

Reproducible environments

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RStudio

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<https://environments.rstudio.com/>

No Strategy

Awareness

Shared Baseline

Record & Restore

Validated

scary upgrades
no sharing
old stuff is broken

reprex
sessioninfo()

site library
frozen repo

renv

internal repo
custom tests

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devtools::**session_info()**

Better than `utils::sessionInfo()` for
development packages

Useful for bug reports and colophons



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RStudio Package Manager checkpoints

MRAN

Site library

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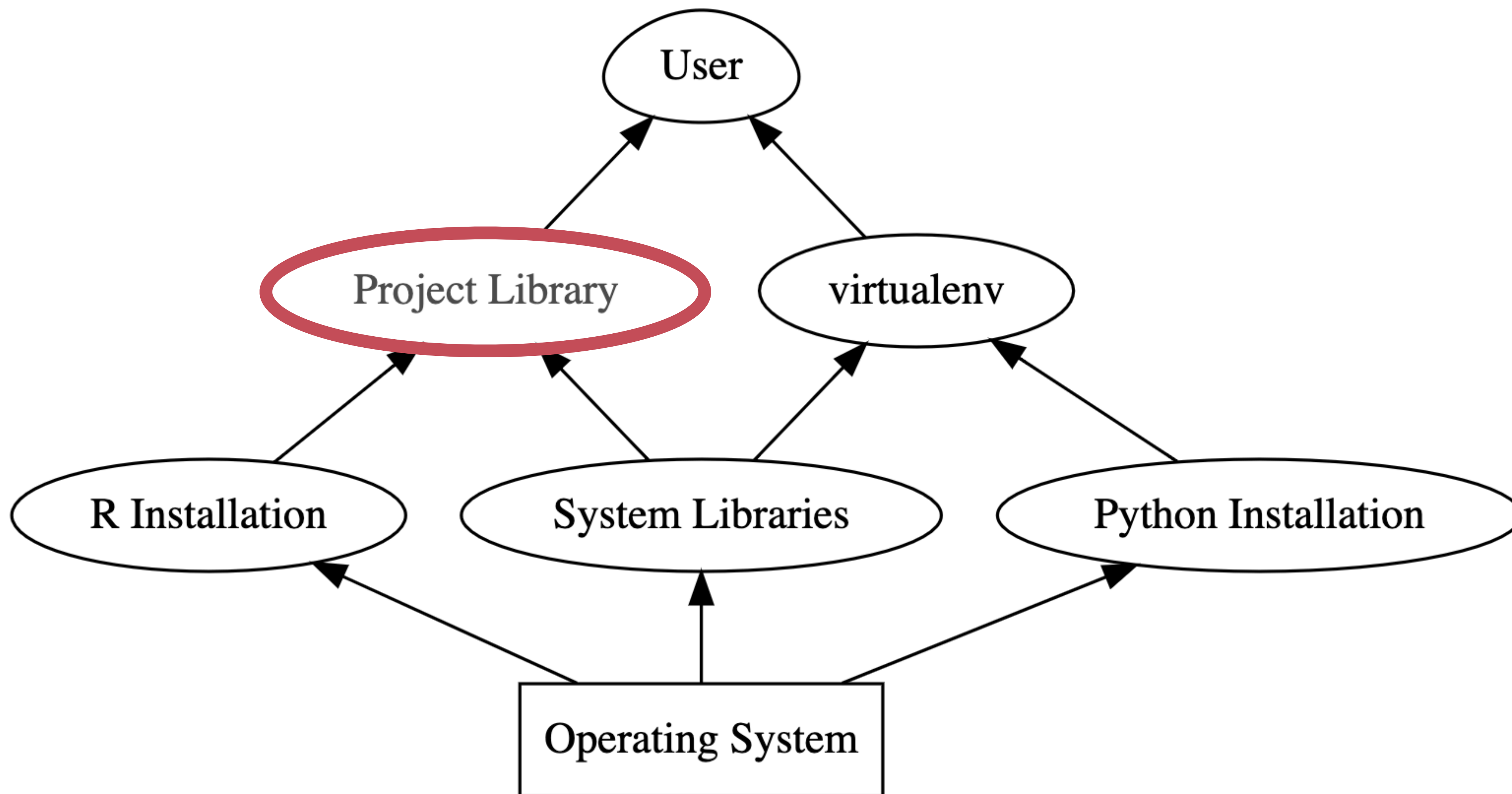
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`renv` (packrat 2.0)

similar to python virtualenv

rstudio.github.io/renv

`renv::init()`

1. Finds existing dependencies
(`dependencies()`)
2. Creates lock file (`snapshot()`)

renv::snapshot()

```
{
  "renv": {
    "Version": "0.9.2-27"
  },
  "R": {
    "Version": "3.6.2",
    "Repositories": [
      {
        "Name": "CRAN",
        "URL": "https://cloud.r-project.org"
      }
    ]
  },
  "Packages": {
    "markdown": {
      "Package": "markdown",
      "Version": "1.0",
      "Source": "Repository",
      "Repository": "CRAN",
      "Hash": "4584a57f565dd7987d59dda3a02cfb41"
    },
    "mime": {
      "Package": "mime",
      "Version": "0.7",
      "Source": "Repository",
      "Repository": "CRAN",
      "Hash": "908d95ccbfd1dd274073ef07a7c93934"
    }
  }
}
```

renv::restore()

```
61 > renv::restore()
62 The following package(s) will be updated:
63
64 # Bioconductor =====
65 - AnnotationDbi          [* -> 1.48.0]
66 - AnnotationFilter      [* -> 1.10.0]
67 - BSgenome              [* -> 1.54.0]
68 - Biobase                [* -> 2.46.0]
69 - BiocFileCache         [* -> 1.10.2]
70 - BiocGenerics          [* -> 0.32.0]
71 - BiocParallel          [* -> 1.20.0]
72 - BiocVersion           [* -> 3.10.1]
73 - Biostrings            [* -> 2.54.0]
74 - DelayedArray          [* -> 0.12.0]
75 - GenomeInfoDb          [* -> 1.22.0]
76 - GenomeInfoDbData     [* -> 1.2.2]
77 - GenomicAlignments    [* -> 1.22.1]
78 - GenomicFeatures      [* -> 1.38.0]
79 - GenomicRanges        [* -> 1.38.0]
80 - IRanges               [* -> 2.20.1]
81 - OrganismDbi          [* -> 1.28.0]
82 - ProtGenerics         [* -> 1.18.0]
```

Demo

Try renv

install renv and try `renv::init()` on a real project

Maybe the `wtf-packages-report`?

restart R

Use `devtools::session_info()` output

Docker + renv = powerful reproducibility!

