

# notJust

//development

# Realtime Chat

React Native



# Technologies

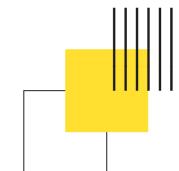
---

Front End



React Navigation

Backend End



## Let's get started

||| Initialise the expo project:

|| \$ expo init WhatsappClone

|| Tint color: #0C6157

## Navigation

### Header

1. Display the title of the Root Stack Screen



### Top Tab Bars

1. Install:

```
yarn add @react-navigation/  
material-top-tabs react-native-  
tab-view react-native-reanimated
```

2. Adjust the style
3. Add all tabs



The screenshot shows the WhatsApp mobile application interface. At the top, there's a green header bar with the WhatsApp logo, signal strength, battery level (26%), and the time (10:05). Below the header, the word "WhatsApp" is displayed in white. The main area has a dark teal background. It features a navigation bar at the top with four items: a camera icon labeled "CHATS", a "STATUS" button, and a "CALLS" button. The "CHATS" button is highlighted with a white border. Below the navigation bar is a list of conversations. Each conversation item includes a small circular profile picture on the left, the contact name in bold, the date of the last message, and a snippet of the last message on the right. The first conversation is with "Fitenniers Assemble" from "Yesterday", with the message "Adrian: that is true for fitness center...". The second conversation is with "Fitenium-Dev" from "Yesterday", with the message "Alex: Whyyyyy I felt soooo sorry for h...". The third conversation is with a contact whose profile picture is a group photo of two people, with the phone number "+7 963 299-49-63" and the message "✓ Photo checking 😁". The fourth conversation is with "JW Player" from "01/10/2020", with the message "Horea: Ok, thanks". The fifth conversation is with "Vlad Petrykov" from "29/09/2020", with the message "yeah, that one sound better for sure :D".

## ChatListItem Component



Input (props):  
ChatRoom:

- ChatRoomId: String
- Users: [User]
- lastMessage: {
  - id: String
  - content: String
  - createdAt: String}



The image shows a screenshot of the WhatsApp mobile application interface. At the top, the WhatsApp logo is visible. Below it, there are three tabs: CHATS (which is selected), STATUS, and CALLS. The main area displays a list of chats. Each chat item includes a profile picture, the chat name, the date of the last message, and a snippet of the last message. The fourth chat from the top is highlighted with a red rectangular border.

Profile Picture	Chat Name	Last Message	Date
	Fiteniers Assemble	Adrian: that is true for fitness center...	Yesterday
	Fitenium-Dev	Alex: Whyyyyy I felt soooo sorry for h...	Yesterday
	+7 963	✓ Photo checking 😂	Yesterday
	JW Player	Horea: Ok, thanks	01/10/2020

## Chats List



FlatList of ChatListItems



Adrian: that is true for fitness center...



Fitenium-Dev Yesterday

Alex: Whyyyy I felt soooo sorry for h...



+7 Yesterday

✓ Photo checking 😊



JW Player 01/10/2020

Horea: Ok, thanks



Vlad Petrykov 29/09/2020

yeah, that one sound better for sure :D



Lukas 29/09/2020

✓ ok



Adrian Ramos 23/09/2020

✓ Yeah, that sounds interesting



Alex 16/09/2020

✓ Photo



## Chat Screen



Message Component  
- green: #DCF8C5



Flatlist with Messages



## Message Input Component



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## Floating Button



Horea: Ok, thanks



Vlad Petrykov

29/09/2020

yeah, that one sound better for sure :D



Lukas

29/09/2020

✓ ok



Adrian Ramos

23/09/2020

✓ Yeah, that sounds interesting



Alex

16/09/2020

Photo



Borja

24/08/2020

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## User List



Horea: Ok, thanks



**Vlad Petrykov**

29/09/2020

yeah, that one sound better for sure :D



**Lukas**

29/09/2020

✓ ok



**Adrian Ramos**

23/09/2020

✓ Yeah, that sounds interesting



**Alex**

16/09/2020

Photo



**Borja**

24/08/2020

## Next Week



1. Setup AWS Amplify
2. Implement User Authentication
3. Create the GraphQL API
4. Connect the frontend with the backend



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# Realtime Chat

Backend Integration  
with AWS Amplify



## Setup AWS Amplify Project

```
||| https://docs.amplify.aws/start/q/integration/react-native
```

```
||| $ amplify init
```

```
||| $ yarn add aws-amplify aws-amplify-react-native @react-native-community/netinfo
```

```
||| Configure the App.tsx
```



## Authentication

```
||| $ amplify add auth
```



## GraphQL API

- ||| \$ amplify add api
- || 1. Add user model
- || 2. Register a user on authentication
- || 3. Display all users in the contact list
- || 4. Chat Rooms
- || 5. Messages
- || 6. Real-time functionality
- |||

 AWS Amplify



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# Q&A



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# Realtime Chat

Part 3: Realtime functionality



## Last message in a chat Room



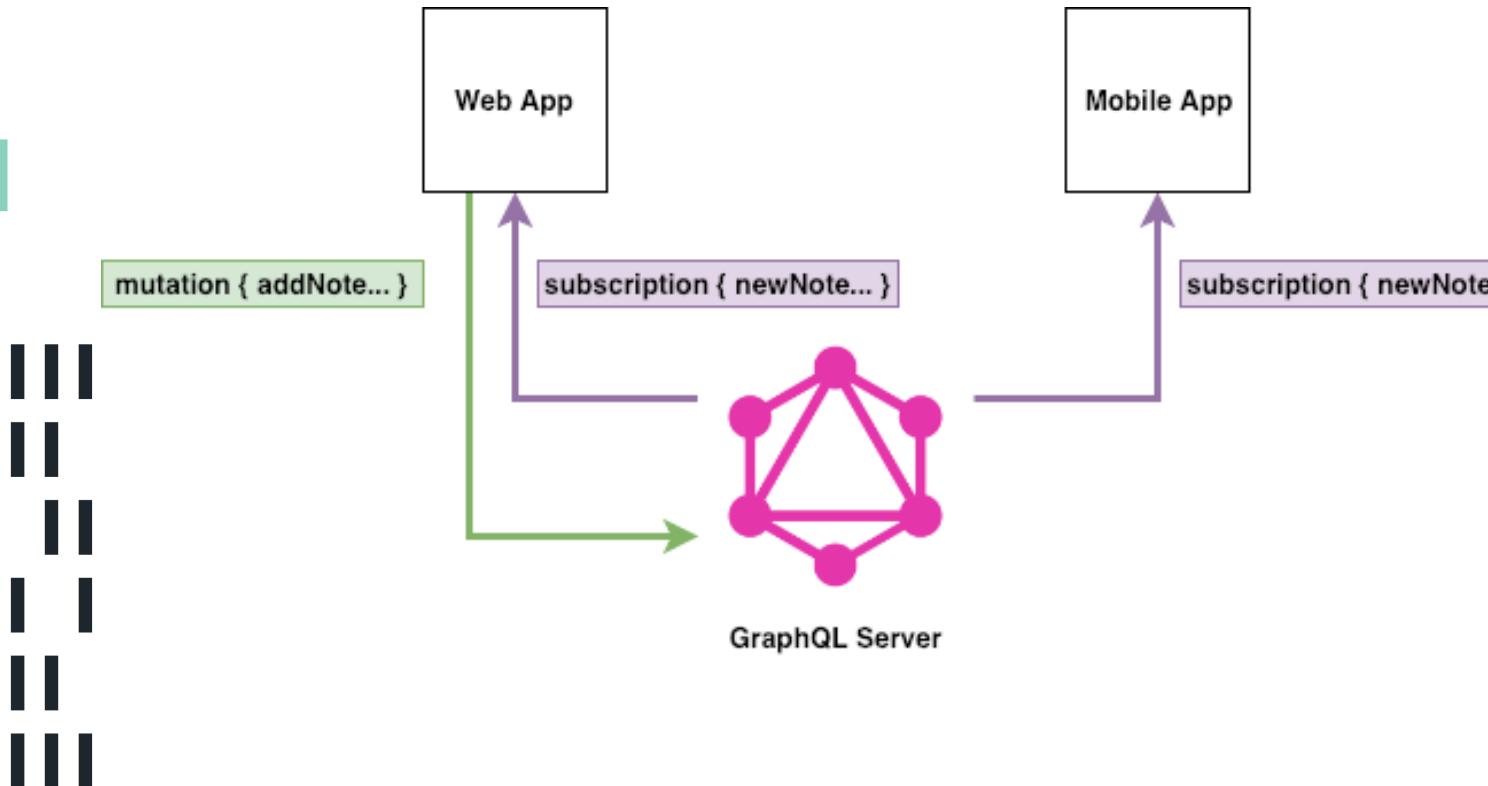
- Update the schema to include lastMessage
- Update the chat room for any new message
- Sort ChatRooms by last message



 AWS Amplify



## GraphQL Subscriptions



## Realtime chat with Instant messages



- Subscribe to new messages
- Subscribe to new messages only in the chat room
- Subscribe to ChatRoom updates



## Keyboard avoiding view



## Improvement Ideas



- Pagination
- Adding people to the chat room  
(groups)



- Updating user data (name, status)
- Emojis



- Extra challenge:
- Sending voice messages
  - Sending media files



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# Q&A

