# P04 Student Instructions – Pivot Tables

**Objectives:** - Create pivot tables to summarise data - Group data by multiple dimensions - Apply filtering, sorting, and calculated fields

**Prerequisites:** Understanding of data tables and basic aggregation **Estimated Time:** 2 hours **Learning Outcomes:** - Design pivot tables in Excel - Group and filter data within pivot tables - Generate calculated fields such as totals and averages

**Dataset Description:** | Column | Type | Description | |——-|——|————-| | Date | datetime64[ns] | Synthetic column | | Product | object | Synthetic column | | Region | object | Synthetic column | | Sales | float64 | Synthetic column | | Quantity | float64 | Synthetic column |

**Tasks and Steps:** 1. Load the sales dataset 2. Create a pivot table summarising total sales by Region and Product 3. Group dates by month and summarise total quantity sold 4. Sort the pivot results in descending order of sales 5. Add a calculated field for average sales per transaction

**Formulas / Methods:** - Pivot Sum: sum of values grouped by categories - Average per Transaction: (rac{Total Sales}{Count})

**Submission Checklist:** - Pivot table screenshot or description - Fields and groupings clearly indicated - Calculated field implementation shown

**मराठी सारांश (Marathi Summary):** या प्रात्यक्षिकात आपण पिव्हॉट टेबल तयार करून प्रदेश आणि उत्पादनानुसार विक्रीचे सारांश पाहू. आपण महिन्यानुसार गट करणे आणि गणनायुक्त फील्ड जोडणे देखील शिकू.