# How to use this folder

This folder is geared towards anyone who wants to contribute new tasks and/or solutions to the website [*How to Data*](https://how-to-data.org).

## If you want to work in Python

(See later in this document for working in R, Excel, or some other software.)

Inside the Python subfolder, you will find a folder entitled “How to print a caterpillar.” Obviously, this is a silly task meant only for use as an example.

* If you’re adding a new task to the *How to Data* database, do this:
  + Rename the folder from “How to print a caterpillar” to the name of your task. It should still begin with “How to,” such as “How to create a scatterplot.”
  + Edit the notebook description.ipynb in that folder and edit it to describe your task, instead of the example caterpillar task.
* If you’re not providing a solution to your task, delete the file Python.ipynb.
* If you are providing a solution with your task, open the Jupyter notebook Python.ipynb in that folder and edit it to show a solution to your task, instead of the caterpillar task.
  + The notebook is named Python.ipynb because it is a solution that uses Python.
  + If you are using Python plus some important packages, please rename the notebook to something like Python, using pandas.ipynb or Python, using Matplotlib and SciPy.ipynb. Note the commas, which are important.

To submit your new task and/or solution, visit [the folder on GitHub](https://github.com/nathancarter/how2data/tree/main/database/tasks) where the *How to Data* tasks and solutions live. You will upload your work there in one of two ways:

* If you created a task (and optionally a solution with it), do this:
  + Click “Add file” and then “Upload files.”
  + Drag the task folder you renamed (e.g., “How to create a scatterplot”) into your browser to upload it.
  + Under the “Commit changes” heading, write a short phrase to explain what you’re submitting, such as “Adding scatterplot task with Python solution.”
  + Make sure you’re creating a new branch and a pull request. (A “pull request” is a request for the *How to Data* maintainers to review and accept your submission.)
  + Click “Commit changes.”
* If you created a solution to a task that already exists in the site, do this instead:
  + In your browser, click to enter the subfolder for the task in question.
  + Click “Add file” and then “Upload files.”
  + Drag *just your new solution file* (e.g. Python.ipynb or Python, using pandas.ipynb) in to upload it. (Do not upload your whole task folder, just the solution file that’s in that folder.)
  + Under the “Commit changes” heading, write a short phrase to explain what you’re submitting, such as “Adding a Python solution to the scatterplot task.”
  + Make sure you’re creating a new branch and a pull request (which means you’re asking the *How to Data* maintainers to accept your submission).
  + Click “Commit changes.”

The team in charge of *How to Data* will (very gratefully!) review your work and contact you soon. Thank you!

## If you want to work in R

(See later in this document for working in Excel or some other software.)

Inside the R subfolder, you will find a folder entitled “How to print a caterpillar.” Obviously, this is a silly task meant only for use as an example.

* If you’re adding a new task to the *How to Data* database, do this:
  + Rename the folder from “How to print a caterpillar” to the name of your task. It should still begin with “How to,” such as “How to create a scatterplot.”
  + Edit the RMarkdown notebook description.Rmd in that folder and edit it to describe your task, instead of the example caterpillar task.
* If you’re not providing a solution to your task, delete the file R.Rmd.
* If you are providing a solution to your task, open the RMarkdown notebook R.Rmd in that folder and edit it to show a solution to your task, instead of the caterpillar task.
  + The notebook is named R.Rmd because it is a solution that uses R.
  + If you are using R plus some important packages, please rename the notebook to something like R, using dplyr.Rmd or R, using ggplot2.Rmd. Note the commas, which are important.

To submit your new task and/or solution, visit [the folder on GitHub](https://github.com/nathancarter/how2data/tree/main/database/tasks) where the *How to Data* tasks and solutions live. You will upload your work there in one of two ways:

* If you created a task (and optionally a solution with it), do this:
  + Click “Add file” and then “Upload files.”
  + Drag the task folder you renamed (e.g., “How to create a scatterplot”) into your browser to upload it.
  + Under the “Commit changes” heading, write a short phrase to explain what you’re submitting, such as “Adding scatterplot task with R solution.”
  + Make sure you’re creating a new branch and a pull request (which means you’re asking the *How to Data* maintainers to accept your submission).
  + Click “Commit changes.”
* If you created a solution to a task that already exists in the site, do this instead:
  + In your browser, click to enter the subfolder for the task in question.
  + Click “Add file” and then “Upload files.”
  + Drag *just your new solution file* (e.g. R.Rmd or R, using ggplot2.Rmd) in to upload it. (Do not upload your whole task folder, just the solution file that’s in that folder.)
  + Under the “Commit changes” heading, write a short phrase to explain what you’re submitting, such as “Adding an R solution to the scatterplot task.”
  + Make sure you’re creating a new branch and a pull request. (A “pull request” is a request for the *How to Data* maintainers to review and accept your submission.)
  + Click “Commit changes.”

The team in charge of *How to Data* will (very gratefully!) review your work and contact you soon. Thank you!

## If you want to work in Excel

(See later in this document for working in other software.)

Inside the Excel subfolder, you will find a folder entitled “How to print a caterpillar.” Obviously, this is a silly task meant only for use as an example.

* If you’re adding a new task to the *How to Data* database, do this:
  + Rename the folder from “How to print a caterpillar” to the name of your task. It should still begin with “How to,” such as “How to create a scatterplot.”
  + Open the Word doc description.docx in that folder and edit it to describe your task, instead of the example caterpillar task.
* If you’re not providing a solution to your task, delete the file Excel.docx.
* If you are providing a solution to your task, open the Word doc Excel.docx in that folder and edit it to show a solution to your task, instead of the caterpillar task.
  + The document is named Excel.docx because it is a solution that uses Excel.
  + If you are using Excel plus VBA or an add-in, please rename the notebook to something like Excel, using VBA.docx or Excel, using Power Pivot.docx. Note the commas, which are important.

To submit your new task and/or solution, visit [the folder on GitHub](https://github.com/nathancarter/how2data/tree/main/database/tasks) where the *How to Data* tasks and solutions live. You will upload your work there in one of two ways:

* If you created a task (and optionally a solution with it), do this:
  + Click “Add file” and then “Upload files.”
  + Drag the task folder you renamed (e.g., “How to create a scatterplot”) into your browser to upload it.
  + Under the “Commit changes” heading, write a short phrase to explain what you’re submitting, such as “Adding scatterplot task with Excel solution.”
  + Make sure you’re creating a new branch and a pull request (which means you’re asking the *How to Data* maintainers to accept your submission).
  + Click “Commit changes.”
* If you created a solution to a task that already exists in the site, do this instead:
  + In your browser, click to enter the subfolder for the task in question.
  + Click “Add file” and then “Upload files.”
  + Drag *just your new solution file* (e.g. Excel.docx or Excel, using VBA.docx) in to upload it. (Do not upload your whole task folder, just the solution file that’s in that folder.)
  + Under the “Commit changes” heading, write a short phrase to explain what you’re submitting, such as “Adding an Excel solution to the scatterplot task.”
  + Make sure you’re creating a new branch and a pull request. (A “pull request” is a request for the *How to Data* maintainers to review and accept your submission.)
  + Click “Commit changes.”

The team in charge of *How to Data* will (very gratefully!) review your work and contact you soon. Thank you!

## If you want to submit solutions in more than one language

Simply follow the instructions for each language separately, above.

## If you want to submit a solution in software besides Python or R

Follow the instructions for either Python, R, or Excel, but rename your solution file so that the filename (before the extension) is the name of the software you’re documenting. Examples:

* Julia.md
* SPSS.docx
* etc.

Submit in the same way as documented for Python, Excel, or R.

## Notes

It is also acceptable to write solution files in .md or .markdown format, in addition to the .ipynb, .Rmd, and .docx formats.

If you’re writing a solution in .doc or .docx format, you can embed images directly in the document and they will be carried along correctly through the website building process.

If you’re writing a solution in a non-Word format, but want to include images anyway, you can place them in the folder being submitted, and reference them from within the .ipynb or .Rmd solution files, using the standard markdown code for images, such as ![image description](image-file.png).