The mosaicManip package provides a simple interface for graphical user input. The manipulate function creates an environment where users can interact with R code through graphical controls, such as sliders and checkboxes. This allows for the evaluation of R code in a controlled and interactive manner, making it easier to understand and experiment with different scenarios. The package is designed to be user-friendly and accessible, making it suitable for a wide range of applications, from educational settings to research environments.

**Basic Manipulate Functionality**

The manipulate package implements a simple graphical interface for R code evaluation. It requires users to define a function that takes inputs, processes them using R code, and returns outputs. The function is then evaluated in a controlled environment, allowing for interactive exploration of the code's behavior.

**Example: A Simple manipulate() Applet**

```r
# Simple manipulate() applet
manipulate("f", x = -1:1, a = 1:2, b = 1:2)
```

This simple example demonstrates how the manipulate function can be used to create an interactive applet that allows users to explore the behavior of the function `f(x, a, b)` by adjusting the values of `x`, `a`, and `b`.

**The mosaicManip Package**

The mosaicManip package is currently in beta testing and is based on experiences with students next semester. It aims to provide a platform for creating and sharing interactive R code examples. The package includes a set of predefined control functions that can be used to create interactive applets.

**The mosaicPackage**

Project MOSAIC is a U.S. NSF-sponsored initiative to help strengthen ties among modeling, statistics, computation, and calculus in the undergraduate curriculum. The mosaic package for R seeks to enhance student development of sophisticated computing skills by providing a smooth path between elementary computations and more advanced, modeling-oriented computing. The goal is to provide an interactive environment that helps students develop a stronger understanding of how different fields of mathematics interact.

**The Authors**

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**The mosaicPackage**

The mosaic package is available on CRAN and can be installed using R with the following command:

```r
install.packages("mosaic")
```

By providing graphical controls, the package enables students to visualize the relationship between two variables and interact with the R code in a more intuitive manner. This can help students develop a deeper understanding of the underlying concepts and improve their problem-solving skills.

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