

CHAPTER 1

INTRODUCTION

1.1 Background

Lately everyone wants something instant, including in the world of technology. Instant here is in processing or processing large amounts of data. On the front-end, speed is important. It can be fast in loading pages, loading images, processing data, transitions between pages, and so on.

Application speed will affect the convenience of the user. The slow speed of an application might be caused by a section for processing large data, it takes time to process it. This large data processing not only cause slow speed an application but also slow down the performance in an application. Slow performance in an application can result in large memory usage, reduced frame rate, lags, large GPU usage, high load times, etc.

There are several methods for processing data in React Native. Some of them are FlatList and ScrollView. In this case, testing and analysis will be carried out between FlatList and ScrollView which is the most optimal method for processing large data. Array Map and the Lodash library will be used for data looping in the processing, and we will also observe whether it affects the data processing. It's a difference between FlatList and ScrollView.

ScrollView will load all items (data in it for scrolling) immediately after the component is done loading. So, all data will mount into RAM and you can't use a hundred or thousand items in it (because of low performance). But FlatList has a better solution for this issue, it will mount 10 items (by default) to the screen. If the user scroll view so other items will mount. It's a big gain of FlatList instead of ScrollView. The FlatList method is more advanced, compared to the ScrollView method.

1.2 Problem Formulation

The problem formulation from the background above will be the topic that will be discussed in this research. The problem formulation is defined into 2:

1. Which is more effective between FlatList and ScrollView method?
2. Does the choice of using Lodash & array map affect data processing?

1.3 Scope

Base on the problem above, this project will compare FlatList and ScrollView and prove whether FlatList is the right solution for data processing in React Native with limitation items and see does Lodash and Array Map affect the processing data or not.

1.4 Objective

Objective of this project is to determine which one between FlatList and Scrollview are the best method to handle large number of data, by using the real data from Bali E-retribution application. Considering a large number of data sets on this project, it is necessary to be precise in choosing the method used for the smoothness and convenience of the application.