

# Project Management and Documentation

## Objective

Learners will learn about and practice managing their projects using file structure and RStudio projects, and about current best practices and style guides for R coding.

## Lesson Outline

- Introductions
- Discuss reproducibility
- Give tour of course website & syllabus
  - Point out code of conduct
- Briefly demo Slack
- Screen setup
- Don't save or load .RData!
- Discuss general best practices for research compendia (use Carpentry lesson??)
  - All files needed for a project in the same folder (ideally)
  - Organize data, code, and outputs into different folders at a minimum
  - Never edit raw data
  - Include documentation on what each file is/does in a README
    - Project summary
    - Project status (in progress, archived, just an idea?)
    - How to give credit
    - Structure of repo (what files do what?)
    - How to reproduce results
    - Example READMEs:
      - <https://github.com/Aariq/BACE-legacy-effects>
      - <https://github.com/ecohealthalliance/amr-analysis>
      - <https://github.com/atredennick/size-environment>
- Live Coding: create an R project and add gapminder data to it
  - Show file pane & connect to Windows Explorer / Finder
  - Show how to make a file read-only
  - Demo closing, opening, and switching projects
- Homework:
  - Apply one or more of the organizing principles of a research compendium to an existing re-search project.

## Installation & materials

1. Slides
2. Software Carpentry Introduction to R and RStudio episode

### 3. Software Carpentry Project Management with RStudio episode