This is a script that I’m using to create a youtube video to talk through and execute code using jupyter notebooks. Parentheses tell me to do the action on the computer. Could you please make it better:

(start in an empty jupyter notebooks file). In this video, we’ll talk about how to use lists in python and how they can be used in pandas. We’ll go over some basic methods like append, and remove. Python lists are like ordered containers that store collections of items.

Imagine our friend gave us a list of exercises to perform for the week before we go to the gym. (I’m going to open up a CSV file that has a list of exercises that we plan on performing once we’re in the gym.) Here we see in the top cell, the title of the column which is exercises, and a list of 18 exercises for the week. (now going back to our jupyter notebook, let’s write some code).

import pandas as pd

import os

file\_name = 'exercises.csv'

if os.path.exists(file\_name):

exercises\_df = pd.read\_csv(file\_name)

exercises = exercises\_df['exercises'].tolist()

print(exercises)

else:

print(f"Error: The file '{file\_name}' was not found in the current directory.")

here we import pandas and os. We know pandas is used in data analysis, but OS is a module that offers functions for file and directory manipulation. Then we define a variable “file\_name” which is the name of the file in the same directory as this jupyter notebook. We write a conditional to see if the path exists and if it does, we’ll create a data frame using the read\_csv function, create a list variable from the dataframe and then print out the list. If the path doesn’t exist, we’ll print an f string saying that it’s not found in the current directory. (let’s go ahead and run this). And in the output we see the list from the CSV file.

Maybe we want to add a few more exercises to our list and there’s a way to do that using the append function. (let’s create a new cell and write the following)

exercises\_to\_add = ['lat pulldown', 'planks']

for exercise in exercises\_to\_add:

exercises.append(exercise)

print(exercises)

here we define a new list with two exercises and then perform a for loop to add each of the exercises to the overall exercises list and we print it to show that the two exercises have been added. (let’s go ahead and run it to see the new list). And here we see that lat pulldown and planks are added.

We can also prompt the user to add any exercise that they would want to add, (so let’s create a new cell and write:)

new\_exercise = input("Enter an exercise to add to your exercises list: ")

exercises.append(new\_exercise)

print("Updated list:", exercises)

here we request the user to input an exercise and that exercise will be added to the overall list. (let’s go ahead and run this) (I’ll type in calf raises and press enter). Here we see that calf raises were added to the list.

We may not be a fan of leg workouts and we want to remove lunges and squats from the list. Let’s see how we can do that (create new cell):

exercises.remove("lunges")

exercises.remove("squat")

print("\nYour Updated Exercise List (after removing exercises):")

print(exercises)

here we use the remove method to take out those two exercises and we print out the updated list to see the results. (let’s run this). And we here see that lunges and squat were removed from the list.

To recap, we demonstrated how to create and manage lists, add and remove items, and use list manipulation techniques

🎥 **Improved Script: "Using Python Lists and Pandas in Jupyter Notebook"**

👋 (Start with a friendly greeting, facing the camera.)

**"Hey everyone! Welcome to today’s video. In this session, we’ll dive into using Python lists and how they work alongside pandas — one of the most popular data analysis libraries in Python. We’ll cover basic list methods like append and remove to manage collections of items, and apply them to real-world scenarios, such as managing a list of exercises from a CSV file."**

📓 (Switch to your **empty Jupyter Notebook**.)

**"Let’s begin by setting the scene. Imagine our friend has given us a list of exercises to perform throughout the week before we hit the gym. We’ll use a CSV file to simulate that list."**

📂 (Open the CSV file named exercises.csv and show it.)

**"Here’s the file. As we can see, it has a column labeled 'exercises' with 18 different exercise names. Now, let’s move back to our notebook and start writing some Python code to work with this data."**

**💻 Code Cell: Import Libraries and Load the CSV File**

python

CopyEdit

import pandas as pd

import os

file\_name = 'exercises.csv'

if os.path.exists(file\_name):

exercises\_df = pd.read\_csv(file\_name)

exercises = exercises\_df['exercises'].tolist()

print(exercises)

else:

print(f"Error: The file '{file\_name}' was not found in the current directory.")

📢 **"Here, we import pandas and os. While pandas is great for data analysis, os helps us manage files and directories. We define file\_name as our CSV, check if it exists, and if it does, we read it into a DataFrame. Then, we convert the 'exercises' column into a Python list and print it. Otherwise, we’ll display an error message if the file isn’t found. Let’s go ahead and run this cell."**

**➕ Adding New Exercises**

python

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exercises\_to\_add = ['lat pulldown', 'planks']

for exercise in exercises\_to\_add:

exercises.append(exercise)

print(exercises)

📢 **"Suppose we want to add a few more exercises to our list. Here, we create a new list exercises\_to\_add, and for each exercise in that list, we use the append() method to add it to our main exercises list. Let’s run this cell to see the updated list."**

**📝 Interactive User Input**

python

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new\_exercise = input("Enter an exercise to add to your list: ")

exercises.append(new\_exercise)

print("Updated list:", exercises)

📢 **"Now, let’s make it interactive! We can prompt the user to add a new exercise of their choice. After they input it, we use append to add it to the list, and then print the updated list. Let’s run it, and I’ll type in 'calf raises'."**

**❌ Removing Exercises**

python

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exercises.remove("lunges")

exercises.remove("squat")

print("\nYour Updated Exercise List (after removing exercises):")

print(exercises)

📢 **"Maybe we’re not fans of leg workouts, so we decide to remove 'lunges' and 'squat' from our list. We use the remove() method to delete them, and then print the updated list. Let’s run this cell and check out the changes."**

**🔁 Summary and Recap**

**"To recap, we explored how to:**

* **Load a list of exercises from a CSV file into a Python list,**
* **Add new exercises to the list using append,**
* **Interactively take user input to expand the list, and**
* **Remove unwanted items with remove.**

These are fundamental Python list operations that are incredibly useful, especially when combined with pandas for data manipulation. Thanks for watching, and don’t forget to like and subscribe for more coding tutorials!"\*