



Data Analysis Assessment questions

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Note:

Please be advised that these assessment inquiries are designed to accommodate interns with diverse skill levels, ranging from novices to seasoned analysts. Should you encounter any challenging questions, you are encouraged to seek solutions independently or reach out to us for assistance at intern@placementdost.com. Best wishes for success in completing the assessment!

Tools needed :- MS Excel

1. Data Loading and Exploration:

- Load the menu_items and order_details tables into separate sheets in Excel.
- Examine the structure of the dataset and identify any missing values.

2. Basic Data Analysis:

- Calculate the total revenue generated from the orders.
- Find the average price of menu items.

3. Pivot Table Creation:

- Create a pivot table to summarize the total revenue generated by each menu item category.
- Include a slicer for users to filter data by date.

4. Date and Time Analysis:

- Extract the day of the week for each order and create a frequency distribution.
- Analyze the busiest day and time for orders.

5. Menu Item Insights:

- Determine the top-selling menu items based on the number of orders.
- Calculate the percentage contribution of each menu item to total revenue.

6. Price Range Analysis:

- Categorize menu items into price ranges (e.g., cheap, moderate, expensive).
- Analyze the distribution of orders across different price ranges.

7. Customer Order Frequency:

- Identify customers who have placed the most orders.

- Create a frequency distribution of order counts for customers.

8. Time Duration Analysis:

- Calculate the time duration between placing an order and its delivery.
- Analyze the distribution of delivery times.

9. Conditional Formatting:

- Apply conditional formatting to highlight menu items with prices above the average.
- Use color scales to represent the variation in order frequencies.

10. Advanced Functions - VLOOKUP:

- Use the VLOOKUP function to retrieve the category of a menu item based on its ID.
- Apply the function for the entire dataset.

11. Advanced Functions - IF Statements:

- Create a new column indicating whether an order was placed during peak hours (e.g., 11:00 AM - 2:00 PM).
- Use IF statements to categorize orders.

12. Named Ranges:

- Define named ranges for menu items, order details, and any additional relevant ranges.
- Use these named ranges in formulas and functions.

13. Data Validation:

- Implement data validation for the order_date column to ensure valid date entries.
- Use a drop-down list for valid menu item IDs in the order_details table.

14. Text-to-Columns:

- Split the order_time column into separate columns for hour, minute, and AM/PM using the Text-to-Columns feature.

15. SUMIFS and COUNTIFS:

- Use the SUMIFS and COUNTIFS functions to calculate the total revenue and number of orders based on specific criteria.

Pivot Table Questions:

16. Category-wise Revenue Analysis:

- Create a Pivot Table to summarize the total revenue generated by each category of menu items.
- Use filters to allow users to explore revenue trends for specific categories.
- Include a calculated field to show the percentage contribution of each category to the total revenue.

17. Top Customers Analysis:

- Generate a Pivot Table to identify the top 5 customers who have spent the most on orders.

- Include slicers to dynamically filter data by date, providing insights into top customer spending over different time periods.

18. Monthly Order Count Trends:

- Develop a Pivot Table to showcase the monthly count of orders over the dataset period.
- Utilize a Pivot Chart to represent the trends graphically, allowing for a quick visual analysis of order frequency fluctuations.

19. Dynamic Date Analysis:

- Construct a Pivot Table that allows users to dynamically change the date range for analysis.
- Utilize timeline filters or date slicers to enable users to explore order details for specific time periods.

20. Customer Loyalty Program Impact:

- Build a Pivot Table to compare the average spending of customers enrolled in different loyalty programs (Star, Nova, Aurora).
- Use conditional formatting to visually highlight any significant differences in average spending among loyalty program members.