**CineCube Report**This is a report on the Avg of amount when account is fixed to 'Liberec' and status is fixed to 'Running Contract/OK'. We will start by answering the original query and we complement the result with contextualization and detailed analyses.

**Answer to the original question**

|  |  |  |
| --- | --- | --- |
|  |  | north Bohemia |
|  | 01-1998 | 31260.00 |
|  | 02-1997 | 475680.00 |
|  | 05-1998 | 43200.00 |
|  | 09-1997 | 145422.00 |
|  | 12-1997 | 65154.00 |

Here, you can see the answer of the original query. You have specified account to be equal to 'Liberec', and status to be equal to 'Running Contract/OK'. We report on Avg of amount grouped by account at level 2, and date at level 2 .  
You can observe the results in this table. We highlight the largest value with red and the lowest value with blue color.

**Act I: Putting results in context**In this series of slides we put the original result in context, by comparing the behavior of its defining values with the behavior of values that are similar to them.

**Assessing the behavior of account**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Summary for account | Ceska Lipa | Chomutov | Decin | Jablonec n. Nisou | **Liberec** | Litomerice | Louny | Most | Teplice | Usti nad Labem |
|  | 01-1998 | - | 22104.00 | - | - | **31260.00** | - | - | - | 42384.00 | 123300.00 |
|  | 02-1994 | - | - | - | - | **-** | - | - | - | 300660.00 | - |
|  | 02-1995 | - | - | - | - | **-** | - | 20832.00 | - | - | - |
|  | 02-1996 | - | - | - | - | **-** | - | 123216.00 | - | - | - |
|  | 02-1997 | - | - | - | - | **475680.00** | - | 44304.00 | - | - | - |
|  | 03-1995 | - | 185952.00 | - | - | **-** | - | - | - | - | - |
|  | 03-1997 | - | - | - | - | **-** | 101208.00 | - | - | - | - |
|  | 03-1998 | - | - | - | - | **-** | 133848.00 | - | - | - | - |
|  | 05-1996 | - | - | - | - | **-** | 284280.00 | - | - | - | - |
|  | 05-1998 | - | 10944.00 | - | - | **43200.00** | - | 130896.00 | - | - | - |
|  | 06-1994 | - | - | - | - | **-** | - | - | - | 239460.00 | - |
|  | 06-1996 | - | - | - | - | **-** | - | 176148.00 | - | 186384.00 | - |
|  | 07-1996 | 162468.00 | - | - | - | **-** | - | 96768.00 | - | - | - |
|  | 07-1998 | - | - | - | - | **-** | 271260.00 | 64860.00 | - | - | - |
|  | 08-1997 | 57120.00 | - | 289920.00 | - | **-** | - | - | - | - | - |
|  | 09-1997 | - | - | - | 127200.00 | **145422.00** | - | - | - | - | - |
|  | 09-1998 | - | 125472.00 | - | - | **-** | - | - | 253560.00 | - | - |
|  | 10-1997 | 48096.00 | - | - | - | **-** | - | - | - | - | - |
|  | 10-1998 | - | - | 17952.00 | - | **-** | - | 327660.00 | - | - | - |
|  | 11-1995 | - | - | - | - | **-** | - | - | 73056.00 | - | - |
|  | 11-1998 | 16032.00 | - | - | - | **-** | - | - | - | - | - |
|  | 12-1997 | - | 247920.00 | 155760.00 | - | **65154.00** | - | - | - | - | - |
|  | 12-1998 | - | - | - | - | **-** | - | 160920.00 | - | - | - |

In this graphic, we put the original request in context by comparing the value 'Liberec' for account at level 1 with its sibling values. We highlight the reference cells with bold, the highest values with red and the lowest values with blue color. We calculate the Avg of amount while fixing account at level 2 to be equal to ''north Bohemia'', and status at level 0 to be equal to ''Running Contract/OK''.  
Compared to its sibling we observe the following:  
In 23 out of 23 cases Ceska Lipa has null value.  
In 2 out of 23 cases Liberec has higher value than Chomutov.  
In 1 out of 23 cases Liberec has lower value than Chomutov.  
In 20 out of 23 cases Chomutov has null value.  
In 1 out of 23 cases Liberec has lower value than Decin.  
In 22 out of 23 cases Decin has null value.  
In 1 out of 23 cases Liberec has higher value than Jablonec n. Nisou.  
In 22 out of 23 cases Jablonec n. Nisou has null value.  
In 23 out of 23 cases Litomerice has null value.  
In 1 out of 23 cases Liberec has higher value than Louny.  
In 1 out of 23 cases Liberec has lower value than Louny.  
In 21 out of 23 cases Louny has null value.  
In 23 out of 23 cases Most has null value.  
In 1 out of 23 cases Liberec has lower value than Teplice.  
In 22 out of 23 cases Teplice has null value.  
In 1 out of 23 cases Liberec has lower value than Usti nad Labem.  
In 22 out of 23 cases Usti nad Labem has null value.

**Assessing the behavior of status**

|  |  |  |
| --- | --- | --- |
|  | Summary for status | **Running Contract/OK** |
|  | 01-1998 | **31260.00** |
|  | 02-1997 | **475680.00** |
|  | 05-1998 | **43200.00** |
|  | 09-1997 | **145422.00** |
|  | 12-1997 | **65154.00** |

In this graphic, we put the original request in context by comparing the value 'Running Contract/OK' for status at level 0 with its sibling values. We highlight the reference cells with bold, the highest value with red and the lowest value with blue color. We calculate the Avg of amount while fixing account at level 1 to be equal to ''Liberec'', and status at level 1 to be equal to ''Running Contract/OK''.  
Compared to its sibling we observe the following:

**Assessing the behavior of status**

|  |  |  |
| --- | --- | --- |
|  | Summary for status | north Bohemia |
|  | **Running Contract/OK** | **138756.00** |

In this graphic, we put the original request in context by comparing the value 'Running Contract/OK' for status at level 0 with its sibling values. We highlight the reference cells with bold, the highest value with red and the lowest value with blue color. We calculate the Avg of amount while fixing account at level 1 to be equal to ''Liberec'', and status at level 1 to be equal to ''Running Contract/OK''.

**Act II: Explaining results**In this series of slides we will present a detailed analysis of the values involved in the result of the original query. To this end, we drill-down the hierarchy of grouping levels of the result to one level of aggregation lower, whenever this is possible.

**Drilling down the Rows of the Original Result**

|  |  |  |  |
| --- | --- | --- | --- |
|  | *01-1998* |  | north Bohemia |
|  |  | 1997-02-12 | 475680.00 (1) |
|  |  | 1997-09-08 | 162576.00 (1) |
|  |  | 1997-09-09 | 128268.00 (1) |
|  |  | 1997-12-24 | 24180.00 (1) |
|  |  | 1997-12-28 | 106128.00 (1) |
|  |  | 1998-01-21 | 31260.00 (1) |
|  |  | 1998-05-27 | 43200.00 (1) |
|  | *02-1997* |  |  |
|  |  | 1997-02-12 | 475680.00 (1) |
|  |  | 1997-09-08 | 162576.00 (1) |
|  |  | 1997-09-09 | 128268.00 (1) |
|  |  | 1997-12-24 | 24180.00 (1) |
|  |  | 1997-12-28 | 106128.00 (1) |
|  |  | 1998-01-21 | 31260.00 (1) |
|  |  | 1998-05-27 | 43200.00 (1) |
|  | *05-1998* |  |  |
|  |  | 1997-02-12 | 475680.00 (1) |
|  |  | 1997-09-08 | 162576.00 (1) |
|  |  | 1997-09-09 | 128268.00 (1) |
|  |  | 1997-12-24 | 24180.00 (1) |
|  |  | 1997-12-28 | 106128.00 (1) |
|  |  | 1998-01-21 | 31260.00 (1) |
|  |  | 1998-05-27 | 43200.00 (1) |
|  | *09-1997* |  |  |
|  |  | 1997-02-12 | 475680.00 (1) |
|  |  | 1997-09-08 | 162576.00 (1) |
|  |  | 1997-09-09 | 128268.00 (1) |
|  |  | 1997-12-24 | 24180.00 (1) |
|  |  | 1997-12-28 | 106128.00 (1) |
|  |  | 1998-01-21 | 31260.00 (1) |
|  |  | 1998-05-27 | 43200.00 (1) |
|  | *12-1997* |  |  |
|  |  | 1997-02-12 | 475680.00 (1) |
|  |  | 1997-09-08 | 162576.00 (1) |
|  |  | 1997-09-09 | 128268.00 (1) |
|  |  | 1997-12-24 | 24180.00 (1) |
|  |  | 1997-12-28 | 106128.00 (1) |
|  |  | 1998-01-21 | 31260.00 (1) |
|  |  | 1998-05-27 | 43200.00 (1) |

In this slide, we expand dimension date by drilling down from level 2 to level 1. For each cell we show both the Avg of amount and the number of tuples that correspond to it in parentheses. We highlight the 40 lowest values in blue and the 40 largest in red color.  
Some interesting findings include:  
Column north Bohemia has 40 of the 40 highest values.  
Column north Bohemia has 40 of the 40 lowest values.

**Drilling down the Columns of the Original Result**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | *north Bohemia* |  | 01-1998 | 02-1994 | 02-1995 | 02-1996 | 02-1997 | 03-1995 | 03-1997 | 03-1998 | 05-1996 | 05-1998 | 06-1994 | 06-1996 | 07-1996 | 07-1998 | 08-1997 | 09-1997 | 09-1998 | 10-1997 | 10-1998 | 11-1995 | 11-1998 | 12-1997 | 12-1998 |
|  |  | Ceska Lipa | - | - | - | - | - | - | - | - | - | - | - | - | 162468.00 (1) | - | 57120.00 (1) | - | - | 48096.00 (1) | - | - | 16032.00 (1) | - | - |
|  |  | Chomutov | 22104.00 (1) | - | - | - | - | 185952.00 (1) | - | - | - | 10944.00 (1) | - | - | - | - | - | - | 125472.00 (1) | - | - | - | - | 247920.00 (1) | - |
|  |  | Decin | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 289920.00 (1) | - | - | - | 17952.00 (1) | - | - | 155760.00 (1) | - |
|  |  | Jablonec n. Nisou | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 127200.00 (1) | - | - | - | - | - | - | - |
|  |  | Liberec | 31260.00 (1) | - | - | - | 475680.00 (1) | - | - | - | - | 43200.00 (1) | - | - | - | - | - | 145422.00 (2) | - | - | - | - | - | 65154.00 (2) | - |
|  |  | Litomerice | - | - | - | - | - | - | 101208.00 (2) | 133848.00 (1) | 284280.00 (1) | - | - | - | - | 271260.00 (1) | - | - | - | - | - | - | - | - | - |
|  |  | Louny | - | - | 20832.00 (1) | 123216.00 (1) | 44304.00 (1) | - | - | - | - | 130896.00 (1) | - | 176148.00 (1) | 96768.00 (1) | 64860.00 (1) | - | - | - | - | 327660.00 (1) | - | - | - | 160920.00 (1) |
|  |  | Most | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 253560.00 (1) | - | - | 73056.00 (1) | - | - | - |
|  |  | Teplice | 42384.00 (1) | 300660.00 (1) | - | - | - | - | - | - | - | - | 239460.00 (1) | 186384.00 (1) | - | - | - | - | - | - | - | - | - | - | - |
|  |  | Usti nad Labem | 123300.00 (1) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

In this slide, we expand dimension account by drilling down from level 2 to level 1. For each cell we show both the Avg of amount and the number of tuples that correspond to it in parentheses. We highlight the 9 lowest values in blue and the 9 largest in red color.  
Some interesting findings include:  
Column 01-1998 has 3 of the 9 lowest values.

**Summary**-In this slide we summarize our findings.  
-  
-First, we tried to put the original result in context, by comparing its defining values with similar ones.  
-When we compared Liberec to its siblings, grouped by account and date, we observed the following:  
-  
-In 23 out of 23 cases Ceska Lipa has null value.  
-In 2 out of 23 cases Liberec has higher value than Chomutov.  
-In 1 out of 23 cases Liberec has lower value than Chomutov.  
-In 20 out of 23 cases Chomutov has null value.  
-In 1 out of 23 cases Liberec has lower value than Decin.  
-In 22 out of 23 cases Decin has null value.  
-In 1 out of 23 cases Liberec has higher value than Jablonec n. Nisou.  
-In 22 out of 23 cases Jablonec n. Nisou has null value.  
-In 23 out of 23 cases Litomerice has null value.  
-In 1 out of 23 cases Liberec has higher value than Louny.  
-In 1 out of 23 cases Liberec has lower value than Louny.  
-In 21 out of 23 cases Louny has null value.  
-In 23 out of 23 cases Most has null value.  
-In 1 out of 23 cases Liberec has lower value than Teplice.  
-In 22 out of 23 cases Teplice has null value.  
-In 1 out of 23 cases Liberec has lower value than Usti nad Labem.  
-In 22 out of 23 cases Usti nad Labem has null value.  
-When we compared Running Contract/OK to its siblings, grouped by status and date, we observed the following:  
-  
-  
-Then we analyzed the results by drilling down one level in the hierarchy.  
-When we drilled down date, we observed the following facts:  
-  
-Column north Bohemia has 40 of the 40 highest values.  
-Column north Bohemia has 40 of the 40 lowest values.  
-When we drilled down account, we observed the following facts:  
-  
-Column 01-1998 has 3 of the 9 lowest values.