

Week 2: Programming with R

Welcome to Week 2 of R Programming. This week, we take the gloves off, and the lectures cover key topics like control structures and functions. We also introduce the first programming assignment for the course, which is due at the end of the week.

Week 2: Programming with R

This week is all about functions and about controlling the flow of an R program. We start with control structures (like if-else, and for loops) and then move on to writing functions. Next, we discuss the [lexical scoping](#) features of the language and how they can be used in interesting ways, particularly for statistical applications.

Learning Objectives

By the end of this week you should be able to:

- Write an if-else expression
- Write a for loop, a while loop, and a repeat loop
- Define a function in R and specify its return value [see Functions Part 1 and Part 2]
- Describe how R binds a value to a symbol via the search list
- Define what lexical scoping is with respect to how the value of free variables are resolved in R
- Describe the difference between lexical scoping and dynamic scoping rules
- Convert a character string representing a date/time into an R datetime object. [see Dates and Times]

Assessments

- Quiz 2 - at least 80% to pass
- Programming assignment 1: Air Pollution - at least 80% to pass. For those interested in a bit of a "warm up" to this programming assignment, Derek Franks has written a very nice [tutorial](#) to help you get up to speed. This programming assignment has multiple parts and you will submit your answers using the submit script described in the instructions.

Practical R Exercises in swirl Part 2

During this week of the course you should complete the following lessons in the R Programming swirl course:

1. Logic
2. Functions

3. Dates and Times

Complete