**Hypothesis Testing**

1. **Null Hypothesis (H₀):**

There is no significant relationship between the symptoms (features) and the prognosis (target variable).

1. **Alternative Hypothesis (H₁):**

There is a significant relationship between the symptoms and the prognosis.

**Experiment**

1. **Objective:**

To analyze the dataset and determine whether specific symptoms can predict a particular prognosis.

1. **Data Collection:**

The dataset contains various symptoms as binary variables (1 for presence and 0 for absence) and the corresponding prognosis.

1. **Data Preprocessing:**

Check for missing values and handle them appropriately (if necessary).

Split the data into training and testing sets.

1. **Statistical Tests:**

Perform Chi-square tests for categorical variables to determine the association between individual symptoms and the prognosis.

Use a Logistic Regression model or Decision Tree classifier to predict the prognosis based on symptoms, and evaluate the model's accuracy using cross-validation.

1. **Evaluation Metrics:**

Accuracy, Precision, Recall, F1-Score, and Confusion Matrix will be used to evaluate the model's performance.

1. **Conclusion:**

Based on the statistical tests and model performance, determine if the null hypothesis can be rejected, implying a significant relationship between symptoms and prognosis.