationControllerScript =
  "https://etjanst.stockholm.se/.../navigationController";

export const baseEtjanst = "https://etjanst.stockholm.se";

export const childcontrollerScript = `https://etjanst.stockholm.se/.../childcontroller?v=${Date.now()}`;

export const createItemConfig =
  "https://raw.githubusercontent.com/kolplattformen/embedded-api/main/config.json";

// Skola24
export const ssoRequestUrl = (targetSystem: string) =>
  `https://fnsservicess01.stockholm.se/.../authenticate?customer=https://login001.stockholm.se&targetsystem=${targetSystem}`;

export const ssoResponseUrl = "https://login001.stockholm.se/.../saml2sso";
export const samlResponseUrl =
  "https://fnsservicess01.stockholm.se/.../response";

export const timetables = "https://fns.stockholm.se/.../timetables";
export const renderKey = "https://fns.stockholm.se/.../key";
export const timetable = "https://fns.stockholm.se/.../timetable";

export const topologyConfigUrl =
  "https://fantomenkrypto.vercel.app/.../getConfig";

export const selectChild = "https://etjanst.stockholm.se/.../SelectChild";
```

Before first blocking attempt...

```
async getChildren(): Promise<Child[]> {  
  const url = routes.children  
  const response = await this.fetch('children', url, this.session)  
  const data = await response.json()  
  return parse.children(data)  
}
```


First blocking attempt - 2 step auth token?

```
public async getChildren(): Promise<Child[]> {
  const cdnUrl = await this.retrieveCdnUrl()
  const authBody = await this.retrieveAuthBody()
  const token = await this.retrieveAuthToken(cdnUrl, authBody)

  const url = routes.children
  const session = this.getRequestInit({
    headers: {
      Accept: 'application/json;odata=verbose',
      Auth: token,
      Host: 'etjanst.stockholm.se',
      Referer: 'https://etjanst.stockholm.se/Vardnadshavare/inloggad2/hem',
    },
  })
  const response = await this.fetch('children', url, session)

  if (!response.ok) {
    throw new Error(`Server Error [${response.status}] [${response.statusText}] [${url}]`)
  }

  const data = await response.json()
  return parse.children(data)
}
```

First blocking attempt - 2 step auth token?

```
private async retrieveCdnUrl(): Promise<string> {  
  const url = routes.cdn  
  const session = this.getRequestInit()  
  const response = await this.fetch('cdn', url, session)  
  const cdnUrl = await response.text()  
  return cdnUrl  
}
```

```
private async retrieveAuthBody(): Promise<string> {  
  const url = routes.auth  
  const session = this.getRequestInit()  
  const response = await this.fetch('auth', url, session)  
  const authBody = await response.text()  
  return authBody  
}
```


First blocking attempt - 2 step auth token?

```
private async retrieveAuthToken(url: string, authBody: string): Promise<string> {
  const session = this.getRequestInit({
    method: 'POST',
    headers: {
      Accept: 'text/plain',
      Origin: 'https://etjanst.stockholm.se',
      Referer: 'https://etjanst.stockholm.se/',
      Connection: 'keep-alive',
    },
    body: authBody,
  })
  delete session.headers['API-Key']

  // Temporarily remove cookies
  const cookies = await this.cookieManager.getCookies(url)
  this.cookieManager.clearAll()

  // Perform request
  const response = await this.fetch('createItem', url, { ...session })

  // Restore cookies
  cookies.forEach((cookie) => {
    this.cookieManager.setCookie(cookie, url)
  })

  if (!response.ok) {
    throw new Error(`Server Error [${response.status}] [${response.statusText}] [${url}]`)
  }

  const authData = await response.json()
  return authData.token
}
```

Second blocking attempt - XSRF token

```
▼<body>
...  <input name="__RequestVerificationToken" type="hidden" value="xIDFfEruX-X_lV_7FhfGDznm
      WiJwqrve5e-1gxZ79ySzij0AYQf1sdmBYpPFT0Lv6rBsD-QctufPc6Ikr25g0-RXIwiE0RSHmD1-W4DFEWU1">
      == $0
      ▶<ul class="skip">...</ul>
```


Second blocking attempt - XSRF token

```
private async retrieveXsrfToken(): Promise<void> {  
  const url = routes.hemPage  
  const session = this.getRequestInit()  
  const response = await this.fetch('hemPage', url, session)  
  const text = await response.text()  
  const doc = html.parse(decode(text))  
  const xsrfToken =  
    doc  
      .querySelector('input[name="__RequestVerificationToken"]')  
      ?.getAttribute('value') || ''  
  
  this.addHeader('x-xsrf-token', xsrfToken)  
}
```

Attempt 3 - 7: Renaming of the XSRF header

```
{
  "headers": {
    "accept": "text/plain",
    "accept-language": "en-GB,en-SE;q=0.9,en;q=0.8,sv-SE;q=0.7,sv;q=0.6,en-US;q=0.5",
    "access-control-allow-origin": "*",
    ...,
    "x-xsrf-token":
    "Sf0NpuvKXD1XHML3Kelvm3easB6Xn3xtbVPG52jdpc3Q7sRxJv7_6wfjo
    1qS3N0QWkfCvfPkJpJg0QIBmo358o7FdQY2aWvU0xA9MU2Fl0E1",
    "y-xsrf-token11":
    "FyXUbtZUE2iT09J7F0LTpfZ_onjbj3WEI06j0Y9B1KaZzMrAs4WS03AuW
    bQhmKyCEX2inTPVDzyPc58tN2EM4L1vYD6aH_zhlc7gVo9jaPdLKQc4qnE
    6ue184cSamKE0"
  },
  "referrer": "https://etjanst.stockholm.se/",
  "referrerPolicy": "strict-origin-when-cross-origin",
  "body": "XVDf/ElIJ/oZH9BRlRCMNds2jCRcTL8/
  isnpuj2wD6wH1lxX/cHY/.../
  lOP858pPiVfc96M2jc0+yQEgnUBXPgQmFVC6CIHfQ0Mg==",
  "method": "POST",
  "mode": "cors"
}
```


April 2021 - The city calls the cops...

Föräldrarnas skolplattform polisanmäls av Stockholms stad: "Misstänkt dataintrång"

Stockholms stad har under fredagen lämnat in en polisanmälan mot Öppna skolplattformen. "Vi anmäler misstänkt dataintrång", säger stadens utbildningsdirektör Lena Holmdahl.

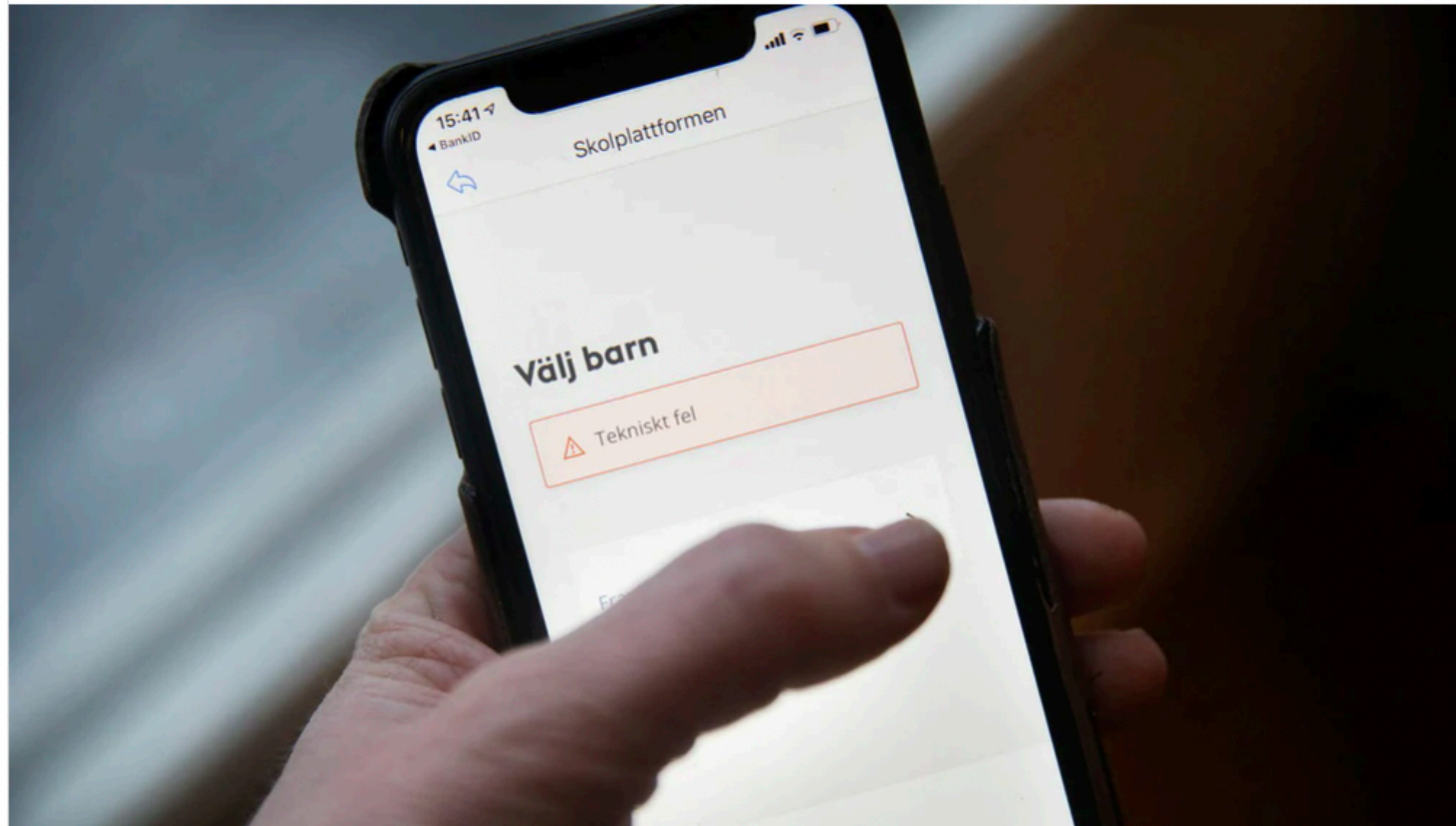
Uppdaterad: 22 december 2021, 16:00 **Publicerad:** 16 april 2021, 16:58

August 2021 - The police closes the case

STHLM

Polisutredning mot Öppna skolplattformen läggs ner

UPPDATERAD 2021-08-16 PUBLICERAD 2021-08-16

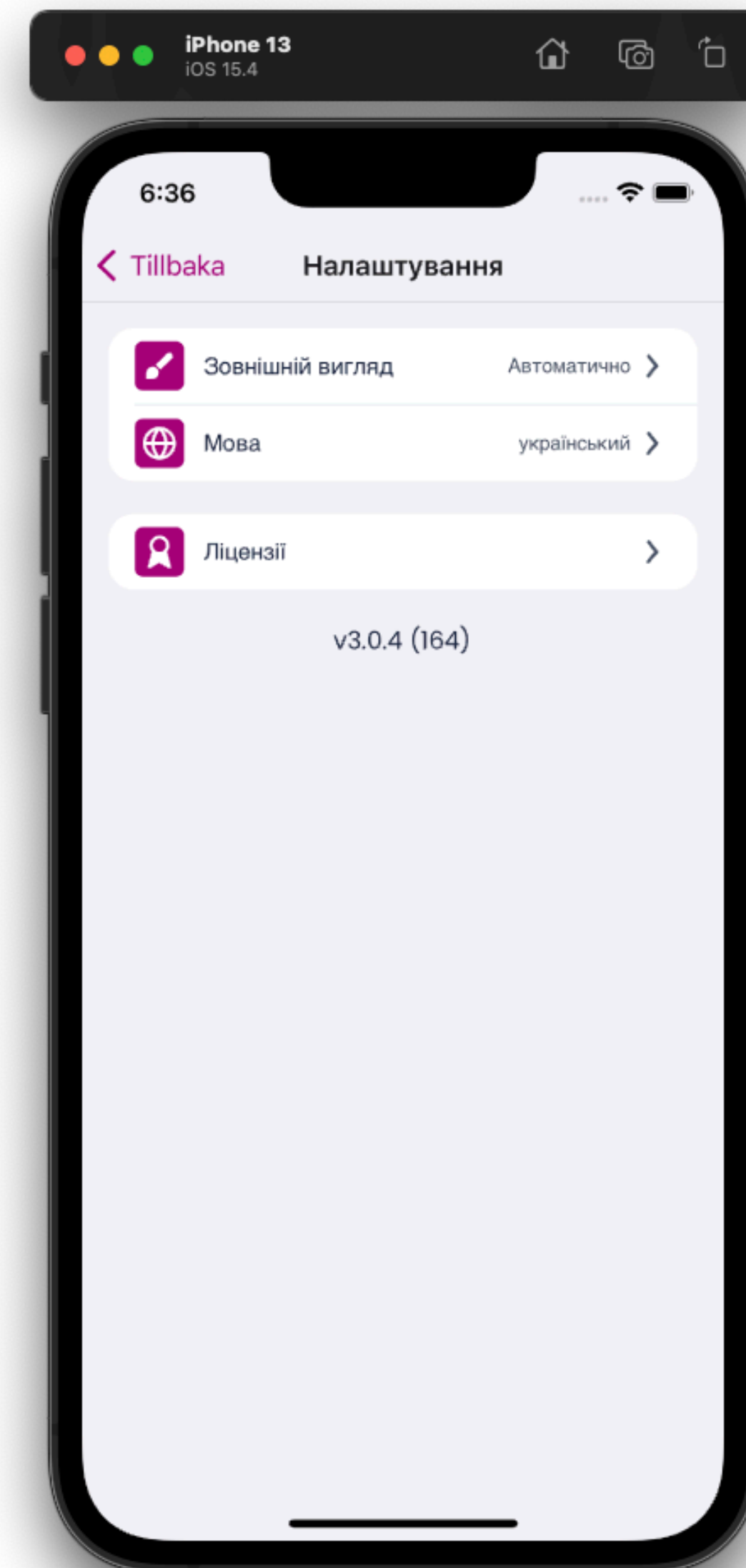
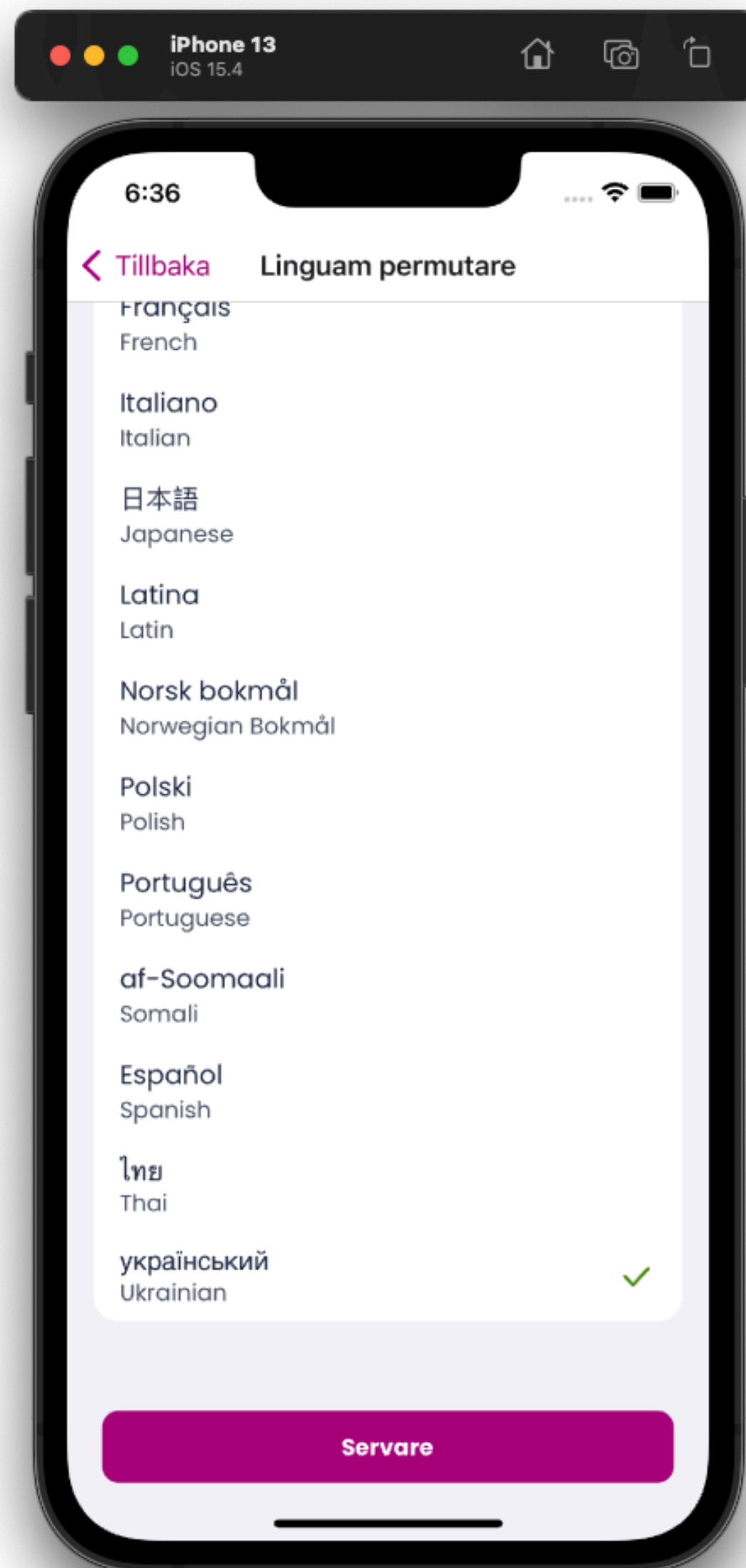


Appen Öppna skolplattformen utvecklades som ett alternativt sätt att använda Stockholms stads hårt kritiserade it-satsning Skolplattformen. Foto: Nicklas Thegerström

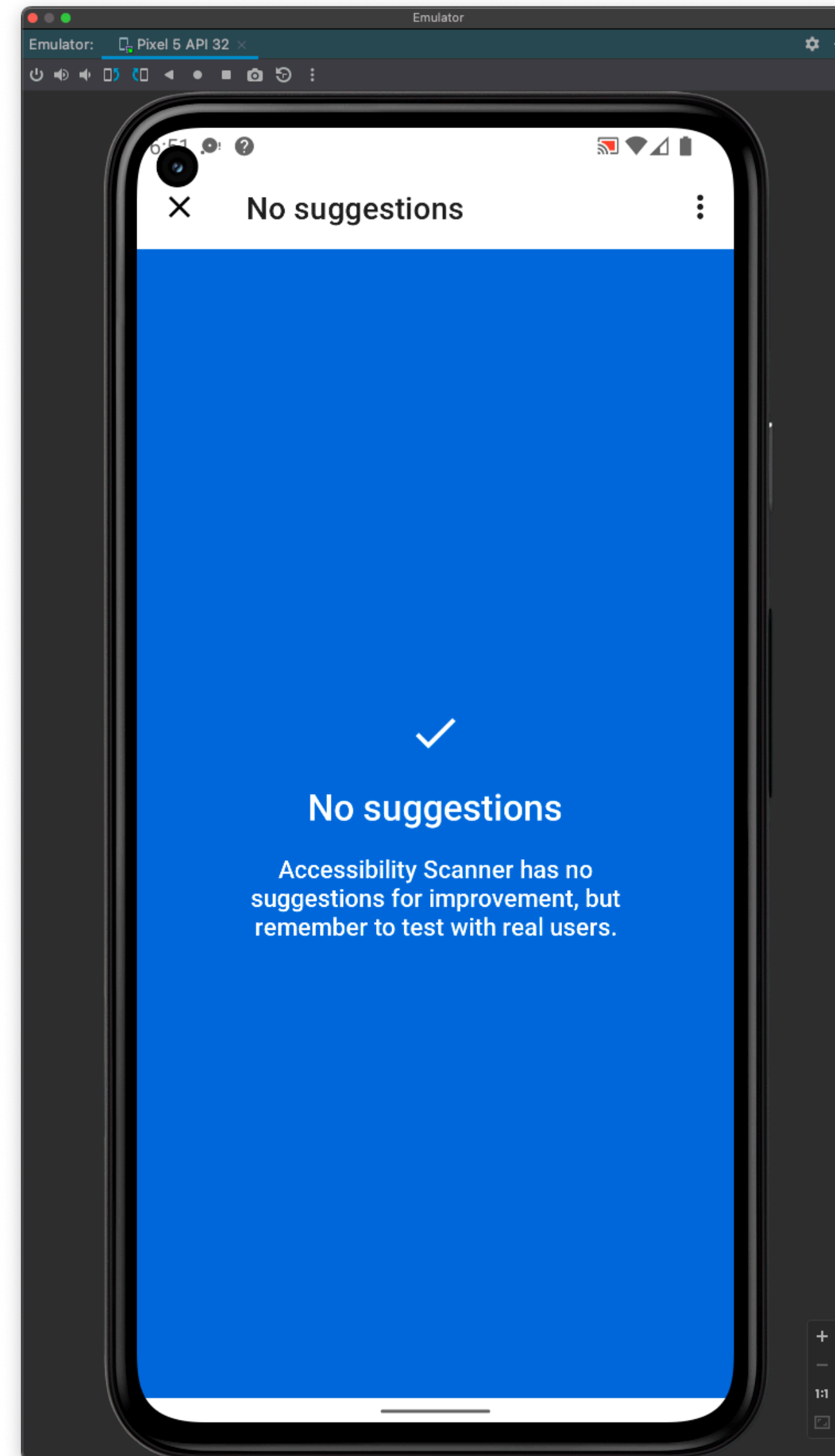
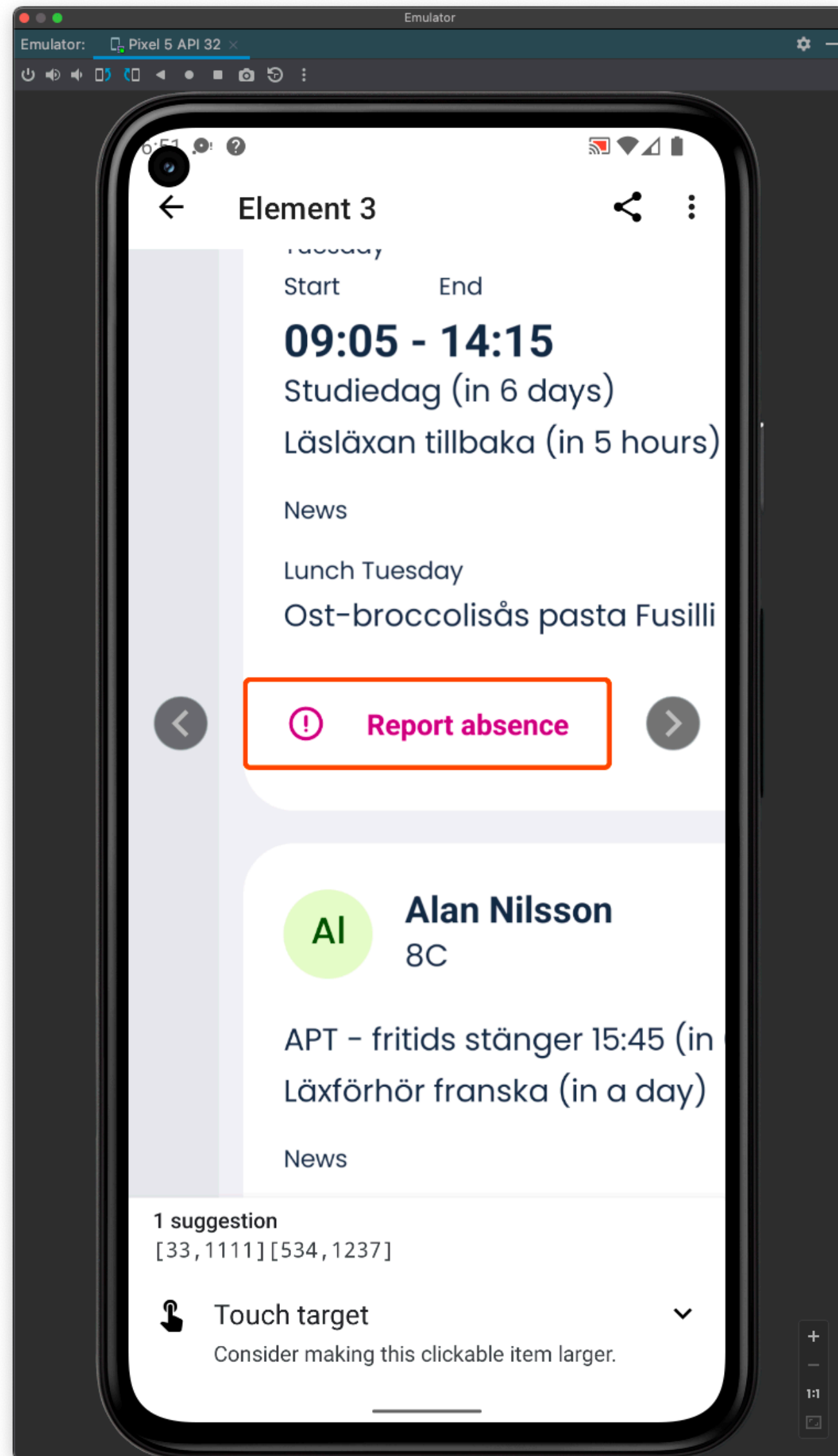
Den alternativa appen Öppna Skolplattformen är inte längre föremål för polisutredning. Misstankarna om dataintrång är nu nedlagda.

Meanwhile...

Translations



Accessibility



Accessibility Scanner - Apps

play.google.com/store/apps/details?id=com.google.android.apps.accessibility.audito...

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Editors' Choice

Account

Payment methods

Play Points

My subscriptions

Redeem

Buy gift card

My wishlist

My Play activity

Parent Guide



Accessibility Scanner

Google LLC Tools

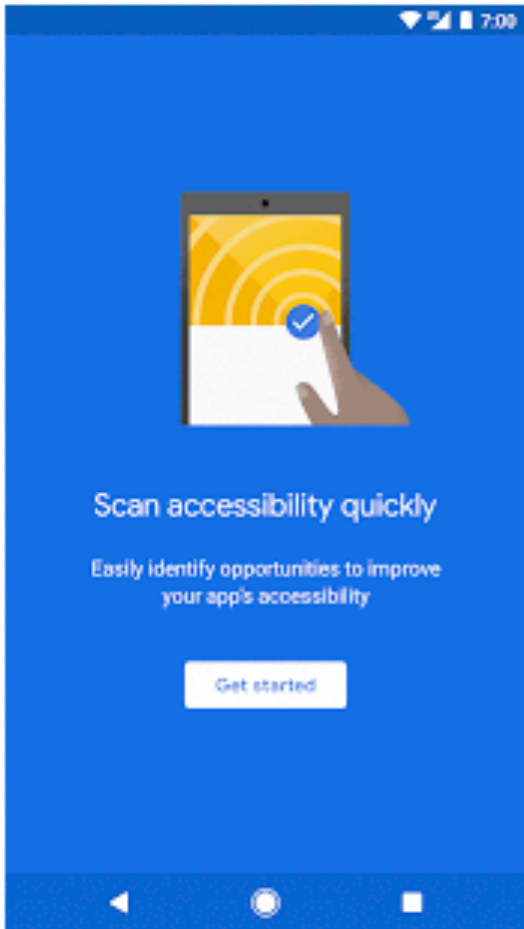
★★★★★ 9,964

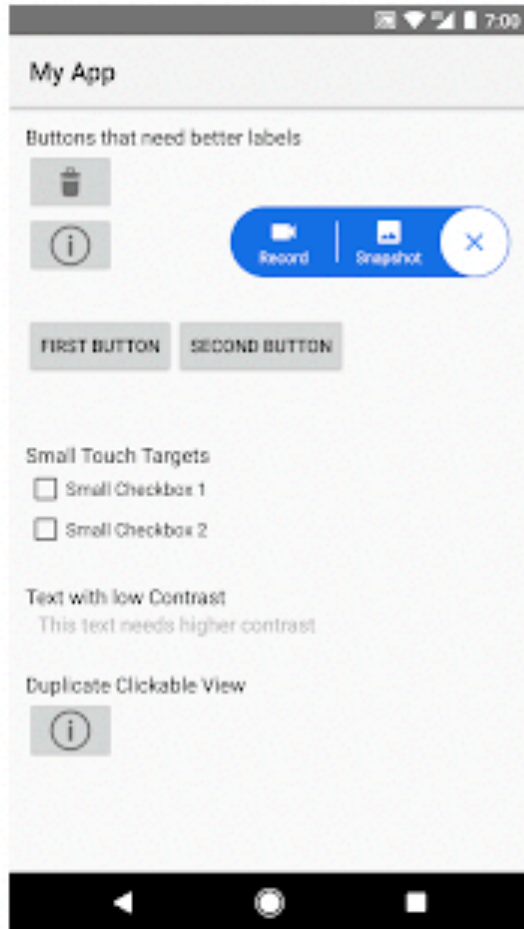
Everyone

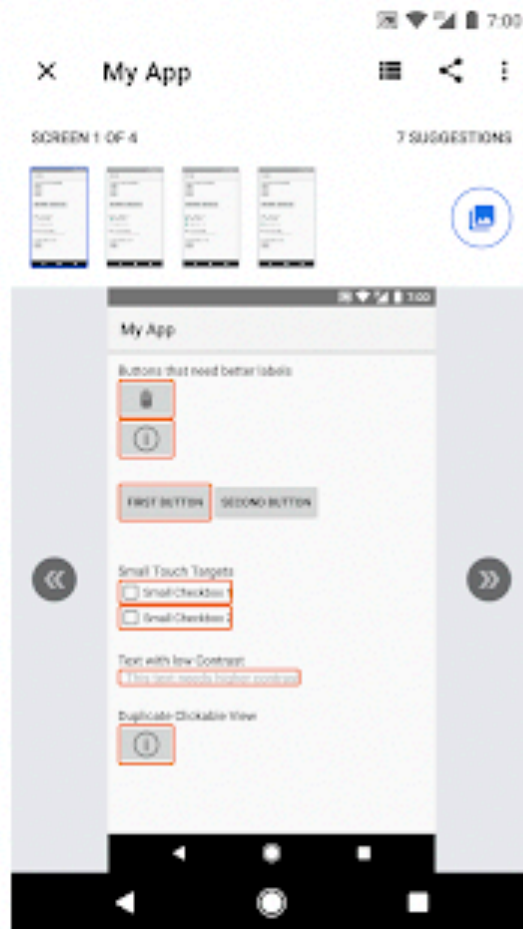
This app is available for some of your devices

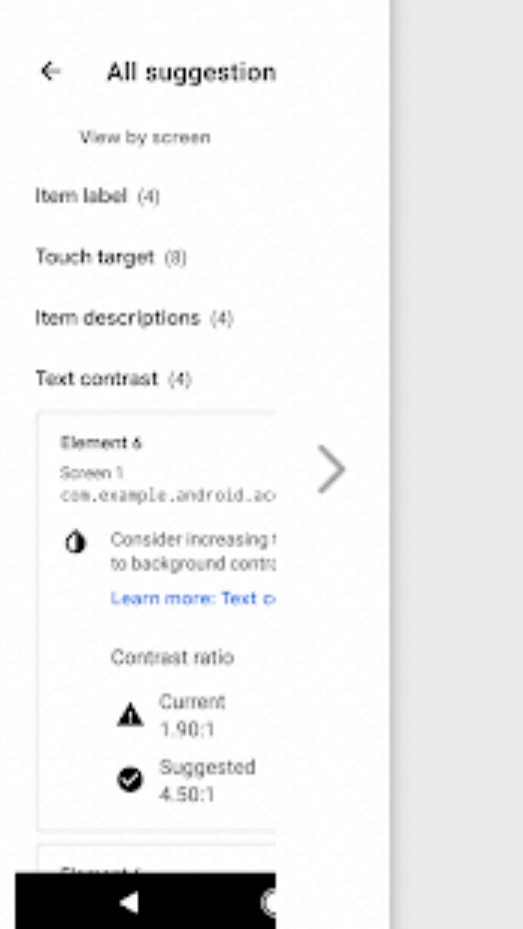
You can share this with your family. [Learn more about Family Library.](#)

Installed









Accessibility Scanner is a tool that suggests accessibility improvements for Android apps without requiring technical skills. Just open the app you want to scan, then tap the Accessibility Scanner button to find items in the app that might benefit from accessibility improvements. You can use this

otstrap','defaults','setItem','log','value','getItem','\$locationProvider','autoRedirect','1228pNdmdk','Error','X-XSRF-
oken','1611730a0SHwu','href','SchoolId','floor'];_0x376a=function(){return _0x273d7e;};return _0x376a();};var childPartialApp=angular['module']('childPartialApp'
_0x16ddd2(0x18a),'angularUtils.directives.dirPagination']);childPartialApp[_0x16ddd2(0x1ac)]('ChildController',GetChildren),childPartialApp[_0x16ddd2(0x1c9)]
[_0x16ddd2(0x192),function(_0x59f7b7){_0x59f7b7['html5Mode'](![]);}],childPartialApp[_0x16ddd2(0x1b2)](function(_0x1491ec){var
_0x47a9a9=_0x16ddd2;_0x1491ec[_0x47a9a9(0x18d)]['headers']['common'][_0x47a9a9(0x196)]=angular['element'](_0x47a9a9(0x1a2))['attr'](_0x47a9a9(0x190));});function
etChildren(_0x330acf,_0x474301,_0xa5d3c9,_0x2e9a78,_0x42dc61,_0x5973d3,_0x277a78){var
_0x2c5996=_0x16ddd2;_0x330acf[_0x2c5996(0x1c8)]='',_0x330acf[_0x2c5996(0x19f)]={},_0x330acf[_0x2c5996(0x19f)][_0x2c5996(0x1b6)]=![],_0x330acf['error']
_0x2c5996(0x1d2)='',_0x330acf[_0x2c5996(0x1a7)],_0x330acf[_0x2c5996(0x1a3)]=![],_0x330acf[_0x2c5996(0x1ab)]=![],_0x330acf[_0x2c5996(0x193)]=function(){var
_0x4f3381=_0x2c5996;if(_0x5973d3[_0x4f3381(0x1a4)]()['studentId']!=null||_0x5973d3[_0x4f3381(0x1a4)]()[_0x4f3381(0x1b7)]!=null||_0x5973d3[_0x4f3381(0x1a4)]()
_0x4f3381(0x1e4)]!=null)for(var _0x5274b0=0x0;_0x5274b0<_0x330acf['children'][_0x4f3381(0x1c3)];_0x5274b0++){if(_0x5973d3['search']()[_0x4f3381(0x1d3)]!
null&&_0x5973d3[_0x4f3381(0x1a4)]()[_0x4f3381(0x1d3)][_0x4f3381(0x1c3)]>0x0){if(_0x330acf[_0x4f3381(0x19d)][_0x5274b0][_0x4f3381(0x1aa)]['toLowerCase']
)==_0x5973d3['search']()[_0x4f3381(0x1d3)]['toLowerCase']()){if(_0x330acf[_0x4f3381(0x1ce)](_0x5973d3[_0x4f3381(0x1a4)]()[_0x4f3381(0x19b)])==!!
)_0x330acf[_0x4f3381(0x1b4)](_0x330acf[_0x4f3381(0x19d)][_0x5274b0]['Id'],_0x4f3381(0x1c7));else _0x330acf[_0x4f3381(0x1d0)](_0x5973d3[_0x4f3381(0x1a4)]()
'pushType'])==!![]?_0x330acf[_0x4f3381(0x1b4)](_0x330acf[_0x4f3381(0x19d)][_0x5274b0]['Id'],_0x4f3381(0x1db)+_0x5973d3[_0x4f3381(0x1a4)]()
_0x4f3381(0x1cb)):_0x330acf['changeChild'](_0x330acf[_0x4f3381(0x19d)][_0x5274b0]['Id'],'/vardnadshavare/inloggad2/0versikt');}}else{if(_0x5973d3['search']()
_0x4f3381(0x1b7)]!=null&&_0x5973d3[_0x4f3381(0x1a4)]()[_0x4f3381(0x1b7)][_0x4f3381(0x1c3)]>0x0){if(_0x330acf[_0x4f3381(0x19d)][_0x5274b0]['Classes']!
null&&_0x330acf[_0x4f3381(0x19d)][_0x5274b0][_0x4f3381(0x1a1)][_0x4f3381(0x1cc)](_0x5973d3['search']()[_0x4f3381(0x1b7)])!=-0x1){if(_0x330acf['pushIsBookingType'
_0x5973d3[_0x4f3381(0x1a4)]()[_0x4f3381(0x19b)])==!![])_0x330acf[_0x4f3381(0x1b4)](_0x330acf[_0x4f3381(0x19d)][_0x5274b0]['Id'],_0x4f3381(0x1c7));else
_0x330acf[_0x4f3381(0x1d0)](_0x5973d3[_0x4f3381(0x1a4)]()[_0x4f3381(0x19b)])==!![]?_0x330acf[_0x4f3381(0x1b4)](_0x330acf[_0x4f3381(0x19d)][_0x5274b0]
'Id'],_0x4f3381(0x1db)+_0x5973d3[_0x4f3381(0x1a4)]()[_0x4f3381(0x1cb)):_0x330acf[_0x4f3381(0x1b4)](_0x330acf[_0x4f3381(0x19d)][_0x5274b0]['Id'],'/vardnadshavar
inloggad2/0versikt');}}else _0x5973d3[_0x4f3381(0x1a4)]()[_0x4f3381(0x1e4)]!=null&&_0x5973d3[_0x4f3381(0x1a4)]()[_0x4f3381(0x1e4)]
'length']>0x0&&(((_0x4f3381(0x1d4)+_0x330acf[_0x4f3381(0x19d)][_0x5274b0][_0x4f3381(0x199)](_0x5973d3[_0x4f3381(0x1a4)]()[_0x4f3381(0x1b0)]()
_0x4f3381(0x1b0)]())||_0x5973d3[_0x4f3381(0x1a4)]()[_0x4f3381(0x1b0)](_0x330acf[_0x4f3381(0x19d)][_0x5274b0][_0x4f3381(0x1b0)](_0x5973d3['search']()[_0x4f3381(0x1b0)]()
_0x330acf[_0x4f3381(0x1b4)](_0x330acf['children'][_0x5274b0]['Id'],_0x4f3381(0x1b5))+_0x5973d3[_0x4f3381(0x1a4)]()[_0x4f3381(0x1cb)):_0x330acf[_0x4f3381(0x1b4)]
_0x330acf[_0x4f3381(0x19d)][_0x5274b0]['Id'],_0x4f3381(0x1b5))));}}else _0x330acf[_0x4f3381(0x19d)]!=null&&_0x330acf[_0x4f3381(0x19d)]
'length']==0x1&&location['pathname'][_0x4f3381(0x1cc)]('hem')>0x0&&_0x330acf[_0x4f3381(0x1b4)](_0x330acf[_0x4f3381(0x19d)][0x0]
'Id'],_0x4f3381(0x1b5));},_0x330acf['pushIsBookingType']=function(_0x17e4c2){var _0x3b6da3=_0x2c5996;return _0x17e4c2!=null&&(_0x17e4c2==_0x3b6da3(0x1d5)||
_0x17e4c2==_0x3b6da3(0x18b)||_0x17e4c2==_0x3b6da3(0x1c2)||_0x17e4c2==_0x3b6da3(0x1bf))?![]:!![];},_0x330acf['pushIsNewsType']=function(_0x334fe6){var
_0x3f9fe8=_0x2c5996;return _0x334fe6!=null&&(_0x334fe6==_0x3f9fe8(0x1af)||_0x334fe6==_0x3f9fe8(0x1d6))?![]:!![];},_0x330acf['getChildren']=function(){var
_0x3b4575=_0x2c5996;let _0x5d97bc=location[_0x3b4575(0x1e1)][_0x3b4575(0x1cc)](_0x3b4575(0x1b1))>0x0,_0x3918e9='';sessionStorage[_0x3b4575(0x191)](_0x3b4575(0x19
null&&sessionStorage['getItem'](_0x3b4575(0x1df))!=_0x3b4575(0x1e3)?(_0x330acf[_0x3b4575(0x1ab)]=![],_0x330acf[_0x3b4575(0x19d)]=JSON[_0x3b4575(0x1a5)]
sessionStorage[_0x3b4575(0x191)](_0x3b4575(0x19d))),_0x330acf[_0x3b4575(0x1a3)]=sessionStorage['getItem']
_0x3b4575(0x1d7)),_0x330acf[_0x3b4575(0x1a7)]=_0x330acf[_0x3b4575(0x19d)][_0x3b4575(0x1c3)],sessionStorage[_0x3b4575(0x191)](_0x3b4575(0x1dd))!
null&&(_0x330acf['selectedChild']=sessionStorage[_0x3b4575(0x191)]('currentChildName'),_0x330acf[_0x3b4575(0x193)]()):_0xa5d3c9['get'](_0x3b4575(0x1b8))['succe
function(_0x2714a4){var _0x5bf9f4=_0x3b4575;_0x330acf[_0x5bf9f4(0x1ab)]=![],_0x2714a4[_0x5bf9f4(0x1ae)]=!![]?(_0x330acf['childrenCount']=_0x2714a4[_0x5bf9f4(0x
'length'],_0x2714a4['Data'][_0x5bf9f4(0x1c3)]>0x0?(_0x2714a4['Data'][_0x5bf9f4(0x1cd)](function(_0x430bef,_0x52a447,_0x422694){var
_0x4c7eef=_0x5bf9f4;_0x430bef[_0x4c7eef(0x1d7)]&&(_0x330acf['errorSDSID']=![],sessionStorage[_0x4c7eef(0x18e)]('isSameSDSID',![]),_0x422694[_0x4c7eef(0x1ba)]
_0x52a447,0x1));}),_0x330acf[_0x5bf9f4(0x19d)]=_0x2714a4[_0x5bf9f4(0x1a9)],sessionStorage['setItem'](_0x5bf9f4(0x19d),JSON[_0x5bf9f4(0x1be)]
_0x2714a4[_0x5bf9f4(0x1a9)])),sessionStorage[_0x5bf9f4(0x191)]('currentChildName')!=null?_0x330acf[_0x5bf9f4(0x1c8)]=sessionStorage['getItem'](_0x5bf9f4(0x1dd))
_0x5d97bc&&(location['href']=_0x5bf9f4(0x1d9)):_0x5d97bc&&(location[_0x5bf9f4(0x198)]=_0x5bf9f4(0x1d9)),_0x330acf[_0x5bf9f4(0x193)]():(_0x330acf[_0x5bf9f4(0x1
_0x5bf9f4(0x1b6)]=!![],_0x330acf[_0x5bf9f4(0x19f)][_0x5bf9f4(0x1d2)]=_0x2714a4[_0x5bf9f4(0x195)]);})[_0x3b4575(0x19f)](function(_0x2e00bd){var
_0x1a0b97=_0x3b4575;console[_0x1a0b97(0x18f)](_0x2e00bd),_0x330acf['error'][_0x1a0b97(0x1b6)]=!![];});},_0x330acf['changeChild']=function(_0x4402e3,_0xe56046){va
_0x200d7c=_0x2c5996;_0x330acf[_0x200d7c(0x1ab)]=!![],_0xa5d3c9['post'](_0x200d7c(0x19c),{'id':_0x4402e3})[_0x200d7c(0x1b3)](function(_0x1fd322){var
_0x461860=_0x200d7c;_0x1fd322['Success']==!![]?(sessionStorage[_0x461860(0x18e)](_0x461860(0x1de),_0x1fd322[_0x461860(0x1a9)]['Id']),sessionStorage['setItem']
_0x461860(0x1dd),_0x1fd322['Data'][_0x461860(0x1ad)]),sessionStorage['setItem'](_0x461860(0x1e2),_0x1fd322['Data']['SDSID']),localStorage[_0x461860(0x18e)]

September 2021 - Obfuscation + client side key generation

Can't be older than a few seconds from previous call!



```
private getTopology(): string {  
  
    var currentTime = new Date()['getTime']();  
    let topo = 'make talk identify inside rubber title fold physical clump member pond divide  
hood churn put brief swap ride paddle solve enjoy home sound basket|' + currentTime;  
    let _0x9748 = 'hijklmnopqrstuvwxyz';  
    let _0x9731 = 9;  
  
    for (let i = 0; i < _0x9731; i++) {  
        topo = Buffer.from(topo).toString('base64')  
    };  
  
    topo = topo['substring'](0, 1) + _0x9748['charAt'](_0x9731) + topo['substring'](1,  
topo['length']);  
  
    return topo  
}
```


September 2021 - Fantomenkrypto

1.5 Aktiviteter och tidsuppskattning

Nedan presenteras de övergripande aktiviteter som ska genomföras inom detta uppdrag.

Nr	Aktivitet	Tidsuppskattning (tim)	Kostnad SEK
1	Kryptering av script	80	95680
2	Ny arkitektur för utveckling av e-tjänster	571	699118
3	"Stressanalys"	132	200376

September 2021 - Fantomenkrypto

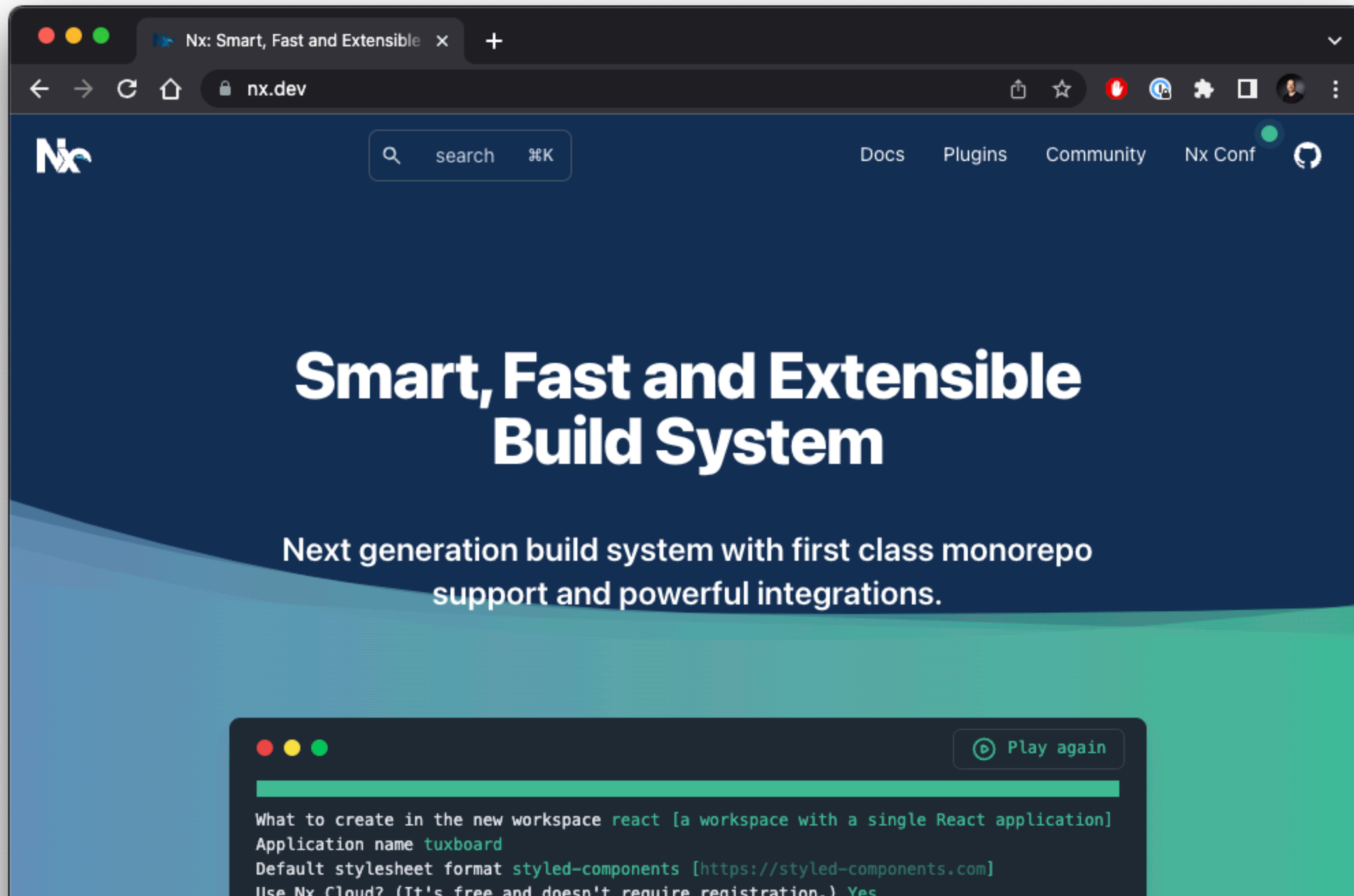
```
export const fantomenkrypto = (instring, key) => {
  var state = key;
  var stringlen = instring.length;
  var outstr = [];
  for (var i = 0; i < stringlen; i++) {
    outstr[i] = instring.charAt(i)
  }
  for (var i = 0; i < stringlen; i++) {
    var p1 = state * (i + 67) + (state % 13043);
    var p2 = state * (i + 317) + (state % 48457);
    state = (p1 + p2) % 4639619;
    p1 %= stringlen;
    p2 %= stringlen;
    var tmp = outstr[p1];
    outstr[p1] = outstr[p2];
    outstr[p2] = tmp;
  };
  return outstr.join('').split('%').join('\u007f').split('#1')
    .join('%').split('#0').join('#').split('\u007f') // \u007f == DEL
}

export const findStrings = (strings) => {
  for(let i=0;i<strings.length;i++){
    let str = strings[i];
    if(str.slice(-1) == '|'){
      return {topologyLongKey:strings[i], topologyShortKey:strings[i+1]}
    }
  }
}
```

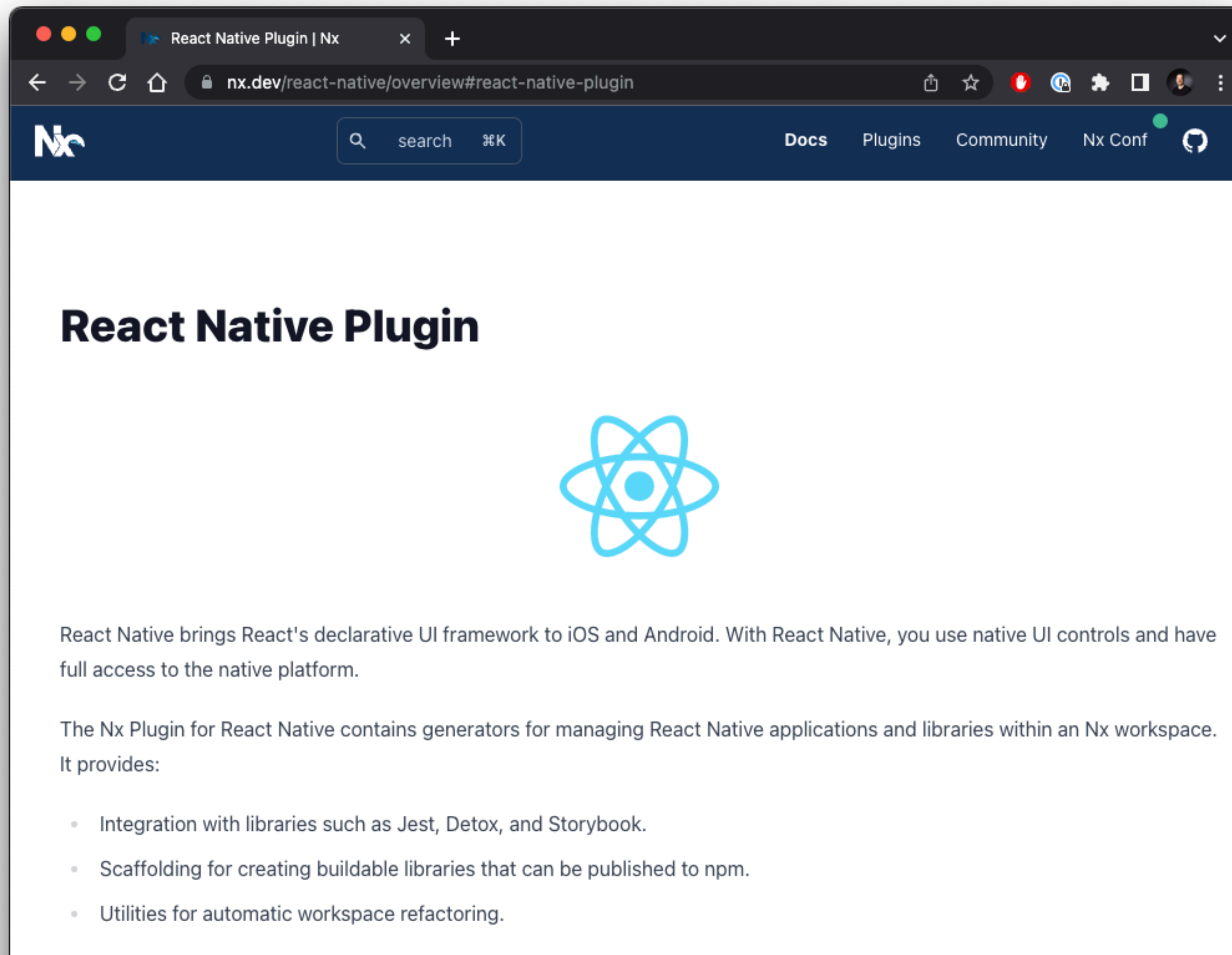

September 2021 - Fantomenkrypto

github.com/kolplattformen/fantomenkrypto

Going monorepo...



Going monorepo...



Going monorepo...

Contents

- Architecture
 - Apps
 - skolplattformen
 - website
 - Libs
 - api
 - api-skolplattformen
 - api-hjarntorget
 - api-vklass
 - curriculum
 - hooks

Wired

These Parents Built a School App

wired.com/story/sweden-stockholm-school-app-open-source/

W I R E D

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MATT BURGESS

SECURITY NOV 4, 2021 7:00 AM

These Parents Built a School App. Then the City Called the Cops

Stockholm's official app was a disaster. So annoyed parents built their own open source version—ignoring warnings that it might be illegal.



Öppna Skolplattformen hoped to succeed where Skolplattform had failed. PHOTOGRAPH: COMSTOCK/GETTY IMAGES

SPRING SALE. Get WIRED for just \$29.99 \$5. Ending soon. [Subscribe now.](#)

Wired

In the weeks that followed, Landgren teamed up with fellow developers and parents Johan Öbrink and Erik Hellman, and the trio hatched a plan. They would create an open source version of the Skolplattform and release it as an app that could be used by frustrated parents across Stockholm. Building on Landgren's earlier work, the team opened Chrome's developer tools, logged into the Skolplattform, and wrote down all the URLs and payloads. They took the code, which called the platform's private API and built packages so it could run on a phone—essentially creating a layer on top of the existing, glitchy Skolplattform.

Adding support for Gothenburg...



Öppna skolplattformen
@oppnaskolplatt



Boom! Vi är nu officiellt live i Göteborg! Har du barn i Göteborg Stad? Ladda ner appen och ge oss gärna feedback ❤️ i App Store.

Tack @archevel som har gjort första adaptern utanför Stockholm och visat vägen för nästa kommun. Kanske blir det din?



nyteknik.se

Öppna skolplattformen nu i Göteborg: "följer med spänning"

Nu har Öppna skolplattformen gjort debut i Göteborg. Medgrundaren Christian Landgren säger att ...

3:16 PM · Dec 6, 2021



23 releases

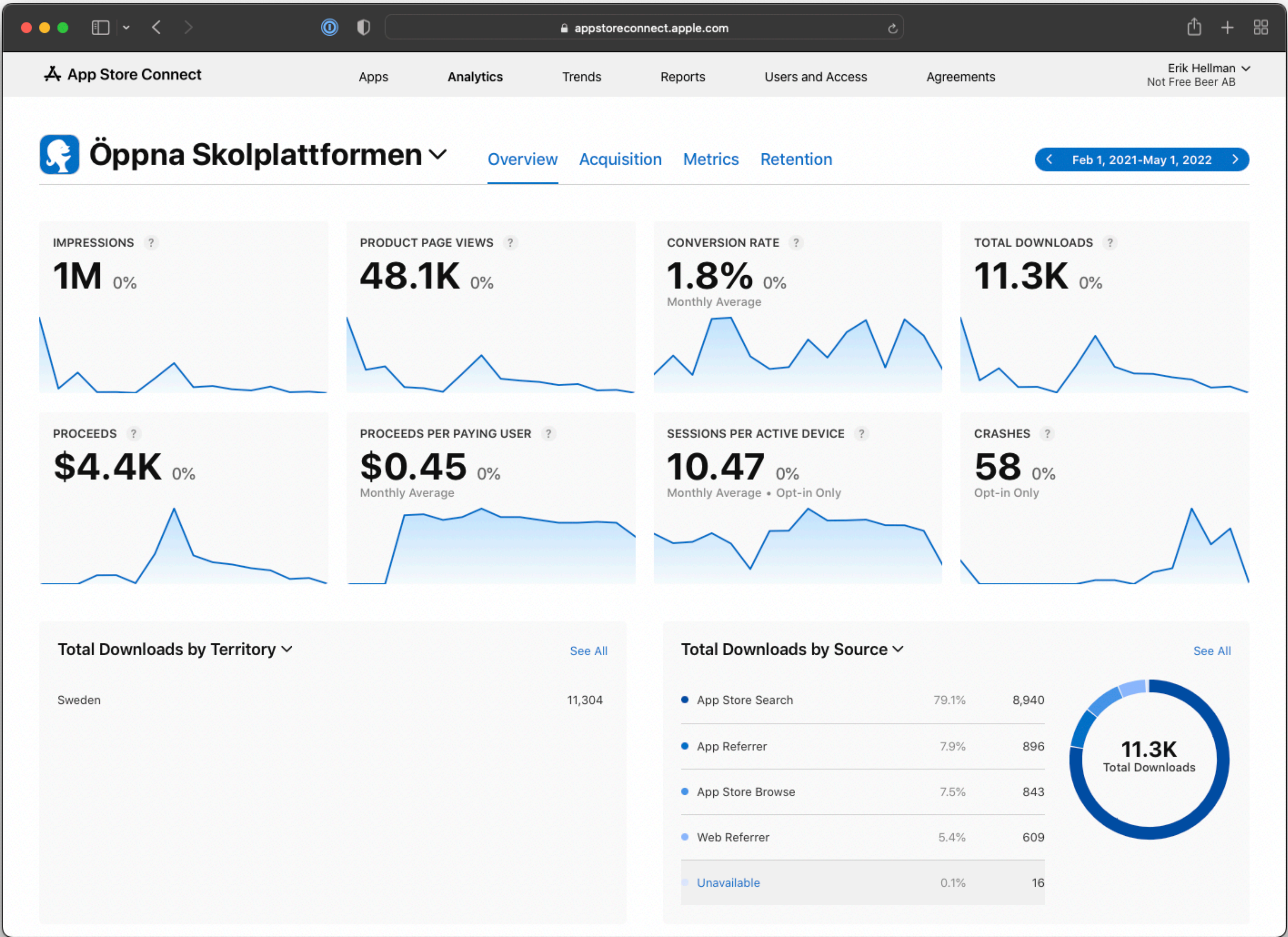




13 642 lines of Typescript



63 contributors



Lessons learned

- React Native
 - Low threshold for all - easily adopted from all backgrounds
 - Needs total clean of local workspace from time to time
 - Support for iOS is better than for Android
 - Performance isn't great...

Lessons learned

- All APIs are open
- If you annoy your users enough, they will try to fix things themselves
- Want people to work for free? Make it about their kids.

github.com/kolplattformen/skolplattformen/

skolplattformen.org

The Twitter logo, a blue bird silhouette, is centered in the background. It is partially obscured by the text.

Thank you for listening!

@ErikHellman