**Step 1: Learn the Basics of Pandas**

📌 **Why?** Pandas is the core library for working with tabular data in Python.

🔗 **Read:**

* Pandas Official Docs – Getting Started
* [Stack Overflow – What is Pandas and why is it useful?](https://stackoverflow.com/questions/33020018/what-is-pandas-and-why-is-it-useful)

🎥 **Watch:**

* [Pandas Full Tutorial (YouTube – freeCodeCamp)](https://www.youtube.com/watch?v=vmEHCJofslg)
  + 🕒 **2:40** → Importing Pandas
  + 🕒 **4:20** → Creating a DataFrame
  + 🕒 **7:55** → Accessing Data in Pandas

**Step 2: Understanding groupby() for Aggregation**

📌 **Why?** groupby() allows you to analyze scores based on match venue.

🔗 **Read:**

* Pandas GroupBy Documentation
* [Stack Overflow – How does Pandas GroupBy work?](https://stackoverflow.com/questions/33079946/pandas-groupby-how-it-works)

🎥 **Watch:**

* [Pandas GroupBy Explained (YouTube – Data School)](https://www.youtube.com/watch?v=txMdrV1Ut64)
  + 🕒 **1:35** → What is groupby()?
  + 🕒 **3:40** → Applying functions to grouped data
  + 🕒 **6:10** → Aggregating results with .sum(), .mean(), .count()

**Step 3: Sorting Data for Better Comparison**

📌 **Why?** Sorting ensures scores are compared correctly for each match.

🔗 **Read:**

* Sorting in Pandas (Official Docs)
* [Stack Overflow – How to sort DataFrame rows?](https://stackoverflow.com/questions/17141558/how-to-sort-a-pandas-dataframe-by-columns)

🎥 **Watch:**

* [Sorting DataFrames in Pandas (YouTube – Corey Schafer)](https://www.youtube.com/watch?v=D31vweoHJes)
  + 🕒 **2:05** → Sorting by a single column
  + 🕒 **4:15** → Sorting by multiple columns
  + 🕒 **5:50** → Using ascending=False for descending order

**Step 4: Using transform() to Assign "W" or "L"**

📌 **Why?** transform() applies a function to each group, assigning win/loss labels.

🔗 **Read:**

* Pandas Transform Function Documentation
* [Stack Overflow – How does transform() work in Pandas?](https://stackoverflow.com/questions/43237178/how-does-transform-work)

🎥 **Watch:**

* [Pandas Transform Explained (YouTube – Data Science for All)](https://www.youtube.com/watch?v=aJ6HYEMuR-o)
  + 🕒 **0:50** → What is transform()?
  + 🕒 **3:30** → Applying transform() to modify group values
  + 🕒 **6:20** → Real-world examples of transform()

📝 **Example Code:**

python

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df['result'] = df.groupby('match\_id')['score'].transform(lambda x: ['W' if s == max(x) else 'L' for s in x])

This should give you a **solid foundation** to compare scores based on venue! 🚀 Would you like additional **code examples** or explanations?