**R Lists**

A list in R can contain many different data types inside it. A list is a collection of data which is ordered and changeable.

To create a list, use the list() function:

**# List of strings**

thislist <- list("apple", "banana", "cherry")

# Print the list

thislist

**Access Lists**

You can access the list items by referring to its index number, inside brackets. The first item has index 1, the second item has index 2, and so on:

thislist <- list("apple", "banana", "cherry")

thislist[1]

**Change Item Value**

To change the value of a specific item, refer to the index number:

thislist <- list("apple", "banana", "cherry")

thislist[1] <- "blackcurrant"

# Print the updated list

thislist

**List Length**

To find out how many items a list has, use the length() function:

thislist <- list("apple", "banana", "cherry")

length(thislist)

**Check if Item Exists**

To find out if a specified item is present in a list, use the %in% operator:

Example

Check if "apple" is present in the list:

thislist <- list("apple", "banana", "cherry")

"apple" %in% thislist

**Add List Items**

To add an item to the end of the list, use the append() function:

thislist <- list("apple", "banana", "cherry")

append(thislist, "orange")

**Remove List Items**

You can also remove list items. The following example creates a new, updated list without an "apple" item:

Example

Remove "apple" from the list:

thislist <- list("apple", "banana", "cherry")

newlist <- thislist[-1]

# Print the new list

newlist

**Range of Indexes**

You can specify a range of indexes by specifying where to start and where to end the range, by using the : operator:

Example

Return the second, third, fourth and fifth item:

thislist <- list("apple", "banana", "cherry", "orange", "kiwi", "melon", "mango")

(thislist)[2:5]

**Join Two Lists**

There are several ways to join, or concatenate, two or more lists in R.

The most common way is to use the c() function, which combines two elements together:

list1 <- list("a", "b", "c")

list2 <- list(1,2,3)

list3 <- c(list1,list2)

list3