{"cells":[{"metadata":{},"cell_type":"markdown","source":"**This notebook is an exercise in the [Data Visualization] (https://www.kaggle.com/learn/data-visualization) course. You can reference the tutorial at [this link] (https://www.kaggle.com/alexisbcook/hello-seaborn).**\n\n---\n"},{"metadata":{},"cell_type":"markdown","source":"In this exercise, you will write your first lines of code and learn how to use the coding environment for the micro-course!\n\n## Setup\n\nFirst, you'll learn how to run code, and we'll start with the code cell below. (Remember that a **code cell** in a notebook is just a gray box containing code that we'd like to run.)\n- Begin by clicking inside the code cell. \n- Click on the blue triangle (in the shape of a \"Play button\") that appears to the left of the code cell.\n- If your code was run sucessfully, you will see `Setup Complete` as output below the cell.\n\n![ex0_run_code](https://i.imgur.com/4NzqJ7G.png)"},{"metadata":{},"cell_type":"markdown","source":"The code cell below imports and configures the Python libraries that you need to complete the exercise.\n\nClick on the cell and run it."},{"metadata":{"trusted":false},"cell_type":"code","source":"import pandas as pd\npd.plotting.register_matplotlib_converters()\nimport matplotlib.pyplot as plt\n%matplotlib inline\nimport seaborn as sns\n\n# Set up code checking\nimport os\nif not os.path.exists(\"../input/fifa.csv\"):\n   os.symlink(\"../input/data-for-datavis/fifa.csv\", \"../input/fifa.csv\") \nfrom learntools.core import binder\nbinder.bind(globals())\nfrom learntools.data_viz_to_coder.ex1 import *\nprint(\"Setup Complete\")","execution_count":null,"outputs":[]},{"metadata":{},"cell_type":"markdown","source":"The code you just ran sets up the system to give you feedback on your work. You'll learn more about the feedback system in the next step.\n\n## Step 1: Explore the feedback system\n\nEach exercise lets you test your new skills with a real-world dataset. Along the way, you'll receive feedback on your work. You'll see if your answer is right, get customized hints, and see the official solution (_if you'd like to take a look!_).\n\nTo explore the feedback system, we'll start with a simple example of a coding problem. Follow the following steps in order:\n1. Run the code cell below without making any edits. It will show the following output: \n> Check: When you've updated the starter code, `check()` will tell you whether your code is correct. You need to update the code that creates variable `one`\n\n   This means you need to change the code to set the variable `one` to something other than the blank provided below (`____`).\n\n\n2. Replace the underline with a `2`, so that the line of code appears as `one = 2`. Then, run the code cell. This should return the following output:\n> Incorrect: Incorrect value for `one`: `2`\n\n   This means we still have the wrong answer to the question.\n\n\n3. Now, change the `2` to `1`, so that the line of code appears as `one = 1`. Then, run the code cell. The answer should be marked as Correct. You have now completed this problem!"},{"metadata":{"trusted":false},"cell_type":"code","source":"# Fill in the line below\n# Fill in the line below\none = 1\n# Check your answer\nstep_1.check()","execution_count":null,"outputs":[]},{"metadata":{},"cell_type":"markdown","source":"In this exercise, you were responsible for filling in the line of code that sets the value of variable `one`. **Don't edit the code that checks your answer.** You'll need to run the lines of code like `step_1.check()` and `step_2.check()` just as they are provided.\n\nThis problem was relatively straightforward, but for more difficult problems, you may like to receive a hint or view the official solution. Run the code cell below now to receive both for this problem."},{"metadata":{"trusted":false},"cell_type":"code","source":"step_1.hint()\nstep_1.solution()","execution_count":null,"outputs":[]},{"metadata":{},"cell_type":"markdown","source":"## Step 2: Load the data\n\nYou are ready to get started with some data visualization! You'll begin by loading the dataset from the previous tutorial. \n\nThe code you need is already provided in the cell below. Just run that cell. If it shows Correct result, you're ready to move on!"},{"metadata":{"trusted":false},"cell_type":"code","source":"# Path of the file to read\nfifa_filepath = \"../input/fifa.csv\"\n\n# Read the file into a variable fifa_data\nfifa_data = pd.read_csv(fifa_filepath, index_col=\"Date\", parse_dates=True)\n\n# Check your answer\nstep_2.check()","execution_count":null,"outputs":[]},{"metadata":{},"cell_type":"markdown","source":"Next, recall the difference between comments and executable code:\n- **Comments** are preceded by a pound sign (`#`) and contain text that appear faded and italicized. They are completely ignored by the computer when the code is run.\n- **Executable code** is code that is run by the computer.\n\nIn the code cell below, every line is a comment:\n```python\n# Uncomment the line below to receive a hint\n#step_2.hint()\n#step_2.solution()\n```\n\nIf you run the code cell below without making any changes, it won't return any output. Try this now!"},{"metadata":{"trusted":false},"cell_type":"code","source":"# Uncomment the line below to receive a

hint\n#step_2.hint()\n# Uncomment the line below to see the solution\n#step_2.solution()","execution_count":null,"outputs":[]},
{"metadata":{},"cell_type":"markdown","source":"Next, remove the pound sign before `step_2.hint()` so that the code cell above
appears as follows:\n```python\n# Uncomment the line below to receive a hint\nstep_2.hint()\n#step_2.solution()\n```\nWhen we
remove the pound sign before a line of code, we say we **uncomment** the line. This turns the comment into a line of executable
code that is run by the computer. Run the code cell now, which should return the Hint as
output.\n\nFinally, uncomment the line to see the solution, so the code cell appears as follows:\n```python\n# Uncomment the line
below to receive a hint\nstep_2.hint()\nstep_2.solution()\n```\nThen, run the code cell. You should receive both a Hint and the Solution.\n\nIf at any point you're having trouble with coming up
with the correct answer to a problem, you are welcome to obtain either a hint or the solution before completing the cell. (So, you
don't need to get a Correct result before running the code that gives you a Hint or the Solution.)\n\n## Step 3: Plot the data\n\nNow that the data is
loaded into the notebook, you're ready to visualize it! \n\nRun the next code cell without changes to make a line chart. The code
may not make sense yet - you'll learn all about it in the next tutorial!"},{"metadata":
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showing how FIFA rankings evolved over time\nsns.lineplot(data=fifa_data)\n\n# Check your
answer\nstep_3.a.check()","execution_count":null,"outputs":[]},{"metadata":{},"cell_type":"markdown","source":"Some questions won't
require you to write any code. Instead, you'll interpret visualizations.\n\nAs an example, consider the question: Considering only
the years represented in the dataset, which countries spent at least 5 consecutive years in the #1 ranked spot?\n\nTo receive a
Hint, uncomment the line below, and run the code cell."},{"metadata":
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completing the problem and to ensure your interpretation is right."},{"metadata":{"trusted":false},"cell_type":"code","source":"#
Check your answer (Run this code cell to receive credit!)\nstep_3.b.solution()","execution_count":null,"outputs":[]},{"metadata":
{},"cell_type":"markdown","source":"Congratulations - you have completed your first coding exercise!\n\n# Keep going\n\nMove on to
learn to create your own **[line charts](https://www.kaggle.com/alexisbcook/line-charts)** with a new dataset."},{"metadata":
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(https://www.kaggle.com/learn-forum/161291) to chat with other Learners.*"}],"metadata":{"kernelspec":
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