TASK 1: EDA and finding Business insights

1.) **Peak Sales Hours:** The hourly sales distribution shows a significant spike in sales after lunch particularly between 2 PM and 5 PM. This indicates higher customer activity and shopping propensity during these hours. During this hour more customer's supports and staffs are required. Businesses can leverage this information by timing their marketing campaigns, flash sales, and social media advertisements around these hours to maximize visibility and conversions.

2.) **Weekday Performance:** Wednesday stands out as the best-performing day of the week for sales, surpassing other weekdays and weekends. Meanwhile, Friday and Saturday record relatively lower sales. Also the sales on Weekdays are more as compared to Weekends. Lower weekend sales indicate an opportunity to develop strategies to attract customers, such as exclusive weekend deals or partnerships with other weekend-oriented services.

3.) **Seasonality in Sales:** The month-wise sales data reveal that during winters(i.e in the month of December and January) and monsoon(i.e July to September) the sales peaked. Leveraging predictive analytics to forecast demand for specific products during these months can reduce stockouts and improve overall operational efficiency. This also indicate the festive seasons and needs around that time.

4.) **Regional Sales Leaders:** South America emerges as the region contributing the highest sales, outperforming other regions like Asia, Europe, and North America. This suggests a strong customer base and a potentially loyal market. Businesses should consider region-specific marketing campaigns, such as language-customized ads or culturally relevant promotions, to further enhance engagement.

5.) **Top Product Categories:** Electronics and Books are the leading product categories in terms of revenue, indicating strong customer interest in these segments. Companies should prioritize expanding their product range in these categories while maintaining competitive pricing. Launching exclusive products or limited-time offers in these segments can drive higher sales. Also analyzing the feedback of poor performing category and take required actions helps in boosting sales in other segments also.