**Machine Learning In Finance**

**Lablog book week 2:**

**import pandas as pd**

**# SID**

**sid = "2420077"**

**# Determine n from last digit**

**n = int(sid[-1])**

**n = 10 if n == 0 else n**

**# Load dataset (assuming data is already loaded from 'adult\_data\_mini.csv')**

**# Function to reduce hours-per-week**

**def reduce\_hours(x):**

**return x - n**

**# Apply reduction**

**data['reduced\_hours'] = data['hours-per-week'].apply(reduce\_hours)**

**# First grouping by 'relationship' and 'hours-per-week'**

**group1 = data.groupby(['relationship', 'hours-per-week']).size()**

**# Second grouping by 'relationship' and reduced 'hours-per-week'**

**group2 = data.groupby(['relationship', 'reduced\_hours']).size()**

**# Print results**

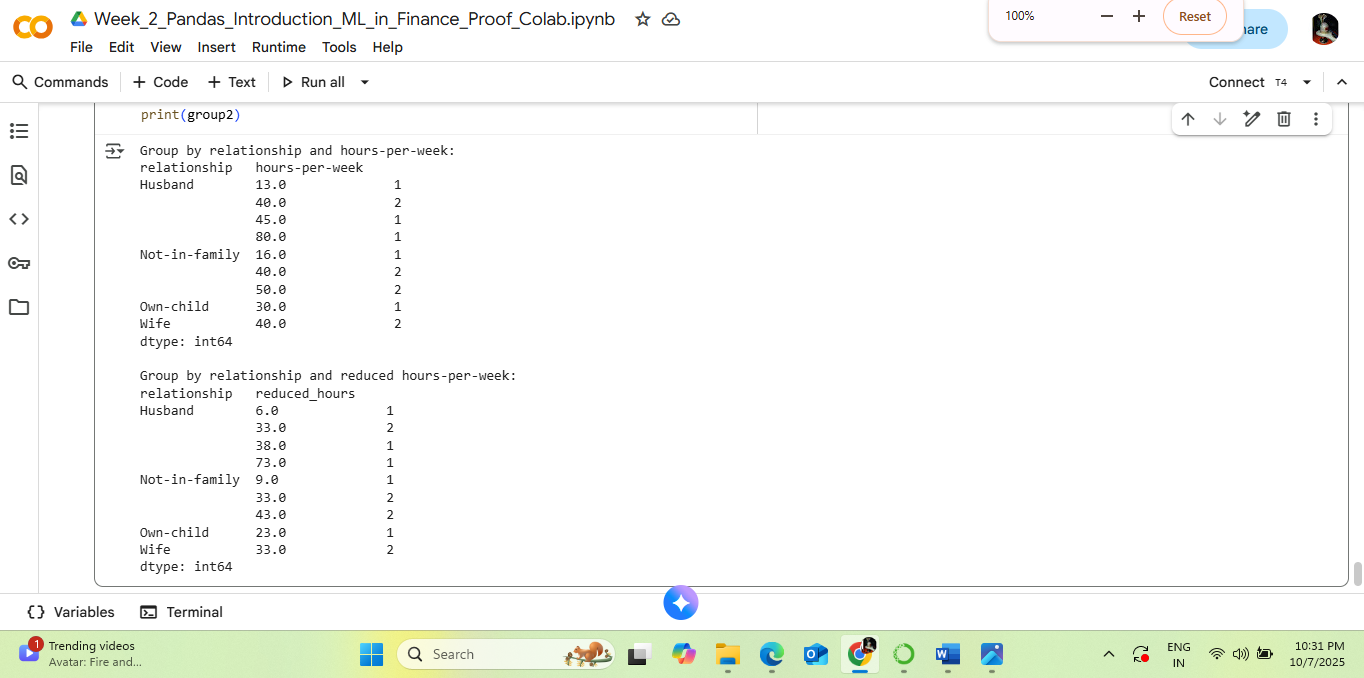
**print("Group by relationship and hours-per-week:")**

**print(group1)**

**print("\nGroup by relationship and reduced hours-per-week:")**

**print(group2)**

**Output:**

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