Data Columns :

InvoiceNo: Invoice number. Nominal. A 6-digit integral number uniquely assigned to each transaction. If this code starts with the letter 'c', it indicates a cancellation.

StockCode: Product (item) code. Nominal. A 5-digit integral number uniquely assigned to each distinct product.

Description: Product (item) name. Nominal.

Quantity: The quantities of each product (item) per transaction. Numeric.

InvoiceDate: Invice date and time. Numeric. The day and time when a transaction was generated.

UnitPrice: Unit price. Numeric. Product price per unit in sterling (Â£).

CustomerID: Customer number. Nominal. A 5-digit integral number uniquely assigned to each customer.

Country: Country name. Nominal. The name of the country where a customer resides.

Excel Case Study Questions(5 Marks for each question) — Total = 50

1. Data Cleaning and Preparation
   - Question: Identify and remove any duplicate records in the dataset. What method did you use to ensure that only unique transactions are analyzed?
   - Relevant Excel Functions: Remove Duplicates, COUNTIF

2. Handling Cancellations
   - Question: Transactions with invoices starting with 'C' are cancellations. Create a new column to flag these cancellations and calculate the total value of cancelled transactions.
   - Relevant Excel Functions: LEFT, IF, SUMIFS, SUMPRODUCT

3. Analysis of Sales Performance
   - Question: Analyze the sales performance per product. What are the top 5 selling products by quantity and by revenue?
   - Relevant Excel Functions: SUMIF, VLOOKUP, LARGE, INDEX, MATCH, PIVOT TABLE

4. Pricing Strategy Analysis
   - Question: Determine the average unit price per item and identify items whose unit price is above the 90th percentile.
   - Relevant Excel Functions: AVERAGEIF, PERCENTILE.INC, IF

5. Customer Analysis
   - Question: Who are the top 10 customers by total spending? Create a ranking column to order customers based on the amount spent.
   - Relevant Excel Functions: SUMIF, RANK.EQ, INDEX, MATCH

6. Temporal Sales Trends
   - Question: How do sales fluctuate monthly? Create a line chart that shows total sales per month for the year.
   - Relevant Excel Functions: TEXT, MONTH, YEAR, SUMIFS, DATE, LINE CHART

7. Geographical Insights
   - Question: Which country has the highest number of transactions? Generate a pivot table that summarizes the number of transactions per country.
   - Relevant Excel Functions: COUNTIF, PIVOT TABLE

8. Product Return Rate
   - Question: Calculate the return rate for each product by comparing the total quantity ordered to the total quantity returned.
   - Relevant Excel Functions: SUMIFS, IF, CELL, ABS, PIVOT TABLE

9. Data Segmentation for Marketing
   - Question: Segment the customers based on the total expenditure into High, Medium, and Low tiers. Define the thresholds for each tier based on quartiles.
   - Relevant Excel Functions: QUARTILE.INC, IF, VLOOKUP

10. Advanced Dashboard Creation
   - Question: Create an interactive dashboard that includes key performance indicators (KPIs) like total sales, average sale per transaction, top products by sales, and sales by country with filter options for different time periods and product categories.
   - Relevant Excel Functions: PIVOT TABLES, SLICERS, CHARTS, DASHBOARD DESIGN

Submission Format :

1. Solve all the questions and after finishing the project, create one presentation.
2. You need to record a video explaining your project and all main points in 10 minutes. Upload that video on youtube and add the link in your presentation.
3. Submit that ppt on the portal exactly below from where you downloaded this docx file.