**INSIGHTS:**

**Local Route**:The forecast indicates a **consistent downward trend** over the next 7 days, aligning with the recent pattern in the historical data.

**Light Rail**:The number of people using light rail is projected to **decrease steadily** over the next 7 days, suggesting reduced demand or seasonal variation.

**Peak Services**:The forecast shows a **short-term increase in users**, followed by a **gradual decline**, likely reflecting weekday commuting patterns.

**Rapid Route**: Similar to peak services, the number of users is expected to **rise initially**, followed by a **decline**, possibly influenced by weekly demand fluctuations.

**School Services**:A **temporary increase in usage** is observed in the forecast, followed by a **sharp decline**, potentially reflecting school schedules or seasonal breaks.

**MODEL USED AND ITS PARAMETERS:**

Model Used: SARIMAX (Seasonal ARIMA)

Parameters:

Non-Seasonal: order=(1, 1, 1)

p=1: Uses one lag of past values (AR term).

d=1: Differencing once to make data stationary.

q=1: One lag of past errors (MA term).

Seasonal:

seasonal\_order=(1, 1, 0, 7)

P=1: Accounts for one seasonal lag (e.g., same day last week).

D=1: Seasonal differencing applied once.

Q=0: No seasonal lagged error terms.

s=7: Weekly seasonality (for daily data).