

# SAHAY Framework : An interactive toolkit to enable developers and designers towards building content-heavy applications

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## Abstract

Content based apps are prevalent in various domains ranging from fitness based apps, language learning course based applications to mental health or meditation based applications. While most of them follow a generic survey based style of presenting UI screens, each of which might have varying interactivity, there does not exist a dedicated framework that provides a suite of such UI components to be used and shared across self-help domains. We thus present **Sahay** *Hindi- meaning enabling/empowering* framework for empowering developers to build content based applications as well as enable designers and domain experts to visualize/design the entire app flow and communicate effectively to developers.

## Motivation

- Dearth of frameworks that provide a suit of UI components common across the self-enabling/self-help domain spectrum.
- Also an interactive visualization tool can help both developers and designers, domain experts to interact with each of the app's components and understand the content and navigation flow of the app.

## Key Contributions

- Introduce a suite of react-native components for the end-developer so that they can plug in any one of them for their own application.
- Introduce more flexibility among designers and developers,through an interactive tool where designers can chalk out a flowchart of the app and integrate content from domain knowledge.

## Architecture

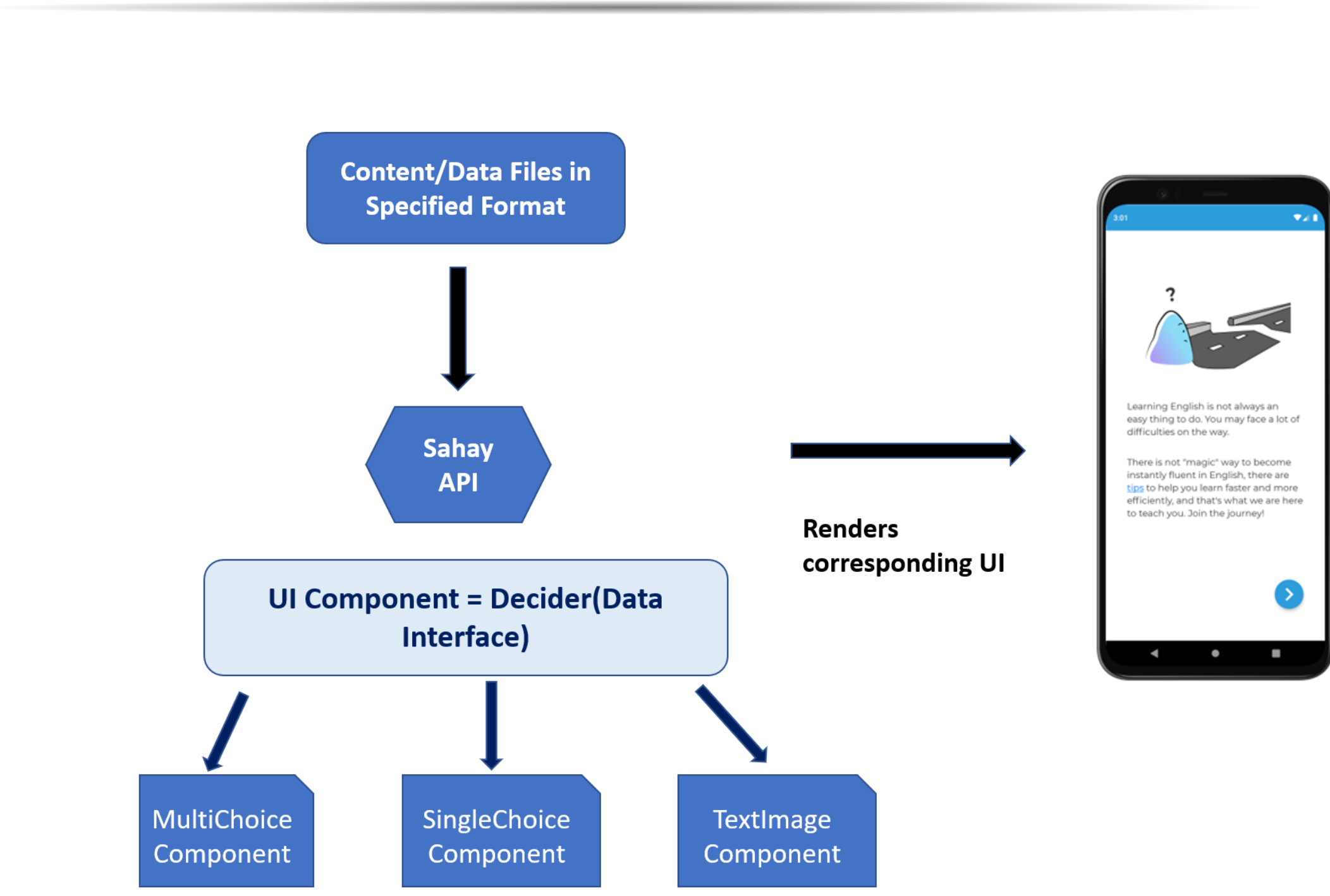


Figure 1:Sahay API architecture

## Shareable React-Native UI Components Library

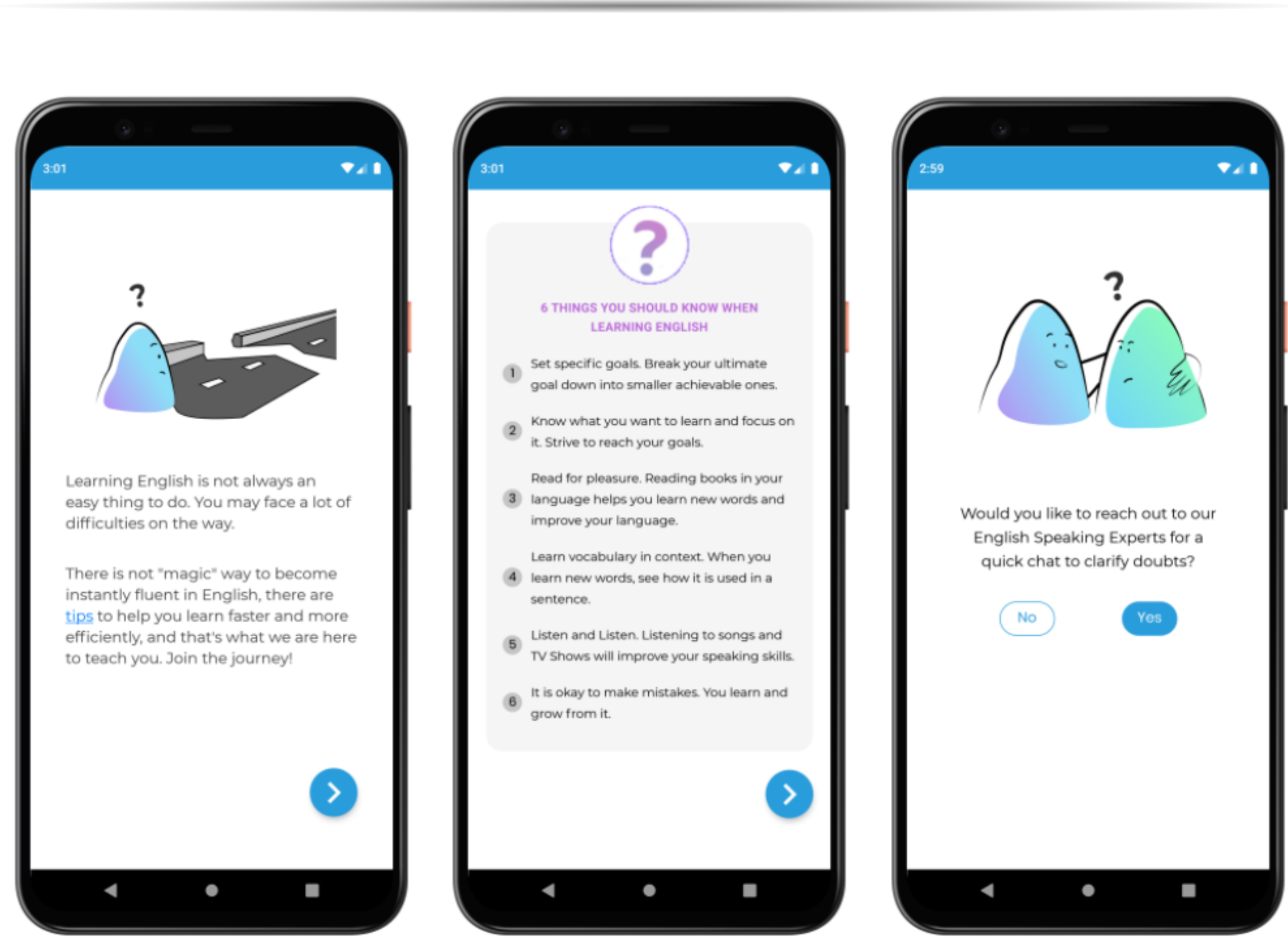


Figure 3:Example of Components from Sahay suite for a english speaking app

## Conclusion & Future Work

We believe this tool can be useful for content developers, domain experts , designers and developers as a whole who are looking to build any content-heavy application. Right from providing a suite of common UI components across various domains, to having a flexible visualization and interactive tool for both designers and developers to understand their application better, we hope Sahay can bridge the gap between all stakeholders in such projects, thereby making collaboration effective and deployment much more smoother. In addition to this, developers can leverage this tool as it provides an interactive interface to visualize their app flow and thus rule out any specific navigation errors or related interface errors a lot earlier.

## Related Work

- <https://arxiv.org/abs/1910.08930Sketch2Code>
- <https://dl.acm.org/doi/10.1145/3310276> Enact: Reducing Designer–Developer Breakdowns When Prototyping Custom Interactions
- <https://dl.acm.org/doi/10.1145/2998181.2998190Design> Breakdowns: Designer–Developer Gaps in Representing and Interpreting Interactive Systems

## Sahay App Visualization ToolKit

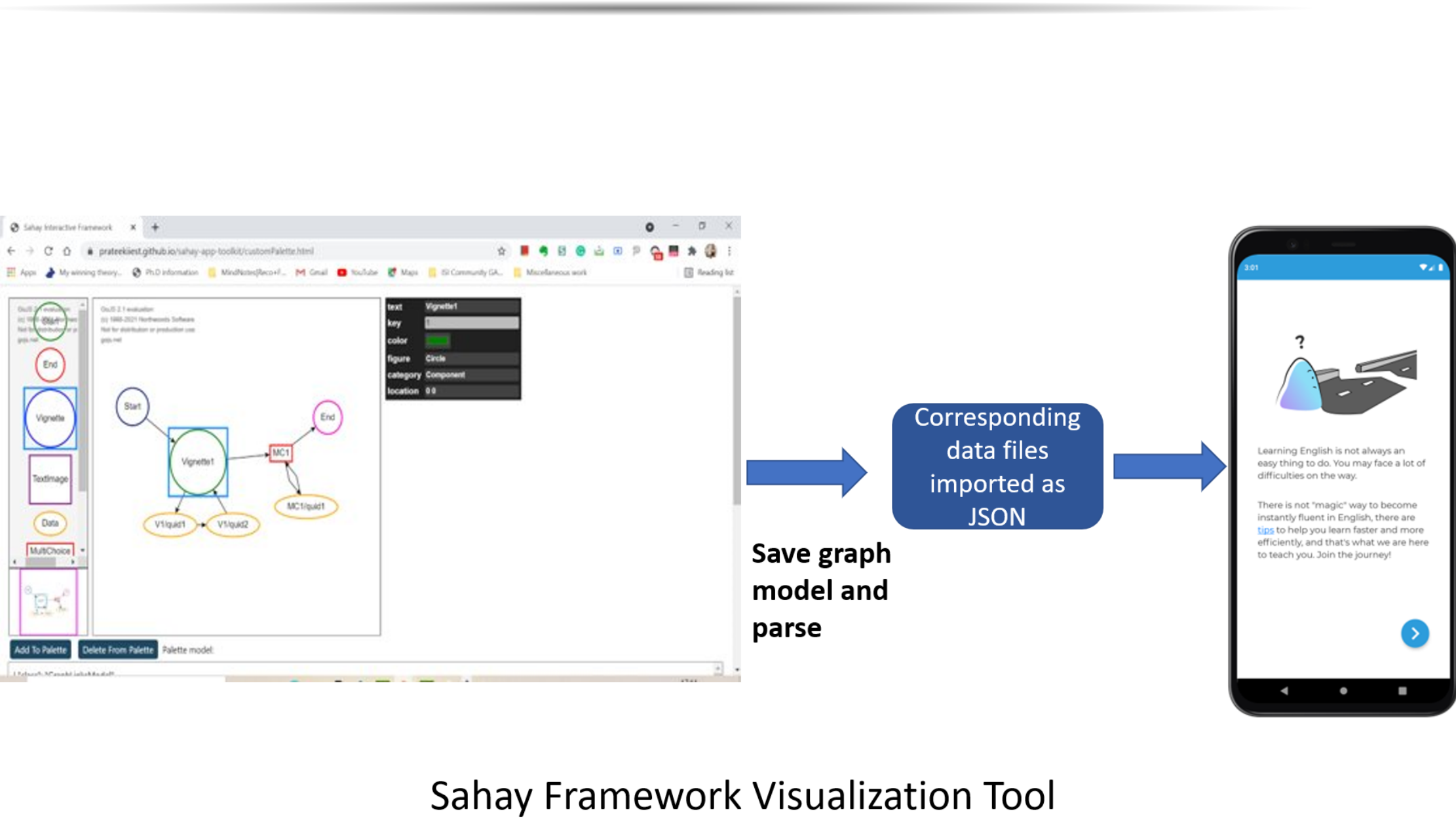


Figure 2:Visualization toolkit lets developers and desiners interact with the app components and their corresponding data

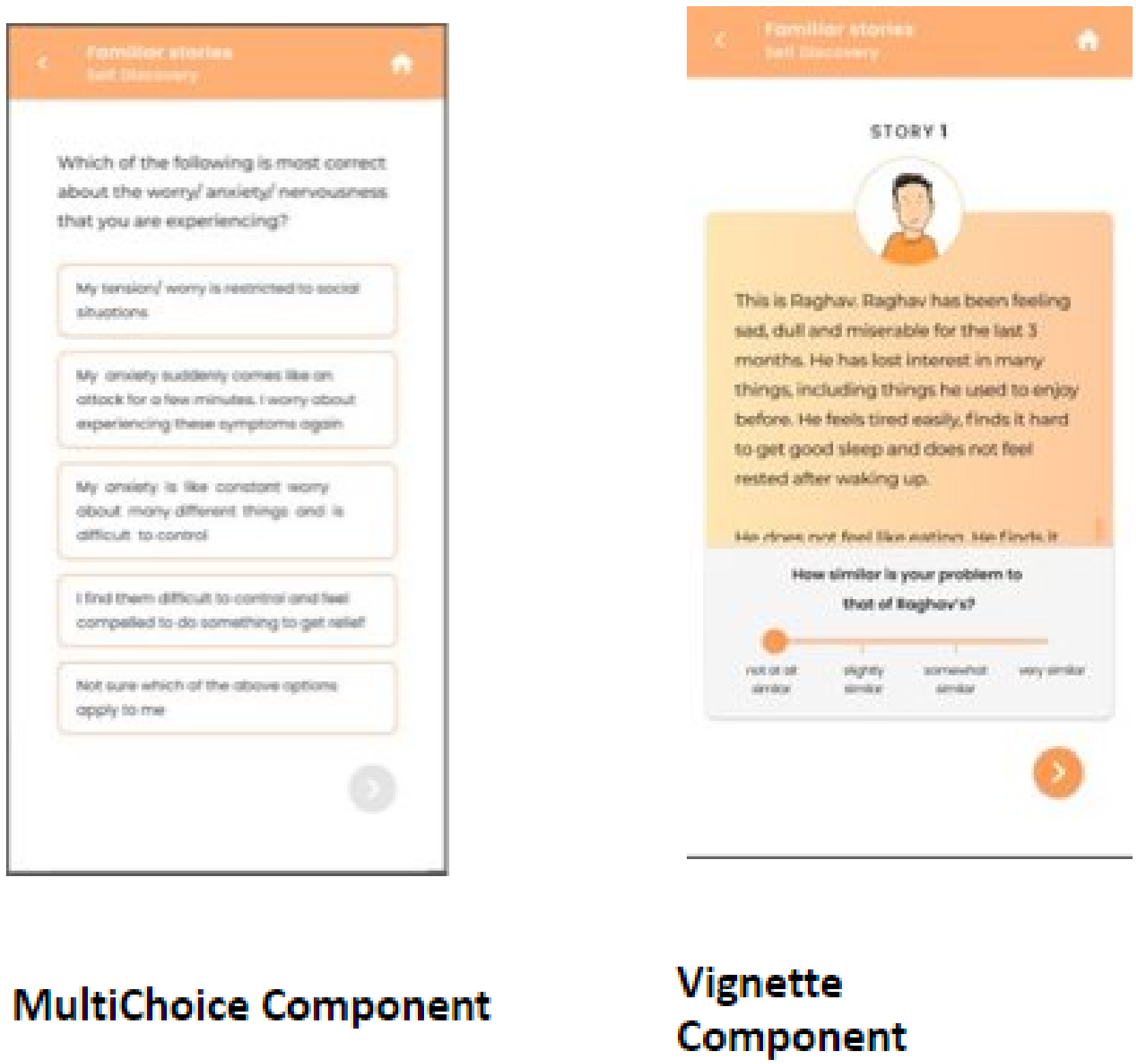


Figure 4:More UI components from teh framework