

Flutter Assessment

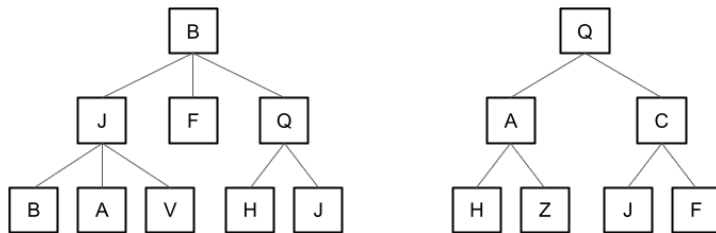
Please do the following for all tasks:

- Ensure all code is null safe and executable.
- Include proper documentation.
- Host the code on GitHub, with relevant commit documentation.

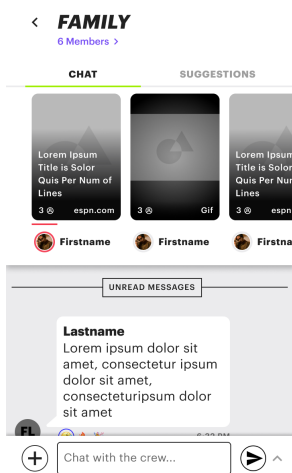
Alphabet Trees

1. Write a class that creates an `AlphabetTree` of any size or length. (Nodes do not have to be unique.)
2. Add a method to the class which accepts another alphabet tree, compares the data of the two trees and prints all the unique letters within the two trees, in alphabetical order.
3. Write unit tests for the code.

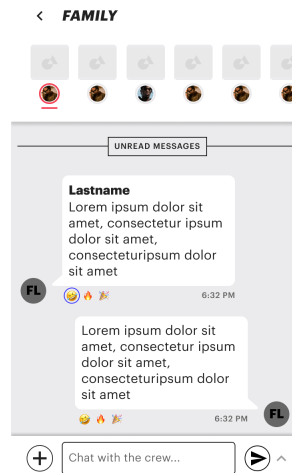
Sample trees for illustration purposes:



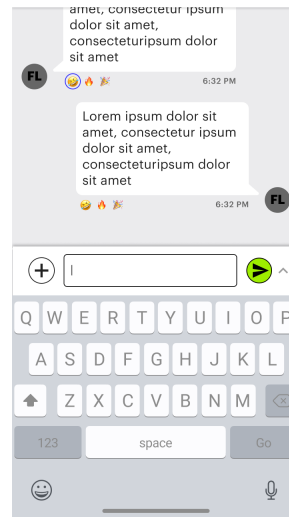
Chat Screen



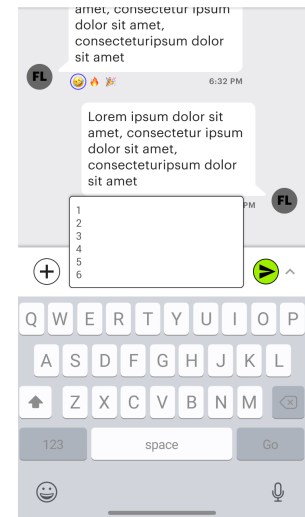
State 1



State 2



State 3



State 4

* Larger versions can be found below.

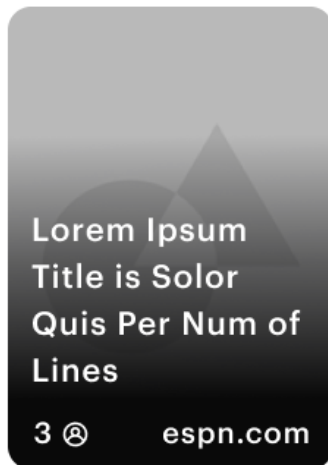
1. Create a Chat screen prototype based on the above mock-ups. (Stay as true to the design as possible. Use your own images if needed.)
2. Include the following key features:
 - a. When scrolling up/down in the messages area, the horizontal carousel should shrink/expand in relation to the drag.
 - b. When dragging is stopped, and the carousel reaches its smallest size, it should “lock” to the small size and not expand again on the next scroll gesture.
 - c. As the carousel shrinks/grows, the items within it should transition to their new visual layout.
 - d. Once the items in the carousel are shrunk (and dragging is still taking place) the tab bar and the “Members” subtitle should swipe up and fade out, while the “Family” title should shrink in size.
 - e. Swiping down on a shrunk carousel should expand it back to its maximum size.
 - f. When the input field receives focus, the header should snap to its new position.
 - g. Typing multiple lines of text should cause the input field to expand in size (up to 6 lines) and provide scrolling as needed.
 - h. Tapping outside of the input field should cause the keyboard to hide and for the header to snap to its shrunk state. (Regardless of the state it was in before.)
 - i. Submitting the text should add it as a new message in the messages view.
 - j. Tapping the PLUS button on the footer should add a new message to the messages view from a random user with random content. (It should also move the “Unread Messages” indicator to the correct location.)

< **FAMILY**

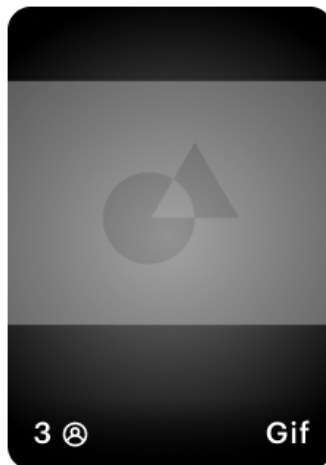
6 Members >

CHAT

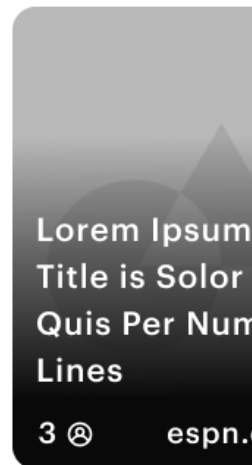
SUGGESTIONS



Firstname



Firstname



Firstna

UNREAD MESSAGES

Lastname

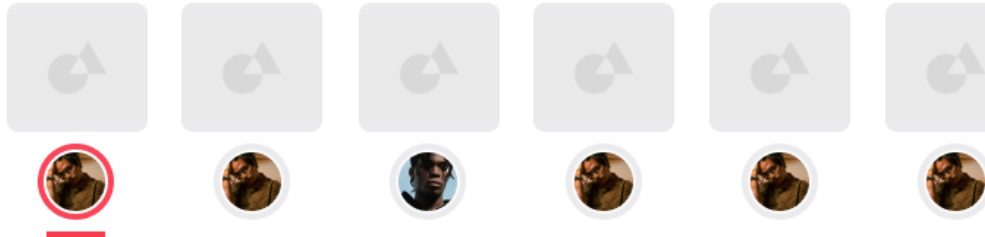
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Chat with the crew...



< **FAMILY**



UNREAD MESSAGES

Lastname

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6:32 PM

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Chat with the crew...



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