

# Jawaban Her mata kuliah pemograman mobile II

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Jawaban:

## aplikasi News Online dengan React Native

### Dokumentasi code

Untuk aplikasi ini, saya menggunakan React Native dengan Node.js sebagai runtime environment dan Expo CLI sebagai alat untuk mengelola proyek React Native. Expo CLI mempermudah proses pengembangan dengan menyediakan lingkungan kerja yang sudah dikonfigurasi, sehingga saya tidak perlu mengatur proyek secara manual.

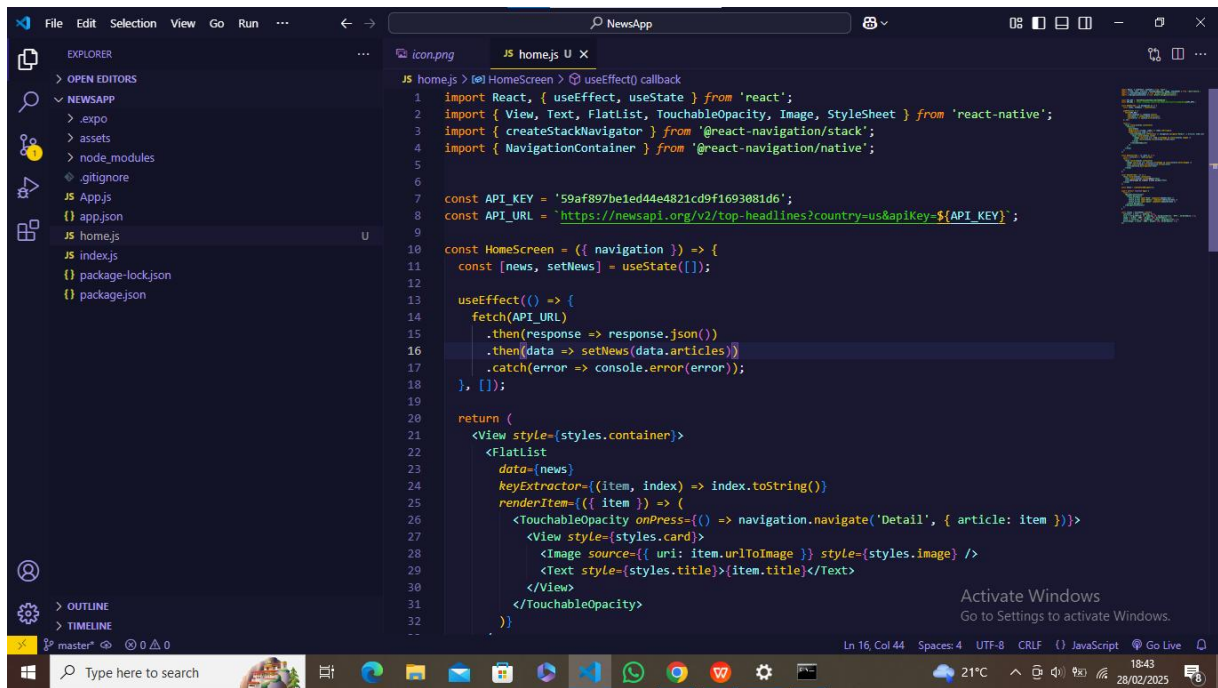
```
Select C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.19045.5247]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Samuel>npm install -g expo-cli
npm warn deprecated @babel/plugin-proposal-numeric-separator@7.18.6: This proposal has been merged to the ECMAScript standard and thus this plugin is no longer maintained. Please use @babel/plugin-transform-numeric-separator instead.
npm warn deprecated @babel/plugin-proposal-nullish-coalescing-operator@7.18.6: This proposal has been merged to the ECMAScript standard and thus this plugin is no longer maintained. Please use @babel/plugin-transform-nullish-coalescing-operator instead.
npm warn deprecated @babel/plugin-proposal-optional-catch-binding@7.18.6: This proposal has been merged to the ECMAScript standard and thus this plugin is no longer maintained. Please use @babel/plugin-transform-optional-catch-binding instead.
npm warn deprecated @babel/plugin-proposal-class-properties@7.18.6: This proposal has been merged to the ECMAScript standard and thus this plugin is no longer maintained. Please use @babel/plugin-transform-class-properties instead.
npm warn deprecated stable@0.1.8: Modern JS already guarantees Array#sort() is a stable sort, so this library is deprecated. See the compatibility table on MDN: https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Array/sort#browser_compatibility
npm warn deprecated @babel/plugin-proposal-optional-chaining@7.21.0: This proposal has been merged to the ECMAScript standard and thus this plugin is no longer maintained. Please use @babel/plugin-transform-optional-chaining instead.
npm warn deprecated abab@2.0.6: Use your platform's native atob() and btoa() methods instead
npm warn deprecated @babel/plugin-proposal-export-namespace-from@7.18.9: This proposal has been merged to the ECMAScript standard and thus this plugin is no longer maintained. Please use @babel/plugin-transform-export-namespace-from instead.
npm warn deprecated @babel/plugin-proposal-async-generator-functions@7.20.7: This proposal has been merged to the ECMAScript standard and thus this plugin is no longer maintained. Please use @babel/plugin-transform-async-generator-functions instead.
npm warn deprecated @babel/plugin-proposal-object-rest-spread@7.20.7: This proposal has been merged to the ECMAScript standard and thus this plugin is no longer maintained. Please use @babel/plugin-transform-object-rest-spread instead.
npm warn deprecated rimraf@2.7.1: Rimraf versions prior to v4 are no longer supported
npm warn deprecated osenv@0.1.5: This package is no longer supported.
npm warn deprecated inflight@1.0.6: This module is not supported, and leaks memory. Do not use it. Check out lru-cache if you want a good and tested way to coalesce async requests by a key value, which is much more comprehensive and powerful.
npm warn deprecated @npmcli/move-file@1.1.2: This functionality has been moved to @npmcli/fs
npm warn deprecated rimraf@2.4.5: Rimraf versions prior to v4 are no longer supported
npm warn deprecated rimraf@3.0.2: Rimraf versions prior to v4 are no longer supported
npm warn deprecated glob@6.0.4: Glob versions prior to v9 are no longer supported
npm warn deprecated glob@7.1.6: Glob versions prior to v9 are no longer supported
npm warn deprecated sudo-prompt@9.1.1: Package no longer supported. Contact Support at https://www.npmjs.com/support for more info.
npm warn deprecated uuid@3.4.0: Please upgrade to version 7 or higher. Older versions may use Math.random() in certain circumstances, which is known to be problematic. See https://v8.dev/blog/math-random for details.
npm warn deprecated uuid@3.4.0: Please upgrade to version 7 or higher. Older versions may use Math.random() in certain circumstances, which is known to be problematic. See https://v8.dev/blog/math-random for details.
npm warn deprecated @xmldom/xmldom@0.7.13: this version is no longer supported, please update to at least 0.8.*
npm warn deprecated sudo-prompt@8.2.5: Package no longer supported. Contact Support at https://www.npmjs.com/support for more info.
npm warn deprecated uuid@3.4.0: Please upgrade to version 7 or higher. Older versions may use Math.random() in certain circumstances, which is known to be problematic. See https://v8.dev/blog/math-random for details.

added 1306 packages in 18m
```

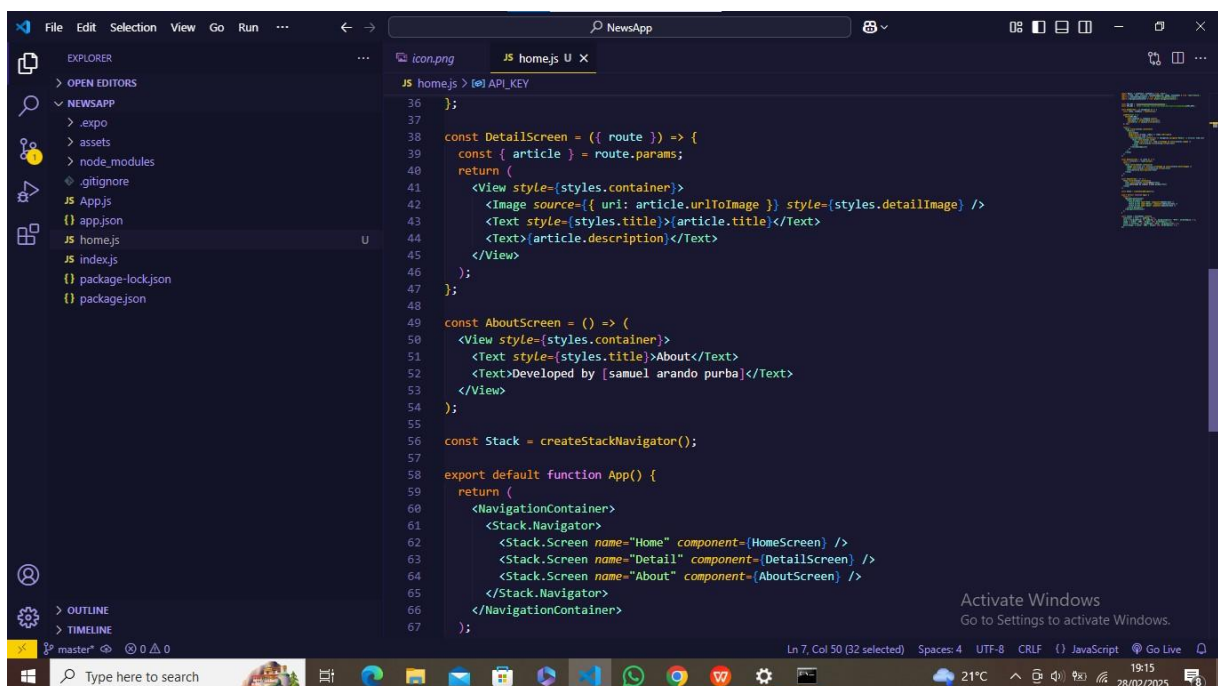
### Penginstalan expo CLI lewat CMD

Dengan Expo CLI, saya dapat membuat proyek React Native lebih cepat tanpa perlu konfigurasi yang rumit. Selain itu, Expo memungkinkan menjalankan aplikasi langsung di emulator atau perangkat fisik menggunakan Expo Go, sebuah aplikasi yang berfungsi sebagai runtime untuk proyek Expo.



```
1 import React, { useEffect, useState } from 'react';
2 import { View, Text, FlatList, TouchableOpacity, Image, StyleSheet } from 'react-native';
3 import { createStackNavigator } from '@react-navigation/stack';
4 import { NavigationContainer } from '@react-navigation/native';
5
6
7 const API_KEY = '59af897be1ed44e4821cd9f1693081d6';
8 const API_URL = `https://newsapi.org/v2/top-headlines?country=us&apiKey=${API_KEY}`;
9
10 const HomeScreen = ({ navigation }) => {
11   const [news, setNews] = useState([]);
12
13   useEffect(() => {
14     fetch(API_URL)
15       .then(response => response.json())
16       .then(data => setNews(data.articles))
17       .catch(error => console.error(error));
18   }, []);
19
20   return (
21     <View style={styles.container}>
22       <FlatList
23         data={news}
24         keyExtractor={(item, index) => index.toString()}
25         renderItem={({ item }) => (
26           <TouchableOpacity onPress={() => navigation.navigate('Detail', { article: item })}>
27             <View style={styles.card}>
28               <Image source={{ uri: item.urlToImage }} style={styles.image} />
29               <Text style={styles.title}>{item.title}</Text>
30             </View>
31           </TouchableOpacity>
32         )}
33       />
34     </View>
35   );
36 }
```

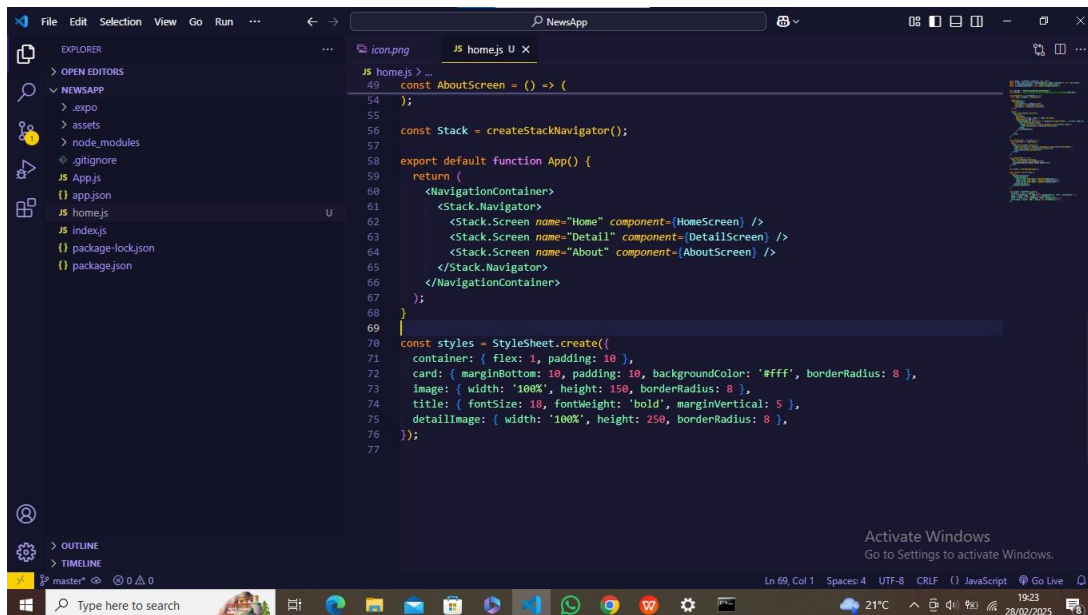
Pertama saya memanfaatkan beberapa library seperti React, useEffect, useState Digunakan untuk membuat komponen fungsional dan mengelola state. View, Text, FlatList, TouchableOpacity, Image, StyleSheet merupakan Komponen bawaan React Native untuk menampilkan elemen UI. createStackNavigator, NavigationContainer Digunakan untuk mengatur navigasi antar layar. API\_KEY Kunci API dari NewsAPI.org(59af897be1ed44e4821cd9f1693081d6 ). API\_URL untuk URL endpoint untuk mengambil berita utama (top headlines) dari Amerika Serikat (country=us). HomeScreen → Komponen utama yang menampilkan daftar berita. useState([]) → Menggunakan state news untuk menyimpan daftar berita yang akan ditampilkan.



```
36
37
38 const DetailScreen = ({ route }) => {
39   const { article } = route.params;
40   return (
41     <View style={styles.container}>
42       <Image source={{ uri: article.urlToImage }} style={styles.detailImage} />
43       <Text style={styles.title}>{article.title}</Text>
44       <Text>{article.description}</Text>
45     </View>
46   );
47 };
48
49 const AboutScreen = () => (
50   <View style={styles.container}>
51     <Text style={styles.title}>About</Text>
52     <Text>Developed by [samuel arando purba]</Text>
53   </View>
54 );
55
56 const Stack = createStackNavigator();
57
58 export default function App() {
59   return (
60     <NavigationContainer>
61       <Stack.Navigator>
62         <Stack.Screen name="Home" component={HomeScreen} />
63         <Stack.Screen name="Detail" component={DetailScreen} />
64         <Stack.Screen name="About" component={AboutScreen} />
65       </Stack.Navigator>
66     </NavigationContainer>
67   );
68 }
```

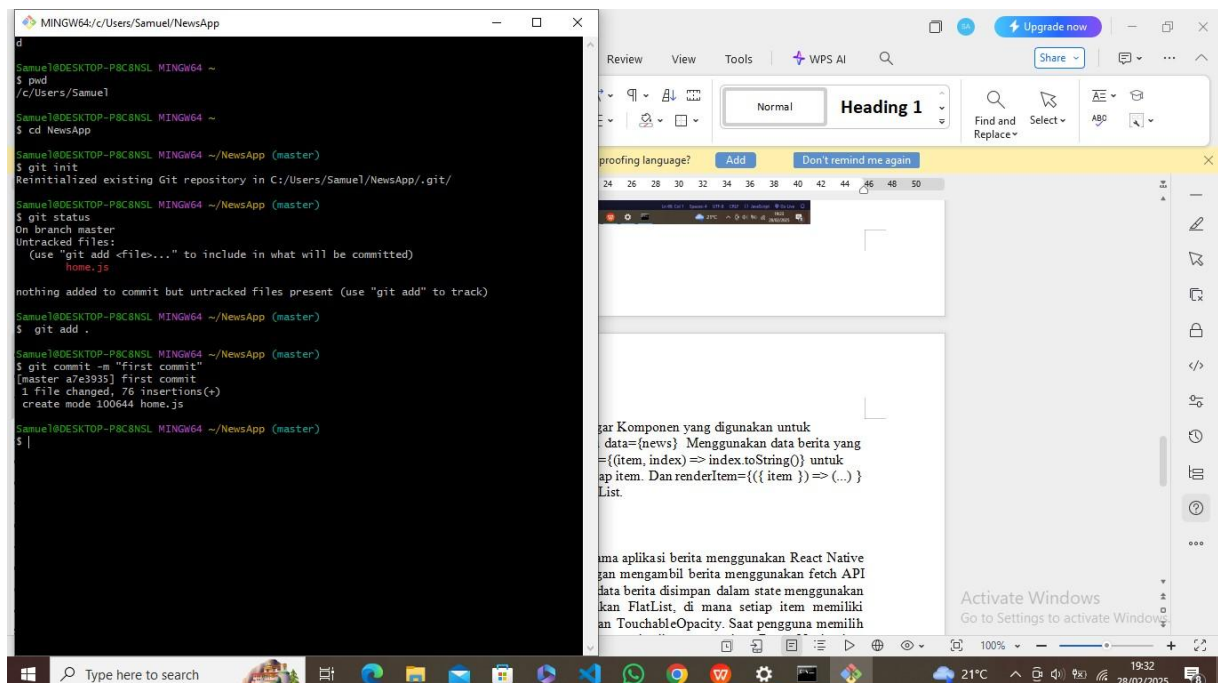
useEffect(() => {...}, []) menggunakan arrow function Hook yang dijalankan sekali saat komponen pertama kali dimuat.

fetch(API\_URL) salah satu method di ES6 ini di gunakan untuk Mengambil data berita dari NewsAPI saya memilih fetch karena cara nya yg simple tidak seperti ajax. Lalu response.json() Mengubah data yang diambil menjadi format JSON. Dan setNews(data.articles) untuk Menyimpan daftar berita ke dalam state news. Dan promise catch(error => console.error(error)) untuk Menangkap error jika terjadi kesalahan saat fetch data.



```
49 const AboutScreen = () => {
50 };
51
52 const Stack = createStackNavigator();
53
54 export default function App() {
55   return (
56     <NavigationContainer>
57       <Stack.Navigator>
58         <Stack.Screen name="Home" component={HomeScreen} />
59         <Stack.Screen name="Detail" component={DetailScreen} />
60         <Stack.Screen name="About" component={AboutScreen} />
61       </Stack.Navigator>
62     </NavigationContainer>
63   );
64 }
65
66 const styles = StyleSheet.create({
67   container: { flex: 1, padding: 10 },
68   card: { margin: 10, padding: 10, backgroundColor: '#fff', borderRadius: 8 },
69   image: { width: '100%', height: 150, borderRadius: 8 },
70   title: { fontSize: 18, fontWeight: 'bold', marginVertical: 5 },
71   detailImage: { width: '100%', height: 250, borderRadius: 8 },
72 });
```

Dan untuk menampilkan daftar berita FlatList agar Komponen yang digunakan untuk menampilkan daftar data dalam bentuk list. Lalu data={news} Menggunakan data berita yang sudah disimpan di state news. Dan keyExtractor={(item, index) => index.toString()} untuk Menggunakan index sebagai key unik untuk setiap item. Dan renderItem={({ item }) => (...)} Cara menampilkan setiap item berita dalam FlatList.



```
Samuel@DESKTOP-P8C8NSL MINGW64 ~
$ pwd
/c/Users/Samuel

Samuel@DESKTOP-P8C8NSL MINGW64 ~
$ cd NewsApp

Samuel@DESKTOP-P8C8NSL MINGW64 ~/NewsApp (master)
$ git init
Reinitialized existing Git repository in C:/Users/Samuel/NewsApp/.git/

Samuel@DESKTOP-P8C8NSL MINGW64 ~/NewsApp (master)
$ git status
On branch master
Untracked files:
  (use "git add <file>..." to include in what will be committed)
    home.js

nothing added to commit but untracked files present (use "git add" to track)

Samuel@DESKTOP-P8C8NSL MINGW64 ~/NewsApp (master)
$ git add .

Samuel@DESKTOP-P8C8NSL MINGW64 ~/NewsApp (master)
$ git commit -m "first commit"
[master a7e3935] first commit
1 file changed, 76 insertions(+)
create mode 100644 home.js

Samuel@DESKTOP-P8C8NSL MINGW64 ~/NewsApp (master)
$
```

Melakukan commit dan mengupload ke git hub

Kesimpulan nya Kode ini membuat halaman utama aplikasi berita menggunakan React Native dengan data dari NewsAPI. Proses dimulai dengan mengambil berita menggunakan fetch API saat komponen pertama kali dimuat, kemudian data berita disimpan dalam state menggunakan useState. Daftar berita ditampilkan menggunakan FlatList, di mana setiap item memiliki gambar dan judul yang dapat diklik menggunakan TouchableOpacity. Saat pengguna memilih sebuah berita, aplikasi akan berpindah ke halaman detail menggunakan React Navigation, sambil mengirimkan data artikel sebagai parameter navigasi. Untuk menjalankan aplikasi ini, pastikan API Key telah dikonfigurasi dengan benar, serta semua dependensi terkait React Navigation telah diinstal.