# Version Guide

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Creating an End to End Business Solution Using the R and Shiny Packages

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**ABSTRACT**

The childcare industry in Singapore is a niche market that requires constant tailoring to fit the needs of the parents, schools and most importantly the children. The company wishes to keep track of the client database and the various corresponding information to identify useful insights. Hence, this project seeks to help ease the management of data and information for the company through the R and Shiny packages. Traditionally, developers turn to programming languages such as JavaScript and HTML do design web applications with Java and MySQL as the backend services. The Shiny package on the other hand is unique as it can also be used to create interactive web apps while having the amazing statistical analysis framework that R is able to provide. With this in mind, we have decided to use Shiny as a front-end tool to help capture new data. The R framework is then used to tie all of the information together by cleaning the captured data which will then be displayed back onto Shiny for the user to take a look at their data. We will finally analyze the result using market basket analysis as it is able to show a shift in customer preferences and profiles resulting in an actionable recommendation after understanding these insights. Data visualization is an important final step because it enables the business user to understand changes in customer behavior and helps the user to discover insights across their different customer profiles as the business continues to add and capture new data. In addition, we aim to create an analytics dashboard which will provide a forecasting tool that processes the captured information for our sponsor to better manage the operations and planning for the company.