**Observed and Logical Correlations:**

**Gender-Based Correlations:**

* **Main Booker Gender → Preferred Heat**:
  + Women guests typically prefer warmer room temperatures compared to men, influencing preferred heat settings.
* **Guest Gender → Preferred Heat**:
  + The overall gender composition of guests (e.g., predominantly female vs. male groups) influences the preferred room temperature similarly.

**Nationality and Minibar Preferences:**

* **Main Booker Country → Minibar Preferences**:
  + Guest origin (nationality) strongly affects minibar consumption habits. For instance, guests from Mexico may prefer tequila, while those from other countries have distinctive preferences aligned with cultural tastes.
* **Guest Country → Minibar Preferences**:
  + Similar patterns are observable with guest companions' nationalities influencing minibar choices as well.

**Room Direction Correlations:**

* **Room Direction → Average Temperature Without Cooling**:
  + West-facing rooms tend to be warmer due to increased afternoon sun exposure, raising the room's temperature without cooling.
* **Room Direction → Cooling Cost**:
  + Consequently, west-facing rooms incur higher cooling costs due to their naturally higher temperatures.
* **Room Direction → Illumination Levels**:
  + West-facing rooms receive stronger afternoon sunlight, resulting in higher natural illumination levels. North-facing rooms generally have lower illumination due to less direct sunlight exposure.

**Cooling and Temperature Correlations:**

* **Average Temperature Without Cooling → Cooling Cost**:
  + Direct correlation; naturally hotter rooms (without cooling) incur significantly higher cooling expenses.

**Lighting Correlations:**

* **Preferred Dimmer Level → Illumination Level (Main Room & Bathroom)**:
  + Higher natural illumination typically necessitates adjustments to the dimmer setting. Guests in brighter rooms tend to select dimmer lighting settings.
* **Room Direction → Preferred Dimmer Level**:
  + Rooms with higher natural illumination (e.g., west-facing) influence guest preferences towards lower dimmer settings (dimmer rooms).

**Guest Count and Minibar Usage:**

* **Number of Guests → Minibar Items Count**:
  + Rooms with more guests generally see higher minibar consumption, leading to an increase in items taken.

**Minibar Existence and Usage:**

* **Existence of Minibar → Minibar Usage**:
  + Strong direct correlation—rooms equipped with minibars have significantly higher minibar consumption rates.

**Operational and Maintenance Correlations:**

* **Bathroom Illumination ↔ Main Room Illumination**:
  + Both illumination sources tend to correlate, suggesting a consistent room lighting strategy or sunlight exposure effect throughout the room and bathroom.
* **Cooling Cost ↔ Illumination Levels**:
  + Higher illumination rooms correlate with higher cooling costs, possibly due to increased sunlight exposure heating the rooms.

MİNİBAR EŞYALARI KODLANDI ve numerize edildi

**0: Minibar\_Beer**

**1: Minibar\_Bottle of Water**

**2: Minibar\_Chocolate**

**3: Minibar\_Coca-Cola**

**4: Minibar\_Fanta**

**5: Minibar\_Granola Bar**

**6: Minibar\_Nuts**

**7: Minibar\_Small Bottle of Wine**

**8: Minibar\_Sparkling Wine**

**9: Minibar\_Sprite**