A7: Notes - Shiny Part 2

```r
library(ggplot2)
library(knitr)
```

Shiny with flexdashboard

One way to use the shiny package is to create a flexdashboard. Flexdashboard allows the programmer to create windows for input and output in a stand alone shiny application.

The simipliest way to implement a flexdashboard is in the YAML header.

Initial Steps for flexdashboard using shiny from blank R Markdown document

- In YAML header have `output: flexdashboard::flex_dashboard`
- In YAML header have `runtime: shiny`
- (Optional) Add '{.sidebar} to the first column of the dashboard to make it a place where inputs can be obtained.

You may now add shiny functions to the sidebar and second column to create a simple flexdashboard.

Use the code below in a blank .Rmd file to generate a simple flexdashboard.

Example 1:

You can find the code for Example 1 here: **Example_1.Rmd from Box folder**

Layouts

For flexdashboards there are multiple layouts that can be utlized. For some examples of the different layouts see: https://rmarkdown.rstudio.com/flexdashboard/layouts.html

We can add to Example 1 and utilize a layout.

Example 2

See the code of Example 2 here: **Example_2.Rmd from Box folder**
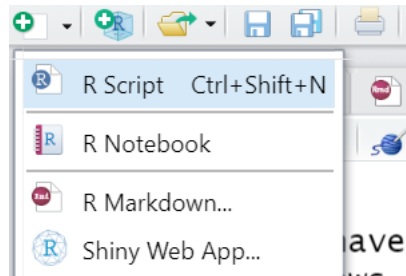
Notice we have added to the YAML the ability to scroll and place windows in rows.

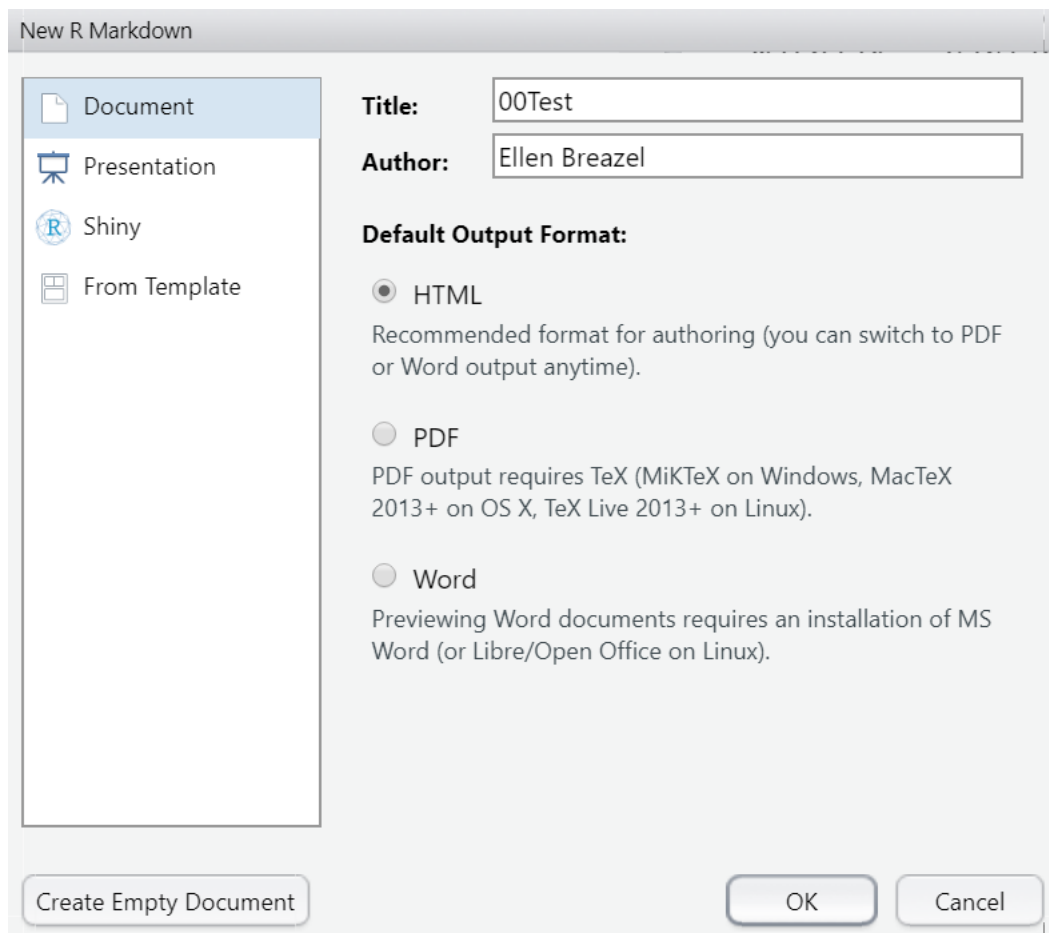## Creating template with R Studio

There is a method of creating flexdashboards with shiny in R Studio that allows for a template.
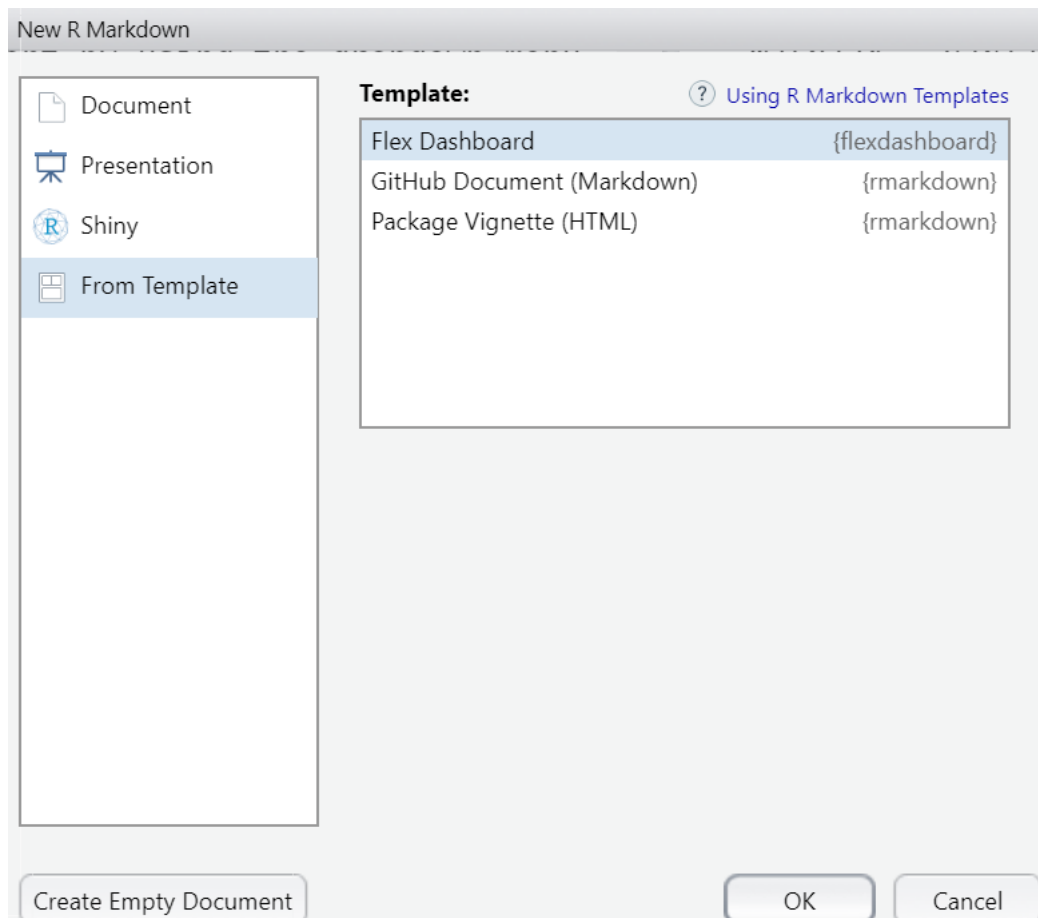
Steps:

1. Create a new R Markdown document by using the dropdown menu.

2. In the pop-up screen select **From Template**

3. Choose `flex dashboard` and hit **OK**.

What is created is a template flexdashboard document.

Shiny Apps

In addition to using the shiny package to embed HTML into R Markdown, or creating flexdashboard documents (there are also shinydashboard documents) you can create a shiny app.

If you plan on needing a lot of flexibility for your shiny application then you can use the shiny app document. If you are building a basic shiny application it is fine to use flexdashboard (or shiny dashboard)

In order to create shiny apps you will need a `app.R` file within its own directory folder.

Example 3

An basic example of how to use shiny app can be found here: **app.R from Box Folder**

Note: when downloading and running app.R from Box folder the file should be in its own directory since all apps are app.R

A more complicated example can be found here: https://gist.github.com/dgrapov/dfcf6ab2339b1cf19b090cfb8dadc855

References

- Flexdashboard for R - https://rmarkdown.rstudio.com/flexdashboard/using.html

- Code for Example 3 - https://gist.github.com/dgrapov/dfcf6ab2339b1cf19b090cfb8dadc855

- How to build a Shiny App - https://shiny.rstudio.com/articles/build.html

- Combining Shiny and R Markdown - https://beta.rstudioconnect.com/content/2671/Combining-Shiny-R-Markdown.html

- Tutorial on Learning Shiny - https://shiny.rstudio.com/tutorial/

- Learn Shinydashboard - https://rstudio.github.io/shinydashboard/