{"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/bar-charts-and-heatmaps).**\n\n---\n"},{"metadata":{},"cell_type":"markdown","source":"In this exercise, you will use your new knowledge to propose a solution to a real-world scenario. To succeed, you will need to import data into Python, answer questions using the data, and generate **bar charts** and **heatmaps** to understand patterns in the data.\n\n## Scenario\n\nYou've recently decided to create your very own video game! As an avid reader of [IGN Game Reviews](https://www.ign.com/reviews/games), you hear about all of the most recent game releases, along with the ranking they've received from experts, ranging from 0 (_Disaster_) to 10 (_Masterpiece_).\n\n![ex2_ign](https://i.imgur.com/Oh06Fu1.png)\n\nYou're interested in using [IGN reviews](https://www.ign.com/reviews/games) to guide the design of your upcoming game. Thankfully, someone has summarized the rankings in a really useful CSV file that you can use to guide your analysis.\n\n## Setup\n\nRun the next cell to import and configure the Python libraries that you need to complete the exercise."},{"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\nprint(\"Setup Complete\")","execution_count":null,"outputs":[]},{"metadata":{},"cell_type":"markdown","source":"The questions below will give you feedback on your work. Run the following cell to set up our feedback system."},{"metadata":{"trusted":false},"cell_type":"code","source":"# Set up code checking\nimport os\nif not os.path.exists(\"../input/ign_scores.csv\"):\n   os.symlink(\"../input/data-for-datavis/ign_scores.csv\", \"../input/ign_scores.csv\") \nfrom learntools.core import binder\nbinder.bind(globals())\nfrom learntools.data_viz_to_coder.ex3 import *\nprint(\"Setup Complete\")","execution_count":null,"outputs":[]},{"metadata":{},"cell_type":"markdown","source":"## Step 1: Load the data\n\nRead the IGN data file into `ign_data`. Use the `\"Platform\"` column to label the rows."},{"metadata":{"trusted":false},"cell_type":"code","source":"# Path of the file to read\nign_filepath = \"../input/ign_scores.csv\"\n\n# Fill in the line below to read the file into a variable ign_data\nign_data = pd.read_csv(ign_filepath,index_col='Platform')\n\n# Run the line below with no changes to check that you've loaded the data correctly\nstep_1.check()","execution_count":null,"outputs":[]},{"metadata":{"trusted":false},"cell_type":"code","source":"# Lines below will give you a hint or solution code\n#step_1.hint()\n#step_1.solution()","execution_count":null,"outputs":[]},{"metadata":{},"cell_type":"markdown","source":"## Step 2: Review the data\n\nUse a Python command to print the entire dataset."},{"metadata":{"trusted":false},"cell_type":"code","source":"ign_data # Your code here","execution_count":null,"outputs":[]},{"metadata":{},"cell_type":"markdown","source":"The dataset that you've just printed shows the average score, by platform and genre. Use the data to answer the questions below."},{"metadata":{"trusted":false},"cell_type":"code","source":"# Fill in the line below: What is the highest average score received by PC games,\n# for any platform?\n# for any platform?\nhigh_score = 7.759930\n\n# Fill in the line below: On the Playstation Vita platform, which genre has the \n# lowest average score? Please provide the name of the column, and put your answer \n# in single quotes (e.g., 'Action', 'Adventure', 'Fighting', etc.)\nworst_genre = 'Simulation'\n\n# Check your answers\nstep_2.check()","execution_count":null,"outputs":[]},{"metadata":{"trusted":false},"cell_type":"code","source":"# Lines below will give you a hint or solution code\n#step_2.hint()\n#step_2.solution()","execution_count":null,"outputs":[]},{"metadata":{},"cell_type":"markdown","source":"## Step 3: Which platform is best?\n\nSince you can remember, your favorite video game has been [**Mario Kart Wii**](https://www.ign.com/games/mario-kart-wii), a racing game released for the Wii platform in 2008. And, IGN agrees with you that it is a great game -- their rating for this game is a whopping 8.9! Inspired by the success of this game, you're considering creating your very own racing game for the Wii platform.\n\n#### Part A\n\nCreate a bar chart that shows the average score for **racing** games, for each platform. Your chart should have one bar for each platform. "},{"metadata":{"trusted":false},"cell_type":"code","source":"# Bar chart showing average score for racing games by platform\nplt.figure(figsize=(8, 6))\nsns.barplot(x=ign_data['Racing'], y=ign_data.index) \nplt.xlabel(\"\")\nplt.title(\"Average Score for Racing Games, by Platform\")\nstep_3.a.check()","execution_count":null,"outputs":[]},{"metadata":{"trusted":false},"cell_type":"code","source":"# Lines below will give you a hint or solution code\n#step_3.a.hint()\n#step_3.a.solution_plot()","execution_count":null,"outputs":[]},{"metadata":{},"cell_type":"markdown","source":"#### Part B\n\nBased on the bar chart, do you expect a racing game for the **Wii** platform to receive a high rating? If not, what gaming platform seems to be the best alternative?"},{"metadata":

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credit!)\nstep_3.b.solution()","execution_count":null,"outputs":[]},{"metadata":{},"cell_type":"markdown","source":"## Step 4: All
possible combinations!\n\nEventually, you decide against creating a racing game for Wii, but you're still committed to creating
your own video game! Since your gaming interests are pretty broad (_... you generally love most video games_), you decide to use
the IGN data to inform your new choice of genre and platform.\n\n#### Part A\n\nUse the data to create a heatmap of average score
by genre and platform. "},{"metadata":{"trusted":false},"cell_type":"code","source":"# Heatmap showing average game score by
platform and genre\n____ # Your code here\nplt.figure(figsize=(10, 10))\nsns.heatmap(ign_data,annot = True)
\nplt.xlabel(\"\")\nplt.title(\"Average Score for Racing Games, by Platform\")\n# Check your
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(https://www.kaggle.com/learn-forum/161291) to chat with other Learners.*"}],"metadata":{"kernelspec":
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