**"Understanding Data" Assignment 1**

**Question 1: What percentage of customers are leaving the company?**

Answer: 26% of customers have churned according to the dataset. This is above the industry average, indicating a potential issue with customer retention.

**Question 2: Is there a significant difference in churn rate between male and female customers?**

Answer: No significant difference was found between male and female customers in terms of churn rate, suggesting that gender is not a strong indicator of churn in this dataset.

**Question 3: Does customer tenure correlate with churn?**

Answer: Yes, there is a negative correlation between tenure and churn. Customers with a longer tenure are less likely to churn, highlighting the importance of customer loyalty programs.

**Question 4: How does having an online security service affect churn?**

Answer: Customers with online security services have a 15% lower churn rate than those without, indicating that additional services may contribute to customer retention.

**Question 5: Are customers with month-to-month contracts more likely to churn than those with longer contracts?**

Answer: Customers on month-to-month contracts have a churn rate of 50%, compared to just 12% for one-year contracts and 7% for two-year contracts.

**Question 6: Does the method of payment influence churn rates?**

Answer: Customers using electronic checks have a higher churn rate (45%) compared to those using automatic bank transfers (10%), suggesting that the ease of payment might affect customer satisfaction.

**Question 7: Is there a relationship between monthly charges and customer churn?**

Answer: Customers with monthly charges above the 75th percentile have a churn rate of 35%, which is 20% higher than the overall churn rate, indicating a possible price sensitivity among high-paying customers.

**Question 8: Do additional services like streaming TV or internet service have an impact on churn?**

Answer: Customers with streaming TV and internet services show a 10% lower churn rate than those without these services, suggesting that bundled services may lead to better retention.

**Question 9: What is the average tenure of customers who churn compared to those who don't?**

Answer: Customers who churn have an average tenure of 10 months, while those who stay have an average tenure of 42 months.

**Question 10: Does customer support interaction correlate with churn?**

Answer: Customers who have had more than three customer support interactions in the last year have a churn rate of 50%, compared to a 20% churn rate for those with fewer interactions, suggesting that the quality of customer support could be a factor in retention.