### **Summary Customer Churn Analysis**

This analysis provides a comprehensive overview of customer churn patterns, identifying key demographics, service preferences, and payment methods contributing to the churn rate. Based on the analysis, **26.53%** of customers have churned, and detailed insights are summarized below:

#### **1. Customer Demographics**

* **Senior Citizens:**
  + Senior citizens are **13.6% more likely to churn** compared to non-senior citizens.
  + This highlights a need for targeted retention strategies for this demographic group, such as personalized plans or improved support services.

#### **2. Service Duration**

* Customers who have used services for **1-2 months** show a significantly higher churn rate, accounting for **over 45% of churned customers**.
* In contrast, customers with usage exceeding one year exhibit a churn rate below **10%**, indicating that longer-term customers are generally more loyal.

#### **3. Subscription Plans**

* Customers on **1-month subscription plans** account for **65% of churn cases**, compared to customers on **1-year plans (20%)** and **2-year plans (15%)**.
* This suggests that shorter-term plans correlate strongly with churn, emphasizing the importance of promoting longer-term contracts with added benefits.

#### **4. Service Preferences**

* Customers with bundled services tend to stay longer. Key observations include:
  + **Phone and Internet Services (DSL):** Retained customers are **40% more likely** to use these services.
  + **Online Security:** Customers with this service enabled are **30% less likely to churn**.
  + **Online Backup, Tech Support, and Streaming TV:** Churn rates increase by **15%-20%** when these services are not used or unavailable.

#### **5. Payment Methods**

* **Electronic Check:** Over **50% of churned customers** use electronic check as their payment method, significantly higher than other payment methods.
* **Mailed Check, Bank Transfers, and Credit Cards:** Churn rates for these payment methods are below **20%**, indicating a better retention rate with these options.

#### **6. Overall Churn Rate**

* A pie chart visualization highlights that **26.53% of all customers have churned**, while the remaining **73.47% have been retained**.

### **Recommendations**

To mitigate churn and improve customer retention, the following strategies are recommended:

1. **Focus on Senior Citizens:**
   * Develop retention campaigns targeted at senior citizens, such as personalized communication, loyalty rewards, or customer service enhancements.
2. **Promote Long-Term Plans:**
   * Offer incentives (e.g., discounts or exclusive features) for customers to switch from 1-month plans to 1- or 2-year plans.
3. **Enhance Service Bundles:**
   * Encourage customers to adopt additional services like online security and DSL by bundling them with attractive pricing or free trials.
4. **Review Payment Options:**
   * Investigate why electronic check users churn at higher rates and promote alternatives like credit cards or bank transfers.
5. **Retention Programs for New Customers:**
   * Focus retention efforts on customers within the first 2 months of service to reduce the high churn rate for this segment.