**Workshop: Crafting Effective Questions and Hypotheses**

Scenarios

Scenario 1: Retail Sales Analysis

**Context:** You work for a retail company that has noticed a decline in sales during specific months. Your goal is to understand the factors contributing to this decline and formulate actionable insights to improve sales performance.

**Tasks:**

* Craft an open-ended question that explores possible reasons for the sales decline.
* Formulate a hypothesis that you will test using data analysis.

**SCENARIO SOLUTIONS**

**Possible reasons for the sales decline**

For a specific example, we assume the sales drop is due to many factors, one of the factors is the holiday season. During the winter seasons, many retail shops will find a decrease in casual clothes sales due to cold weather. Many tropical dresses' sales dropped to the lowest. This trend forces retailers to stock fewer non-demanded clothes during specific seasons. The order reduction results in production slowing down, hence a decline in sales. This is true for summer clothes as well where all winter clothes disappear from the shelves and summer and spring clothes demand is high, also production pickup for these dresses. Innovations cause sales to drop for existing products based on the demand for the newly innovated products. The new product in the market shadows the markets, which results in the sales decline on the expectation that the product will not sell due to innovations, production slow, and sales slow due to an increase in price. Religious festivals affect retail for gifts, roses, and special foods. During the Easter holiday, the sales for gifts and roses will go up while for the month of Ramadhan, Ramadan the spices, rice, fruit, and vegetable retail stores will see an increase in demand since many Muslims will not go out for dining, some restaurant will be closed hence the demand for retails will drop due to demand-supply issue. These are possible reasons for the decline in sales.