R Package Creation

Creating Well Documented and Reusable Software

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Outline of Lecture

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- A minimal example package utilizing S3 and S4 OOP systems

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- Deliver your work to the world! (PhD Dissertations)

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- This is the simplest form of an R package, but we'll add more

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  - What packages does the package "depend" on, import, suggest - in general, don't use depends

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- Hadley's rule: if I can't remember where a function lives, I need more files, or better names for files

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- License is important to understand when you want to released your package to others, but we won't delve into that here

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  - Export as few functions as necessary to avoid conflicts with existing packages

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  - You can also do this with devtools::create(), devtools::check(), devtools::build, devtools::install()

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- R package developers used to have to document our functions manually by reading "Writing R Extensions", and messing up a lot

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- Three short tests provided in the example package - tests are NOT required to check a package, accomplish via devtools::test()

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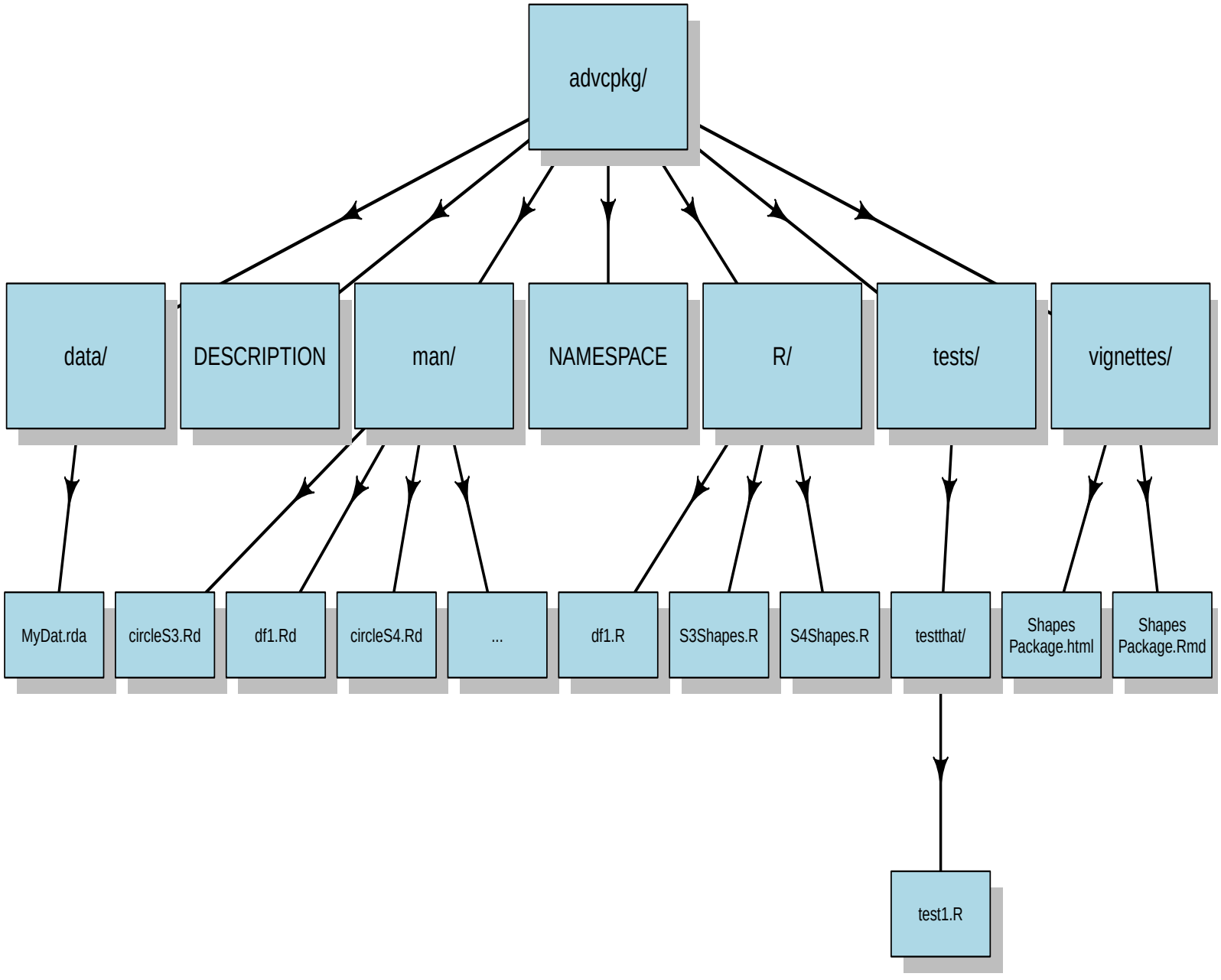
- Vignettes can be transformed into journal articles, so it's not a waste of time

Flowchart of overall package structure



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- Your workflow may change from time to time based on your requirements, for instance you may not be in the testing stage yet but are trying to work out kinks from roxygen2

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- We'll see that different characteristics and functions apply based on the class of the shape

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