Submission deadline: Sunday, March 15th, 2020; 11:55 PM

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Assignment # 3

This assignment provides experience with Pivot4J, a plugin for Pentaho Business Analytics. Using Pivot4J, you will customize a pivot table and extend it to show more aggregated fields.

Before starting this assignment, you must read the Pentaho Pivot4J tutorial and configure Pentaho to use the Pivot4J plug-in. The tutorial demonstrates installation of Pentaho Business Analytics and the Pivot4J plugin. It also has examples of creating, customizing, extending and using MDX to build a pivot table. ***If you have not read the tutorial yet, please refer to it before starting this assignment.***

Startup: Create the Pivot Table

a. Select the SampleData catalog and Quadrant Analysis cube to create the pivot table.

b. Take some time exploring the dataset using this pivot table.

Q. No 1: Customize the Pivot Table

Create a customized pivot table that shows the following:

a. "Department" and "Positions" in the rows axis

b. "Region", "Budget" and "Actual" in the columns axis

c. Expand the "Region" dimension.

d. Expand the "Department" dimension.

e. Expand "Positions" for the Marketing & communication attribute.

f. Export the current view of the pivot table and save it to a document.

g. Save the current view as a report under the name "Q. No 1 Result.pdf".

h. Do NOT close the window and keep it for the next section.

Q. No 2: Extend the Pivot Table

a. Create an axis aggregation field that shows the minimum value of each region (column) across positions and departments (rows). The minimum calculations should appear at the bottom of the pivot table.

b. Create a hierarchical aggregation field for the rows that shows the average value across all positions for each department and region. The average calculations appear in the rows at the end of each department.

c. Swap axes with only one click. Swap back to the previous positions. In an actual analysis, you would select the preferred swapping order.

d. Change the order of dimensions in rows. Change the order of measures in columns. In an actual analysis, you would select the preferred ordering.

e. Export the current view of the pivot table and save it to a document.

f. Save the current view as a report under the name "Q. No 2 Result.pdf".

Q. No 3: Fill in the blanks:

1. How many dimension(s) is/are in the cube? _____

2. How many measure(s) is/are in the cube? _____

3. How many members does the Region dimension have? _____

4. How many members does the Department dimension have? _____

5. How many member does the Positions dimension have? _____

6. How many dimension(s) is/are in the row axis? _____

7. How many dimension(s) is/are in the column axis? _____

8. What is the "Budget" value of "Payroll" in the "Finance" Department for all regions? _____

9. What is the “Actual” value of “All positions” in “Professional Services” for “Central” region?

_____

10. How many non-empty cells does the “Executive Management” department have?

_____

11. Which of these “Positions” does not exist in the “Marketing & Communication” department?

_____

12. What is the minimum “Budget” value for the "All Regions" column across positions? This question relates to the assignment step to create an axis aggregation for the minimum of the column (regions). If you configured the pivot table according to the assignment specifications, the "All Regions" column shows the sum of values (budget and actual) across all regions for each position.

_____

13. What is the average “Actual” value across all positions in the “Executive Management” department in the “Eastern” region? This question corresponds to the assignment step to create an average hierarchical aggregation for the rows.

_____

Save all your answers of the blanks in a report under the name “Q. No 3 Result.pdf”.

Compress all the PDF documents in one zip archive and upload the compressed file on slate.

Good Luck. Thank you.