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**ROLL NO:24**

**BATCH : B2**

**COURSE: DATA SCIENCE PRACTICAL**

**Assginment No. 2**

**Code :**

**from statistics import mean, median, mode, StatisticsError**

**def measures\_of\_central\_tendency(data):**

**"""**

**Calculate and return the measures of central tendency: mean, median, and mode.**

**:param data: List of numeric values**

**:return: Tuple containing (mean, median, mode)**

**"""**

**if not data:**

**raise ValueError("The data list is empty.")**

**# Calculate mean**

**data\_mean = mean(data)**

**# Calculate median**

**data\_median = median(data)**

**# Calculate mode**

**try:**

**data\_mode = mode(data)**

**except StatisticsError:**

**data\_mode = None # Mode is not defined if there are multiple modes**

**return data\_mean, data\_median, data\_mode**

**# Example data**

**data = [2, 3, 5, 7, 7, 8, 9, 10]**

**# Compute measures of central tendency**

**mean\_value, median\_value, mode\_value = measures\_of\_central\_tendency(data)**

**print(f"Mean: {mean\_value:.2f}")**

**print(f"Median: {median\_value:.2f}")**

**print(f"Mode: {mode\_value if mode\_value is not None else 'No unique mode'}")**

**OUTPUT:**

