| - 110-10   |           | Aver       | <b>t</b> 1 | t2     | t3     | t4     | t5     |
|------------|-----------|------------|------------|--------|--------|--------|--------|
| Row1_LCC   | Runtime   | 1.43       | 1.45       | 1.43   | 1.36   | 1.51   | 1.38   |
| Relation A | CPUsystem | 0.05       | 0.04       | 0.03   | 0.04   | 0.06   | 0.09   |
| 4.91       | CPUuser   | 1.24       | 1.29       | 1.29   | 1.18   | 1.31   | 1.14   |
| 270.15     | Memory    | 276,636.00 | 276604     | 276604 | 276656 | 276656 | 276660 |
| Row1_LCP   | Runtime   | 7.02       | 7.08       | 7.1    | 6.99   | 6.97   | 6.95   |
| Relation B | CPUsystem | 0.04       | 0.04       | 0.05   | 0.03   | 0.04   | 0.06   |
| 79.63%     | CPUuser   | 6.61       | 6.65       | 6.69   | 6.59   | 6.57   | 6.53   |
| 218.41     | Memory    | 223,652.80 | 223604     | 223620 | 223616 | 223620 | 223804 |
| Row1_SLCT  | Runtime   | 1.29       | 1.22       | 1.51   | 1.24   | 1.23   | 1.24   |
|            | CPUsystem | 0.01       | 0          | 0      | 0.01   | 0.01   | 0.01   |
|            | CPUuser   | 1.27       | 1.22       | 1.49   | 1.21   | 1.21   | 1.21   |
| 24.84      | Memory    | 25,436.80  | 26572      | 26732  | 24660  | 24652  | 24568  |
| Row2_LCC   | Runtime   | 1.26       | 1.25       | 1.26   | 1.26   | 1.26   | 1.26   |
| Relation A | CPUsystem | 0.06       | 0.08       | 0.04   | 0.04   | 0.06   | 0.06   |
| 5.66       | CPUuser   | 1.20       | 1.17       | 1.21   | 1.22   | 1.2    | 1.2    |
| 342.67     | Memory    | 350,889.60 | 350464     | 350500 | 352536 | 350476 | 350472 |
| Row2_LCP   | Runtime   | 7.13       | 7.11       | 7.1    | 7.09   | 7.09   | 7.24   |
| Relation B | CPUsystem | 0.05       | 0.05       | 0.05   | 0.08   | 0.04   | 0.05   |
| 82.33%     | CPUuser   | 7.07       | 7.06       | 7.05   | 7.01   | 7.04   | 7.19   |
| 272.30     | Memory    | 278,832.00 | 278876     | 278792 | 278800 | 278800 | 278892 |
| Row2_SLCT  | Runtime   | 1.26       | 1.26       | 1.28   | 1.26   | 1.26   | 1.26   |
|            | CPUsystem | 0.01       | 0          | 0.01   | 0.01   | 0.01   | 0.01   |
|            | CPUuser   | 1.25       | 1.26       | 1.27   | 1.24   | 1.25   | 1.25   |
| 35.35      | Memory    | 36,200.00  | 35044      | 35056  | 36936  | 36992  | 36972  |
| Row3_LCC   | Runtime   | 1.47       | 1.45       | 1.45   | 1.48   | 1.47   | 1.49   |
| Relation A | CPUsystem | 0.11       | 0.1        | 0.14   | 0.1    | 0.1    | 0.11   |
| 5.44       | CPUuser   | 1.35       | 1.34       | 1.31   | 1.38   | 1.36   | 1.38   |
| 639.97     | Memory    | 655,327.20 | 655344     | 655384 | 655312 | 655296 | 655300 |
| Row3_LCP   | Runtime   | 7.99       | 7.96       | 7.93   | 7.97   | 8.14   | 7.95   |
| Relation B | CPUsystem | 0.08       | 0.08       | 0.08   | 0.1    | 0.09   | 0.07   |
| 81.62%     | CPUuser   | 7.90       | 7.88       | 7.85   | 7.86   | 8.05   | 7.88   |
| 527.96     | Memory    | 540,632.00 | 540716     | 540456 | 540716 | 540556 | 540716 |
| Row3_SLCT  | Runtime   | 1.34       | 1.33       | 1.34   | 1.33   | 1.34   | 1.36   |
|            | CPUsystem | 0.01       | 0.02       | 0.01   | 0.02   | 0.01   | 0.01   |
|            | CPUuser   | 1.33       | 1.32       | 1.32   | 1.31   | 1.33   | 1.35   |
| 64.84      | Memory    | 66,398.40  | 67652      | 67532  | 65548  | 65628  | 65632  |
| Row4_LCC   | Runtime   | 2.82       | 2.89       | 2.79   | 2.81   | 2.79   | 2.8    |
| Relation A | CPUsystem | 0.03       | 0.02       | 0.02   | 0.02   | 0.03   | 0.04   |
| 5.90       | CPUuser   | 2.71       | 2.75       | 2.7    | 2.7    | 2.7    | 2.68   |
| 30.30      | Memory    | 31,030.40  | 31436      | 31204  | 31368  | 29628  | 31516  |
| Row4_LCP   | Runtime   | 16.65      | 16.81      | 16.77  | 16.65  | 16.46  | 16.55  |
| Relation B | CPUsystem | 0.02       | 0.02       | 0.03   | 0.02   | 0.01   | 0.02   |
| 83.05%     | CPUuser   | 16.63      | 16.79      | 16.74  | 16.63  | 16.45  | 16.54  |
| 26.67      | Memory    | 27,311.20  | 27336      | 27316  | 27328  | 27352  | 27224  |

| Row4 SLCT              | Runtime           | 2.94                      | 2.9            | 2.9            | 3.11           | 2.89           | 2.91           |
|------------------------|-------------------|---------------------------|----------------|----------------|----------------|----------------|----------------|
| _                      | CPUsystem         | 0.01                      | 0.01           | 0.02           | 0              | 0.01           | 0              |
|                        | CPUuser           | 2.93                      | 2.89           | 2.88           | 3.11           | 2.88           | 2.9            |
| 6.44                   | Memory            | 6,597.60                  | 5524           | 7160           | 7124           | 5744           | 7436           |
| Row5_LCC               | Runtime           | 3.54                      | 3.52           | 3.51           | 3.57           | 3.55           | 3.54           |
| Relation A             | CPUsystem         | 0.29                      | 0.31           | 0.3            | 0.27           | 0.26           | 0.32           |
| 5.97                   | CPUuser           | 3.24                      | 3.2            | 3.21           | 3.29           | 3.28           | 3.22           |
| 1,614.05               | Memory            | 1,652,791.20              | 1653416        | 1651696        | 1653356        | 1651960        | 1653528        |
| Row5_LCP               | Runtime           | 21.13                     | 21.41          | 20.98          | 21.28          | 21.1           | 20.89          |
| Relation B             | CPUsystem         | 0.31                      | 0.28           | 0.31           | 0.29           | 0.34           | 0.33           |
| 83.25%                 | CPUuser           | 20.83                     | 21.13          | 20.67          | 20.99          | 20.77          | 20.57          |
| 1,412.11               | Memory            | 1,446,000.80              | 1446124        | 1445928        | 1446124        | 1445964        | 1445864        |
| Row5_SLCT              | Runtime           | 2.98                      | 3              | 2.97           | 2.99           | 2.97           | 2.98           |
|                        | CPUsystem         | 0.01                      | 0              | 0              | 0              | 0.03           | 0              |
|                        | CPUuser           | 2.97                      | 3              | 2.96           | 2.98           | 2.94           | 2.98           |
| 12.79                  | Memory            | 13,096.80                 | 11804          | 13248          | 13452          | 13392          | 13588          |
| Row6_LCC               | Runtime           | 4.08                      | 4.07           | 4.08           | 4.08           | 4.06           | 4.09           |
| Relation A             | CPUsystem         | 0.35                      | 0.37           | 0.34           | 0.37           | 0.31           | 0.35           |
| 5.45                   | CPUuser           | 3.72                      | 3.69           | 3.74           | 3.71           | 3.74           | 3.74           |
| 1,960.11               | Memory            | 2,007,156.00              | 2006384        | 2007892        | 2007848        | 2006104        | 2007552        |
| Row6_LCP               | Runtime           | 22.23                     | 22.19          | 22.44          | 22.06          | 22             | 22.48          |
| Relation B             | CPUsystem         | 0.33                      | 0.22           | 0.33           | 0.38           | 0.35           | 0.39           |
| 81.65%                 | CPUuser           | 21.90                     | 21.97          | 22.11          | 21.68          | 21.65          | 22.1           |
| 1,638.82               | Memory            | 1,678,151.20              | 1678184        | 1678128        | 1678184        | 1678096        | 1678164        |
| Row6_SLCT              | Runtime           | 3.38                      | 3.38           | 3.38           | 3.37           | 3.39           | 3.39           |
|                        | CPUsystem         | 0.05                      | 0.07           | 0.05           | 0.03           | 0.04           | 0.04           |
| 176.64                 | CPUuser           | 3.33                      | 3.31           | 3.33           | 3.34           | 3.34           | 3.35           |
| <b>176.64</b> Row7 LCC | Memory<br>Runtime | 180,881.60<br><b>9.13</b> | 180644<br>9.27 | 180616<br>9.18 | 180616<br>9.04 | 180540<br>8.98 | 181992<br>9.16 |
| Relation A             | CPUsystem         | 0.06                      | 0.05           | 0.06           | 0.05           | 0.04           | 0.08           |
| 5.99                   | CPUuser           | 8.93                      | 8.99           | 8.97           | 8.91           | 8.88           | 8.91           |
| 42.44                  | Memory            | 43,463.20                 |                | 43768          |                |                | 42264          |
| Row7 LCP               | Runtime           | 54.66                     | 54.78          | 54.39          | 55.17          | 54.61          | 54.34          |
| Relation B             | CPUsystem         | 0.03                      | 0.03           | 0.04           | 0.01           | 0.04           | 0.05           |
| 83.31%                 | CPUuser           | 54.65                     | 54.77          | 54.37          |                | 54.6           | 54.32          |
| 36.44                  | Memory            | 37,318.40                 | 37260          | 37280          | 37272          | 37300          | 37480          |
| Row7 SLCT              | •                 | 9.61                      | 9.63           | 9.59           | 9.62           | 9.61           | 9.6            |
| _                      | CPUsystem         | 0.03                      | 0.03           | 0.02           | 0.02           | 0.03           | 0.04           |
|                        | CPUuser           | 9.58                      | 9.6            | 9.58           | 9.6            | 9.58           | 9.56           |
| 7.22                   | Memory            | 7,396.00                  | 7960           | 8072           | 6544           | 7972           | 6432           |
| Row8 LCC               | Runtime           | 11.79                     | 11.82          | 11.73          | 11.81          | 11.75          | 11.82          |
| Relation A             | CPUsystem         | 0.85                      | 0.82           | 0.85           | 0.86           | 0.93           | 0.78           |
| 5.76                   | CPUuser           | 10.94                     | 11             | 10.88          | 10.94          | 10.82          | 11.04          |
| 4,408.69               | Memory            | 4,514,494.40              | 4513172        | 4514592        |                | 4515008        | 4514988        |
| Row8_LCP               | Runtime           | 67.90                     | 67.83          | 67.99          | 67.96          | 67.49          | 68.23          |
| Relation B             | CPUsystem         | 0.83                      | 0.83           | 0.86           | 0.87           | 0.82           | 0.78           |
|                        |                   |                           |                |                |                |                |                |

| 82.64%        | CPUuser   | 67.10        | 67.03   | 67.16   | 67.12   | 66.7    | 67.48   |
|---------------|-----------|--------------|---------|---------|---------|---------|---------|
| 3,850.46      | Memory    | 3,942,875.20 | 3942812 | 3942988 | 3942876 | 3942864 | 3942836 |
| Row8_SLCT     | Runtime   | 10.85        | 10.82   | 10.96   | 10.87   | 10.79   | 10.82   |
|               | CPUsystem | 0.10         | 0.1     | 0.12    | 0.12    | 0.09    | 0.09    |
|               | CPUuser   | 10.75        | 10.72   | 10.84   | 10.75   | 10.71   | 10.72   |
| 362.61        | Memory    | 371,316.80   | 371576  | 371780  | 371480  | 371752  | 369996  |
| Row9_LCC      | Runtime   | 15.40        | 15.42   | 15.38   | 15.56   | 15.33   | 15.32   |
| Relation A    | CPUsystem | 1.20         | 1.11    | 1.15    | 1.27    | 1.17    | 1.28    |
| 4.97          | CPUuser   | 12.77        | 12.85   | 12.8    | 12.85   | 12.72   | 12.61   |
| 6,313.13      | Memory    | 6,464,646.40 | 6464288 | 6464500 | 6464324 | 6464360 | 6465760 |
| Row9_LCP      | Runtime   | 76.54        | 76.72   | 76.06   | 76.31   | 77.21   | 76.38   |
| Relation B    | CPUsystem | 1.17         | 1.2     | 1.21    | 1.17    | 1.13    | 1.12    |
| 79.88%        | CPUuser   | 73.88        | 74.02   | 73.38   | 73.65   | 74.59   | 73.78   |
| 5,355.29      | Memory    | 5,483,820.80 | 5483812 | 5483832 | 5483808 | 5483844 | 5483808 |
| Row9_SLCT     | Runtime   | 13.18        | 13.08   | 13.09   | 13.57   | 12.95   | 13.2    |
|               | CPUsystem | 0.16         | 0.19    | 0.18    | 0.15    | 0.12    | 0.18    |
|               | CPUuser   | 11.57        | 11.43   | 11.48   | 11.98   | 11.39   | 11.58   |
| 622.70        | Memory    | 637,648.00   | 637104  | 638560  | 636912  | 638548  | 637116  |
| Row10_LCC     |           | 44.25        | 45.55   | 44.15   | 44.09   | 43.68   | 43.8    |
| Relation A    | CPUsystem | 0.42         | 0.41    | 0.42    | 0.41    | 0.4     | 0.45    |
| 2.93          | CPUuser   | 43.46        | 43.95   | 43.53   | 43.45   | 43.16   | 43.21   |
| 506.09        | Memory    | 518,235.20   | 517500  | 519432  | 519236  | 517500  | 517508  |
| Row10_LCP     | Runtime   | 129.58       | 132.48  | 129.94  | 128.25  | 128.36  | 128.86  |
| Relation B    | CPUsystem | 0.49         | 0.48    | 0.52    | 0.51    | 0.4     | 0.56    |
| 65.87%        | CPUuser   | 129.14       | 132.07  | 129.48  | 127.8   | 128.01  | 128.36  |
| 1,125.18      | Memory    | 1,152,185.60 | 1152212 | 1152208 | 1152104 | 1152192 | 1152212 |
| Row10_SLCT    |           | 48.36        | 46.27   | 48.8    | 46.89   | 51.57   | 48.29   |
|               | CPUsystem | 0.37         | 0.41    | 0.37    | 0.36    | 0.34    | 0.35    |
|               | CPUuser   | 48.01        | 45.88   | 48.44   | 46.54   | 51.25   | 47.95   |
| 515.82        | -         | 528,201.60   | 527812  | 527836  | 527904  | 527912  | 529544  |
| Row11_LCC     |           | 45.36        | 46.46   | 43.8    | 46.98   | 43.69   | 45.87   |
| Relation A    | CPUsystem | 0.33         | 0.38    | 0.3     | 0.29    | 0.35    | 0.35    |
| 2.99          | CPUuser   | 45.04        | 46.09   | 43.51   | 46.7    | 43.36   | 45.53   |
| 506.52        | Memory    | 518,676.80   | 519564  | 517592  | 517516  | 519276  | 519436  |
| Row11_LCP     | Runtime   | 135.64       | 135.22  | 135.44  | 135.44  | 135.55  | 136.54  |
| Relation B    | CPUsystem | 0.50         | 0.48    | 0.48    | 0.46    | 0.57    | 0.5     |
| 66.56%        | CPUuser   | 135.20       | 134.8   | 135.02  | 135.04  | 135.05  | 136.1   |
| 1,125.71      | Memory    | 1,152,728.00 | 1152676 | 1152788 | 1152732 | 1152720 | 1152724 |
| Row11_SLCT    |           | 47.89        | 49.66   | 46.68   | 47.21   | 46.84   | 49.06   |
|               | CPUsystem | 0.35         | 0.34    | 0.33    | 0.36    | 0.33    | 0.38    |
| <b>717.05</b> | CPUuser   | 47.56        | 49.34   | 46.37   | 46.87   | 46.52   | 48.69   |
| 515.92        | Memory    | 528,297.60   | 527916  | 529744  | 527988  | 527944  | 527896  |
| Row12_LCC     |           | 48.05        | 49.34   | 46.42   | 49.46   | 46.51   | 48.54   |
| Relation A    | CPUsystem | 0.65         | 0.63    | 0.7     | 0.71    | 0.6     | 0.62    |
| 3.11          | CPUuser   | 46.44        | 47.75   | 44.76   | 47.79   | 44.94   | 46.96   |
| 2,351.26      | Memory    | 2,407,685.60 | 2406972 | 2406924 | 2408644 | 2406908 | 2408980 |

| Row12_LCP  | Runtime   | 149.51       | 148.23   | 150.47   | 148.65   | 149.55   | 150.66   |
|------------|-----------|--------------|----------|----------|----------|----------|----------|
| Relation B | CPUsystem | 0.86         | 0.76     | 0.77     | 0.87     | 1        | 0.9      |
| 67.85%     | CPUuser   | 147.72       | 146.54   | 148.76   | 146.85   | 147.6    | 148.83   |
| 2,947.31   | Memory    | 3,018,048.80 | 3018020  | 3018096  | 3018052  | 3018028  | 3018048  |
| Row12_SLCT | Runtime   | 51.76        | 52.03    | 48.73    | 53.39    | 53.12    | 51.54    |
|            | CPUsystem | 0.39         | 0.39     | 0.38     | 0.34     | 0.48     | 0.36     |
|            | CPUuser   | 50.40        | 50.67    | 47.39    | 52.07    | 51.67    | 50.21    |
| 516.60     | Memory    | 528,997.60   | 529692   | 527820   | 529940   | 529716   | 527820   |
| Row13_LCC  | Runtime   | 1,467.49     | 1521.98  | 1452.24  | 1461.6   | 1447.06  | 1454.59  |
| Relation A | CPUsystem | 12.85        | 13.06    | 12.94    | 12.77    | 13.2     | 12.28    |
| 4.95       | CPUuser   | 1,444.58     | 1461.2   | 1438.02  | 1448.34  | 1433.44  | 1441.88  |
| 1,150.06   | Memory    | 1,177,664.80 | 1178424  | 1176460  | 1178400  | 1176532  | 1178508  |
| Row13_LCP  | Runtime   | 7,269.19     | 7326.58  | 7246.4   | 7264.59  | 7219.72  | 7288.64  |
| Relation B | CPUsystem | 15.13        | 14.69    | 14.94    | 15.34    | 15.08    | 15.59    |
| 79.8%      | CPUuser   | 7,256.64     | 7314.61  | 7233.23  | 7251.98  | 7207.32  | 7276.04  |
| 2,737.07   | Memory    | 2,802,756.80 | 2802804  | 2802656  | 2802780  | 2802724  | 2802820  |
| Row13_SLCT |           | 1,552.10     | 1538.78  | 1561.41  | 1551.87  | 1553.02  | 1555.4   |
|            | CPUsystem | 12.99        | 13.05    | 13.12    | 12.98    | 13.07    | 12.73    |
|            | CPUuser   | 1,536.58     | 1525.27  | 1543.78  | 1536.51  | 1538.09  | 1539.27  |
| 1,184.69   | Memory    | 1,213,126.40 | 1211952  | 1211924  | 1213828  | 1213956  | 1213972  |
| Row14_LCC  | Runtime   | 1,501.50     | 1483.77  | 1504.56  | 1538.38  | 1490.16  | 1490.61  |
| Relation A | CPUsystem | 13.78        | 13.44    | 14.14    | 13.78    | 13.76    | 13.78    |
| 4.95       | CPUuser   | 1,472.08     | 1460.11  | 1473.34  | 1506.78  | 1461.03  | 1459.16  |
| 1,149.27   | Memory    | 1,176,855.20 | 1176420  | 1178452  | 1176432  | 1176456  | 1176516  |
| Row14_LCP  | Runtime   | 7,438.88     | 7457.3   | 7411.21  | 7488.86  | 7372.77  | 7464.27  |
| Relation B | CPUsystem | 15.88        | 15.77    | 15.89    | 15.62    | 16.1     | 16.04    |
| 79.8%      | CPUuser   | 7,424.48     | 7443.87  | 7396.33  | 7474.41  | 7357.95  | 7449.84  |
| 2,738.11   | Memory    | 2,803,820.00 | 2803744  | 2803832  | 2803844  | 2803872  | 2803808  |
| Row14_SLCT |           | 1,593.84     | 1582     | 1605.16  | 1606.31  | 1591.73  | 1584.01  |
|            | · ·       | 13.84        | 13.6     |          |          | 14.1     | 13.91    |
| 4 40 4 0 4 | CPUuser   | 1,562.62     | 1557.44  | 1573.29  | 1571.78  | 1559.56  | 1551.01  |
| 1,184.81   | Memory    | 1,213,242.40 | 1214000  | 1214052  | 1212032  | 1212116  | 1214012  |
| Row15_LCC  | Runtime   | 2,822.85     | 2785.31  | 2828.22  | 2889.74  | 2807.05  | 2803.95  |
| Relation A | CPUsystem | 27.65        | 28.17    | 27.52    | 27.12    | 27.67    | 27.79    |
| 5.56       | CPUuser   | 2,747.38     | 2721.32  | 2750.13  | 2811.02  | 2729.91  | 2724.52  |
| 1,978.85   | Memory    | 2,026,344.80 | 2026660  | 2026760  | 2026776  | 2026676  | 2024852  |
| Row15_LCP  |           | 15,700.70    | 15614.61 | 15218.76 | 16777.64 | 14979.6  | 15912.9  |
| Relation B | CPUsystem | 32.19        | 31.56    | 31.78    | 33.64    | 32.16    | 31.8     |
| 82.01%     | CPUuser   | 15,656.57    | 15573.93 | 15173.82 | 16731.33 | 14934.26 | 15869.49 |
| 6,774.05   | Memory    | 6,936,623.20 | 6936912  | 6936572  | 6936520  | 6936652  | 6936460  |
| Row15_SLCT |           | 3,149.36     | 3098.69  | 3116.66  | 3316.79  | 3115.38  | 3099.3   |
|            | CPUsystem | 27.80        | 27.01    | 27.46    | 29.41    | 27.71    | 27.42    |
| 1 071 77   | CPUuser   | 3,071.76     | 3033.4   | 3035.37  | 3235.25  | 3035.49  | 3019.31  |
| 1,971.76   | Memory    | 2,019,080.00 | 2018684  | 2018732  | 2018756  | 2020556  | 2018672  |
| Row16_LCC  | Runtime   | 1,582.64     | 1575.15  | 1567.24  | 1662.13  | 1543.58  | 1565.1   |
| Relation A | CPUsystem | 14.92        | 14.96    | 14.94    | 15.14    | 14.7     | 14.84    |
|            |           |              |          |          |          |          |          |

| 3.86<br>1,881.92   |   |  |   |  |   |   |   |
|--|---|--|---|--|---|---|---|
| 1 881 02   | CPUuser   | 1,567.01   | 1559.75   | 1551.67  | 1646.67   | 1528.29   | 1548.66   |
| 1,001.72   | Memory  | 1,927,086.40   | 1926324   | 1928004  | 1926324   | 1926356   | 1928424   |
| Row16_LCP  | Runtime   | 6,105.66   | 6009.17   | 6105.15  | 6397.95   | 6010.42   | 6005.6  |
| Relation B   | CPUsystem   | 20.99  | 20.78   | 20.98  | 21.59   | 20.96   | 20.64   |
| 74.09%   | CPUuser   | 6,086.68   | 5990.44   | 6085.59  | 6378.38   | 5991.62   | 5987.36   |
| 4,474.65   | Memory  | 4,582,040.00   | 4582048   | 4581992  | 4582088   | 4582084   | 4581988   |
| Row16_SLCT   | Runtime   | 1,641.37   | 1616.76   | 1627.44  | 1729.16   | 1605.75   | 1627.76   |
|  | CPUsystem   | 15.20  | 15.02   | 15.26  | 15.74   | 15.04   | 14.92   |
|  | CPUuser   | 1,620.74   | 1597.88   | 1600.57  | 1708.75   | 1587.88   | 1608.64   |
| 1,930.45   | Memory  | 1,976,777.60   | 1975756   | 1977576  | 1977436   | 1975740   | 1977380   |
| Row17_LCC  | Runtime   | 1,603.16   | 1584.51   | 1575.25  | 1699.25   | 1571.96   | 1584.82   |
| Relation A   | CPUsystem   | 16.14  | 15.97   | 15.61  | 16.66   | 16.19   | 16.27   |
| 4.15   | CPUuser   | 1,579.02   | 1560.49   | 1556.87  | 1675.08   | 1546.08   | 1556.57   |
| 4,761.91   | Memory  | 4,876,199.20   | 4875528   | 4875488  | 4877252   | 4877144   | 4875584   |
| Row17_LCP  | Runtime   | 6,647.79   | 6521.34   | 6628.95  | 6985.32   | 6520.51   | 6582.82   |
| Relation B   | CPUsystem   | 22.07  | 21.54   | 22.33  | 22.57   | 21.95   | 21.96   |
| 75.9%  | CPUuser   | 6,626.28   | 6500.91   | 6609.06  | 6964.13   | 6495.87   | 6561.43   |
| 5,602.45   | Memory  | 5,736,904.00   | 5736892   | 5736912  | 5736988   | 5736896   | 5736832   |
| Row17_SLCT   | Runtime   | 1,670.34   | 1676.06   | 1632.99  | 1753.35   | 1648.11   | 1641.19   |
|  | CPUsystem   | 15.33  | 15.18   | 15.42  | 15.87   | 14.99   | 15.18   |
|  | CPUuser   | 1,645.55   | 1651.02   | 1613.46  | 1727.41   | 1623.04   | 1612.8  |
| 1,930.08   | Memory  | 1,976,406.40   | 1975680   | 1975684  | 1977368   | 1975840   | 1977460   |
| Row18_LCC  | Runtime   | 2,796.66   | 2770.61   | 2779.51  | 2873.31   | 2766.39   | 2793.48   |
| Relation A   | CPUsystem   | 30.22  | 31.02   | 29.67  | 30.77   | 29.5  | 30.12   |
| 4.74   | CPUuser   | 2,741.90   | 2713.32   | 2738.34  | 2815.37   | 2710.72   | 2731.75   |
|  | 3.6   | 2,341,475.20   | 2341728   | 2342112  | 2340076   | 2341856   | 2341604   |
| 2,286.60   | Memory  | ,- ,   |   |  |   |   |   |
| <b>2,286.60</b> Row18_LCP  | Runtime   | 13,251.65  | 12965.72  | 13334.88   | 13764.9   | 13180.4   |   |
| *  | -   |  |   |  | 13764.9<br>34.73  |   | 13012.35  |
| Row18_LCP  | Runtime   | 13,251.65  | 12965.72<br>34.15   | 13334.88   | 34.73   | 13180.4   | 13012.35<br>34.42   |
| Row18_LCP<br>Relation B  | Runtime<br>CPUsystem  | 13,251.65<br>34.44   | 12965.72<br>34.15   | 13334.88<br>34.34<br>13300.24  | 34.73   | 13180.4<br>34.58  | 13012.35<br>34.42<br>12972.7  |
| Row18_LCP<br>Relation B<br><b>78.9%</b>  | Runtime<br>CPUsystem<br>CPUuser<br>Memory   | 13,251.65<br>34.44<br>13,213.65  | 12965.72<br>34.15<br>12927.19   | 13334.88<br>34.34<br>13300.24  | 34.73<br>13725.05   | 13180.4<br>34.58<br>13143.06  | 13012.35<br>34.42<br>12972.7  |
| Row18_LCP<br>Relation B<br>78.9%<br>7,005.44   | Runtime<br>CPUsystem<br>CPUuser<br>Memory   | 13,251.65<br>34.44<br>13,213.65<br>7,173,572.00  | 12965.72<br>34.15<br>12927.19<br>7173684  | 13334.88<br>34.34<br>13300.24<br>7173200   | 34.73<br>13725.05<br>7173372  | 13180.4<br>34.58<br>13143.06<br>7173612   | 13012.35<br>34.42<br>12972.7<br>7173992<br>3038.51  |
| Row18_LCP<br>Relation B<br>78.9%<br>7,005.44   | Runtime<br>CPUsystem<br>CPUuser<br>Memory<br>Runtime  | 13,251.65<br>34.44<br>13,213.65<br>7,173,572.00<br>3,031.52  | 12965.72<br>34.15<br>12927.19<br>7173684<br>3019.22   | 13334.88<br>34.34<br>13300.24<br>7173200<br>3012.37  | 34.73<br>13725.05<br>7173372<br>3066.65   | 13180.4<br>34.58<br>13143.06<br>7173612<br>3020.83  | 13012.35<br>34.42<br>12972.7<br>7173992<br>3038.51<br>30.78   |
| Row18_LCP<br>Relation B<br>78.9%<br>7,005.44   | Runtime<br>CPUsystem<br>CPUuser<br>Memory<br>Runtime<br>CPUsystem   | 13,251.65<br>34.44<br>13,213.65<br>7,173,572.00<br>3,031.52<br>30.07   | 12965.72<br>34.15<br>12927.19<br>7173684<br>3019.22<br>29.6   | 13334.88<br>34.34<br>13300.24<br>7173200<br>3012.37<br>29.83   | 34.73<br>13725.05<br>7173372<br>3066.65<br>29.68  | 13180.4<br>34.58<br>13143.06<br>7173612<br>3020.83<br>30.45   | 13012.35<br>34.42<br>12972.7<br>7173992<br>3038.51<br>30.78<br>2976.6   |
| Row18_LCP Relation B 78.9% 7,005.44 Row18_SLCT 2,296.88 Row19_LCC  | Runtime<br>CPUsystem<br>CPUuser<br>Memory<br>Runtime<br>CPUsystem<br>CPUuser  | 13,251.65<br>34.44<br>13,213.65<br>7,173,572.00<br>3,031.52<br>30.07<br>2,976.01   | 12965.72<br>34.15<br>12927.19<br>7173684<br>3019.22<br>29.6<br>2961.98  | 13334.88<br>34.34<br>13300.24<br>7173200<br>3012.37<br>29.83<br>2968.9<br>2352272<br>1808.69   | 34.73<br>13725.05<br>7173372<br>3066.65<br>29.68<br>3009.15   | 13180.4<br>34.58<br>13143.06<br>7173612<br>3020.83<br>30.45<br>2963.41  | 13012.35<br>34.42<br>12972.7<br>7173992<br>3038.51<br>30.78<br>2976.6<br>2352472  |
| Row18_LCP<br>Relation B<br>78.9%<br>7,005.44<br>Row18_SLCT   | Runtime<br>CPUsystem<br>CPUuser<br>Memory<br>Runtime<br>CPUsystem<br>CPUuser<br>Memory  | 13,251.65<br>34.44<br>13,213.65<br>7,173,572.00<br>3,031.52<br>30.07<br>2,976.01<br>2,352,009.60   | 12965.72<br>34.15<br>12927.19<br>7173684<br>3019.22<br>29.6<br>2961.98<br>2352548   | 13334.88<br>34.34<br>13300.24<br>7173200<br>3012.37<br>29.83<br>2968.9<br>2352272  | 34.73<br>13725.05<br>7173372<br>3066.65<br>29.68<br>3009.15<br>2352164  | 13180.4<br>34.58<br>13143.06<br>7173612<br>3020.83<br>30.45<br>2963.41<br>2350592   | 13012.35<br>34.42<br>12972.7<br>7173992<br>3038.51<br>30.78<br>2976.6<br>2352472<br>1794.69   |
| Row18_LCP Relation B 78.9% 7,005.44 Row18_SLCT 2,296.88 Row19_LCC  | Runtime<br>CPUsystem<br>CPUuser<br>Memory<br>Runtime<br>CPUsystem<br>CPUuser<br>Memory<br>Runtime   | 13,251.65<br>34.44<br>13,213.65<br>7,173,572.00<br>3,031.52<br>30.07<br>2,976.01<br>2,352,009.60<br>1,800.08   | 12965.72<br>34.15<br>12927.19<br>7173684<br>3019.22<br>29.6<br>2961.98<br>2352548<br>1791.96  | 13334.88<br>34.34<br>13300.24<br>7173200<br>3012.37<br>29.83<br>2968.9<br>2352272<br>1808.69   | 34.73<br>13725.05<br>7173372<br>3066.65<br>29.68<br>3009.15<br>2352164<br>1811.78   | 13180.4<br>34.58<br>13143.06<br>7173612<br>3020.83<br>30.45<br>2963.41<br>2350592<br>1793.3   | 13012.35<br>34.42<br>12972.7<br>7173992<br>3038.51<br>30.78<br>2976.6<br>2352472<br>1794.69   |
| Row18_LCP Relation B 78.9% 7,005.44 Row18_SLCT 2,296.88 Row19_LCC Relation A   | Runtime<br>CPUsystem<br>CPUuser<br>Memory<br>Runtime<br>CPUsystem<br>CPUuser<br>Memory<br>Runtime<br>CPUsystem  | 13,251.65<br>34.44<br>13,213.65<br>7,173,572.00<br>3,031.52<br>30.07<br>2,976.01<br>2,352,009.60<br>1,800.08<br>16.78  | 12965.72<br>34.15<br>12927.19<br>7173684<br>3019.22<br>29.6<br>2961.98<br>2352548<br>1791.96<br>16.1  | 13334.88<br>34.34<br>13300.24<br>7173200<br>3012.37<br>29.83<br>2968.9<br>2352272<br>1808.69<br>17.11  | 34.73<br>13725.05<br>7173372<br>3066.65<br>29.68<br>3009.15<br>2352164<br>1811.78<br>16.89  | 13180.4<br>34.58<br>13143.06<br>7173612<br>3020.83<br>30.45<br>2963.41<br>2350592<br>1793.3<br>16.92  | 13012.35<br>34.42<br>12972.7<br>7173992<br>3038.51<br>30.78<br>2976.6<br>2352472<br>1794.69<br>16.9   |
| Row18_LCP Relation B 78.9% 7,005.44 Row18_SLCT 2,296.88 Row19_LCC Relation A 5.17  | Runtime CPUsystem CPUuser Memory Runtime CPUsystem CPUuser Memory Runtime CPUsystem CPUsystem CPUsystem   | 13,251.65<br>34.44<br>13,213.65<br>7,173,572.00<br>3,031.52<br>30.07<br>2,976.01<br>2,352,009.60<br>1,800.08<br>16.78<br>1,782.77  | 12965.72<br>34.15<br>12927.19<br>7173684<br>3019.22<br>29.6<br>2961.98<br>2352548<br>1791.96<br>16.1<br>1775.61   | 13334.88<br>34.34<br>13300.24<br>7173200<br>3012.37<br>29.83<br>2968.9<br>2352272<br>1808.69<br>17.11<br>1791.24   | 34.73<br>13725.05<br>7173372<br>3066.65<br>29.68<br>3009.15<br>2352164<br>1811.78<br>16.89<br>1794.64   | 13180.4<br>34.58<br>13143.06<br>7173612<br>3020.83<br>30.45<br>2963.41<br>2350592<br>1793.3<br>16.92<br>1775.44   | 13012.35<br>34.42<br>12972.7<br>7173992<br>3038.51<br>30.78<br>2976.6<br>2352472<br>1794.69<br>16.9<br>1776.9   |
| Row18_LCP Relation B 78.9% 7,005.44 Row18_SLCT  2,296.88 Row19_LCC Relation A 5.17 1,020.01                                      | Runtime CPUsystem CPUuser Memory Runtime CPUsystem CPUuser Memory Runtime CPUsystem CPUsystem CPUsystem CPUsystem CPUsystem   | 13,251.65<br>34.44<br>13,213.65<br>7,173,572.00<br>3,031.52<br>30.07<br>2,976.01<br>2,352,009.60<br>1,800.08<br>16.78<br>1,782.77<br>1,044,490.40  | 12965.72<br>34.15<br>12927.19<br>7173684<br>3019.22<br>29.6<br>2961.98<br>2352548<br>1791.96<br>16.1<br>1775.61<br>1045224  | 13334.88<br>34.34<br>13300.24<br>7173200<br>3012.37<br>29.83<br>2968.9<br>2352272<br>1808.69<br>17.11<br>1791.24<br>1043424  | 34.73<br>13725.05<br>7173372<br>3066.65<br>29.68<br>3009.15<br>2352164<br>1811.78<br>16.89<br>1794.64<br>1045220  | 13180.4<br>34.58<br>13143.06<br>7173612<br>3020.83<br>30.45<br>2963.41<br>2350592<br>1793.3<br>16.92<br>1775.44<br>1045116  | 13012.35<br>34.42<br>12972.7<br>7173992<br>3038.51<br>30.78<br>2976.6<br>2352472<br>1794.69<br>16.9<br>1776.9<br>1043468<br>9202.74   |
| Row18_LCP Relation B 78.9% 7,005.44 Row18_SLCT  2,296.88 Row19_LCC Relation A 5.17 1,020.01 Row19_LCP                            | Runtime CPUsystem CPUuser Memory Runtime CPUsystem CPUuser Memory Runtime CPUsystem CPUsystem CPUsystem CPUsystem CPUsystem CPUsystem CPUsystem CPUuser Memory Runtime  | 13,251.65<br>34.44<br>13,213.65<br>7,173,572.00<br>3,031.52<br>30.07<br>2,976.01<br>2,352,009.60<br>1,800.08<br>16.78<br>1,782.77<br>1,044,490.40<br>9,298.23  | 12965.72<br>34.15<br>12927.19<br>7173684<br>3019.22<br>29.6<br>2961.98<br>2352548<br>1791.96<br>16.1<br>1775.61<br>1045224<br>9165.48   | 13334.88<br>34.34<br>13300.24<br>7173200<br>3012.37<br>29.83<br>2968.9<br>2352272<br>1808.69<br>17.11<br>1791.24<br>1043424<br>9192.63   | 34.73<br>13725.05<br>7173372<br>3066.65<br>29.68<br>3009.15<br>2352164<br>1811.78<br>16.89<br>1794.64<br>1045220<br>9613.74   | 13180.4<br>34.58<br>13143.06<br>7173612<br>3020.83<br>30.45<br>2963.41<br>2350592<br>1793.3<br>16.92<br>1775.44<br>1045116<br>9316.55   | 13012.35<br>34.42<br>12972.7<br>7173992<br>3038.51<br>30.78<br>2976.6<br>2352472<br>1794.69<br>16.9<br>1776.9<br>1043468<br>9202.74<br>20.49                                  |
| Row18_LCP Relation B 78.9% 7,005.44 Row18_SLCT  2,296.88 Row19_LCC Relation A 5.17 1,020.01 Row19_LCP Relation B                 | Runtime CPUsystem CPUuser Memory Runtime CPUsystem CPUuser Memory Runtime CPUsystem CPUsystem CPUsystem CPUsystem CPUsystem CPUsystem CPUsystem CPUsystem CPUsystem   | 13,251.65<br>34.44<br>13,213.65<br>7,173,572.00<br>3,031.52<br>30.07<br>2,976.01<br>2,352,009.60<br>1,800.08<br>16.78<br>1,782.77<br>1,044,490.40<br>9,298.23<br>20.26   | 12965.72<br>34.15<br>12927.19<br>7173684<br>3019.22<br>29.6<br>2961.98<br>2352548<br>1791.96<br>16.1<br>1775.61<br>1045224<br>9165.48<br>20.12                                  | 13334.88<br>34.34<br>13300.24<br>7173200<br>3012.37<br>29.83<br>2968.9<br>2352272<br>1808.69<br>17.11<br>1791.24<br>1043424<br>9192.63<br>20.11                                  | 34.73<br>13725.05<br>7173372<br>3066.65<br>29.68<br>3009.15<br>2352164<br>1811.78<br>16.89<br>1794.64<br>1045220<br>9613.74<br>20.74                                  | 13180.4<br>34.58<br>13143.06<br>7173612<br>3020.83<br>30.45<br>2963.41<br>2350592<br>1793.3<br>16.92<br>1775.44<br>1045116<br>9316.55<br>19.85                                  | 13012.35<br>34.42<br>12972.7<br>7173992<br>3038.51<br>30.78<br>2976.6<br>2352472<br>1794.69<br>16.9<br>1776.9<br>1043468<br>9202.74<br>20.49<br>9186.06                       |
| Row18_LCP Relation B 78.9% 7,005.44 Row18_SLCT  2,296.88 Row19_LCC Relation A 5.17 1,020.01 Row19_LCP Relation B 80.66%          | Runtime CPUsystem CPUuser Memory Runtime CPUsystem CPUuser Memory Runtime CPUsystem CPUsystem CPUsystem CPUser Memory Runtime CPUsystem CPUser Memory Runtime CPUsystem CPUsystem   | 13,251.65<br>34.44<br>13,213.65<br>7,173,572.00<br>3,031.52<br>30.07<br>2,976.01<br>2,352,009.60<br>1,800.08<br>16.78<br>1,782.77<br>1,044,490.40<br>9,298.23<br>20.26<br>9,282.24                             | 12965.72<br>34.15<br>12927.19<br>7173684<br>3019.22<br>29.6<br>2961.98<br>2352548<br>1791.96<br>16.1<br>1775.61<br>1045224<br>9165.48<br>20.12<br>9149.27                       | 13334.88<br>34.34<br>13300.24<br>7173200<br>3012.37<br>29.83<br>2968.9<br>2352272<br>1808.69<br>17.11<br>1791.24<br>1043424<br>9192.63<br>20.11<br>9177.28                       | 34.73<br>13725.05<br>7173372<br>3066.65<br>29.68<br>3009.15<br>2352164<br>1811.78<br>16.89<br>1794.64<br>1045220<br>9613.74<br>20.74<br>9597.62                       | 13180.4<br>34.58<br>13143.06<br>7173612<br>3020.83<br>30.45<br>2963.41<br>2350592<br>1793.3<br>16.92<br>1775.44<br>1045116<br>9316.55<br>19.85<br>9300.99                       | 13012.35<br>34.42<br>12972.7<br>7173992<br>3038.51<br>30.78<br>2976.6<br>2352472<br>1794.69<br>16.9<br>1776.9<br>1043468<br>9202.74<br>20.49<br>9186.06<br>2536308            |
| Row18_LCP Relation B 78.9% 7,005.44 Row18_SLCT  2,296.88 Row19_LCC Relation A 5.17 1,020.01 Row19_LCP Relation B 80.66% 2,476.78 | Runtime CPUsystem CPUuser Memory Runtime CPUsystem CPUuser Memory Runtime CPUsystem CPUsystem CPUsystem CPUser Memory Runtime CPUsystem CPUser Memory Runtime CPUsystem CPUsystem   | 13,251.65<br>34.44<br>13,213.65<br>7,173,572.00<br>3,031.52<br>30.07<br>2,976.01<br>2,352,009.60<br>1,800.08<br>16.78<br>1,782.77<br>1,044,490.40<br>9,298.23<br>20.26<br>9,282.24<br>2,536,220.80             | 12965.72<br>34.15<br>12927.19<br>7173684<br>3019.22<br>29.6<br>2961.98<br>2352548<br>1791.96<br>16.1<br>1775.61<br>1045224<br>9165.48<br>20.12<br>9149.27<br>2536184            | 13334.88<br>34.34<br>13300.24<br>7173200<br>3012.37<br>29.83<br>2968.9<br>2352272<br>1808.69<br>17.11<br>1791.24<br>1043424<br>9192.63<br>20.11<br>9177.28<br>2536148            | 34.73<br>13725.05<br>7173372<br>3066.65<br>29.68<br>3009.15<br>2352164<br>1811.78<br>16.89<br>1794.64<br>1045220<br>9613.74<br>20.74<br>9597.62<br>2536276            | 13180.4<br>34.58<br>13143.06<br>7173612<br>3020.83<br>30.45<br>2963.41<br>2350592<br>1793.3<br>16.92<br>1775.44<br>1045116<br>9316.55<br>19.85<br>9300.99<br>2536188            | 13012.35<br>34.42<br>12972.7<br>7173992<br>3038.51<br>30.78<br>2976.6<br>2352472<br>1794.69<br>16.9<br>1776.9<br>1043468<br>9202.74<br>20.49<br>9186.06<br>2536308<br>1875.33 |
| Row18_LCP Relation B 78.9% 7,005.44 Row18_SLCT  2,296.88 Row19_LCC Relation A 5.17 1,020.01 Row19_LCP Relation B 80.66% 2,476.78 | Runtime CPUsystem CPUuser Memory Runtime CPUsystem CPUuser Memory Runtime CPUsystem | 13,251.65<br>34.44<br>13,213.65<br>7,173,572.00<br>3,031.52<br>30.07<br>2,976.01<br>2,352,009.60<br>1,800.08<br>16.78<br>1,782.77<br>1,044,490.40<br>9,298.23<br>20.26<br>9,282.24<br>2,536,220.80<br>1,885.33 | 12965.72<br>34.15<br>12927.19<br>7173684<br>3019.22<br>29.6<br>2961.98<br>2352548<br>1791.96<br>16.1<br>1775.61<br>1045224<br>9165.48<br>20.12<br>9149.27<br>2536184<br>1875.62 | 13334.88<br>34.34<br>13300.24<br>7173200<br>3012.37<br>29.83<br>2968.9<br>2352272<br>1808.69<br>17.11<br>1791.24<br>1043424<br>9192.63<br>20.11<br>9177.28<br>2536148<br>1888.96 | 34.73<br>13725.05<br>7173372<br>3066.65<br>29.68<br>3009.15<br>2352164<br>1811.78<br>16.89<br>1794.64<br>1045220<br>9613.74<br>20.74<br>9597.62<br>2536276<br>1911.72 | 13180.4<br>34.58<br>13143.06<br>7173612<br>3020.83<br>30.45<br>2963.41<br>2350592<br>1793.3<br>16.92<br>1775.44<br>1045116<br>9316.55<br>19.85<br>9300.99<br>2536188<br>1875.03 | 13012.35<br>34.42<br>12972.7<br>7173992   |

| Row20 LCC  | Runtime   | 1,832.82     | 1806.91  | 1806.95  | 1931.2   | 1810.34  | 1808.71  |
|------------|-----------|--------------|----------|----------|----------|----------|----------|
| Relation A | CPUsystem | 17.39        | 17.33    | 17.57    | 17.8     | 17.1     | 17.13    |
| 5.24       | CPUuser   | 1,811.80     | 1783.2   | 1786.78  | 1910.51  | 1789.68  | 1788.84  |
| 1,721.32   | Memory    | 1,762,628.80 | 1763164  | 1761148  | 1762900  | 1762976  | 1762956  |
| Row20 LCP  | Runtime   | 9,605.73     | 9506.46  | 9567.39  | 10080.51 | 9434.13  | 9440.17  |
| Relation B | CPUsystem | 20.86        | 21.05    | 20.8     | 21       | 20.57    | 20.86    |
| 80.92%     | CPUuser   | 9,588.40     | 9488.65  | 9550.36  | 10062.65 | 9417.18  | 9423.16  |
| 2,479.82   | Memory    | 2,539,336.00 | 2539340  | 2539292  | 2539352  | 2539304  | 2539392  |
| Row20 SLCT | •         | 1,919.34     | 1897.64  | 1915.02  | 1992.16  | 1902.94  | 1888.92  |
|            | CPUsystem | 17.08        | 17.34    | 17.04    | 17.38    | 16.84    | 16.8     |
|            | CPUuser   | 1,898.01     | 1873.18  | 1895.05  | 1970.35  | 1882.23  | 1869.23  |
| 1,031.41   | Memory    | 1,056,165.60 | 1055112  | 1055020  | 1057036  | 1056988  | 1056672  |
| Row21_LCC  | Runtime   | 4,178.85     | 4166.37  | 4159.81  | 4284.67  | 4156.88  | 4126.53  |
| Relation A | CPUsystem | 35.10        | 35.61    | 35       | 35.57    | 34.84    | 34.49    |
| 5.01       | CPUuser   | 3,669.47     | 3651.73  | 3652.54  | 3772.52  | 3649.33  | 3621.22  |
| 2,890.17   | Memory    | 2,959,530.40 | 2959084  | 2959124  | 2959164  | 2961160  | 2959120  |
| Row21_LCP  | Runtime   | 20,927.79    | 21584.81 | 20576.08 | 21123.24 | 20333.28 | 21021.55 |
| Relation B | CPUsystem | 41.35        | 42.48    | 41.43    | 41.9     | 40.06    | 40.86    |
| 80.04%     | CPUuser   | 20,431.56    | 21089.32 | 20077.62 | 20623.92 | 19839.57 | 20527.36 |
| 7,818.73   | Memory    | 8,006,379.20 | 8006336  | 8006308  | 8006592  | 8006328  | 8006332  |
| Row21_SLCT | Runtime   | 4,400.34     | 4380.07  | 4406.14  | 4472.88  | 4376.02  | 4366.59  |
|            | CPUsystem | 35.17        | 35.05    | 35.66    | 35.11    | 35.31    | 34.73    |
|            | CPUuser   | 3,889.86     | 3862.04  | 3900.43  | 3956.81  | 3867.41  | 3862.61  |
| 2,028.95   | Memory    | 2,077,647.20 | 2077968  | 2078064  | 2076128  | 2078188  | 2077888  |
| Table6     |           |              |          |          |          |          |          |
| Row2 LCC   | Runtime   | 1.41         | 1.39     | 1.39     | 1.44     | 1.4      | 1.41     |
| Relation A | CPUsystem | 0.05         | 0.04     | 0.06     | 0.05     | 0.04     | 0.05     |
| 21.50      | CPUuser   | 1.35         | 1.34     | 1.33     | 1.39     | 1.35     | 1.36     |
| 278.75     | Memory    | 285,435.20   | 286960   | 285100   | 285056   | 285008   | 285052   |
| Row2 LCP   | Runtime   | 30.31        | 29.79    | 30.59    | 30.52    | 30.16    | 30.49    |
| Relation B | CPUsystem | 0.09         | 0.1      | 0.08     | 0.05     | 0.11     | 0.12     |
| 95.35%     | CPUuser   | 30.23        | 29.71    | 30.52    | 30.48    | 30.06    | 30.38    |
| 433.19     | Memory    | 443,583.20   | 443588   | 443572   | 443568   | 443628   | 443560   |
| Row3 LCC   | Runtime   | 1.34         | 1.34     | 1.34     | 1.34     | 1.34     | 1.34     |
| Relation A | CPUsystem | 0.06         | 0.07     | 0.08     | 0.04     | 0.05     | 0.04     |
| 9.03       | CPUuser   | 1.28         | 1.26     | 1.26     | 1.29     | 1.29     | 1.29     |
| 270.96     | Memory    | 277,461.60   | 278648   | 278584   | 276712   | 276680   | 276684   |
| Row3_LCP   | Runtime   | 12.10        | 12.11    | 12.09    | 12.09    | 12.12    | 12.11    |
| Relation B | CPUsystem | 0.05         | 0.05     | 0.06     | 0.05     | 0.05     | 0.06     |
| 88.93%     | CPUuser   | 12.05        | 12.06    | 12.04    | 12.04    | 12.07    | 12.05    |
| 219.24     | Memory    | 224,503.20   | 224484   | 224660   | 224456   | 224436   | 224480   |
| Row4_LCC   | Runtime   | 1.50         | 1.5      | 1.5      | 1.5      | 1.51     | 1.51     |
| Relation A | CPUsystem | 0.05         | 0.06     | 0.03     | 0.06     | 0.06     | 0.04     |
| 23.93      | CPUuser   | 1.45         | 1.44     | 1.46     | 1.44     | 1.45     | 1.46     |
| 278.85     | Memory    | 285,537.60   | 285140   | 285180   | 285172   | 285108   | 287088   |
|            |           |              |          |          |          |          |          |

| Row4 LCP   | Runtime   | 35.89      | 35.33  | 35.43  | 37.12  | 35.77  | 35.78  |
|------------|-----------|------------|--------|--------|--------|--------|--------|
| Relation B | CPUsystem | 0.08       | 0.05   | 0.08   | 0.12   | 0.07   | 0.08   |
| 95.82%     | CPUuser   | 35.82      | 35.29  | 35.37  | 37.02  | 35.71  | 35.72  |
| 433.99     | Memory    | 444,404.00 | 444444 | 444404 | 444396 | 444400 | 444376 |
| Row6 LCC   | Runtime   | 2.73       | 2.7    | 2.78   | 2.73   | 2.71   | 2.72   |
| Relation A | CPUsystem | 0.01       | 0.02   | 0.02   | 0.01   | 0.01   | 0      |
| 6.55       | CPUuser   | 2.71       | 2.68   | 2.76   | 2.72   | 2.69   | 2.72   |
| 30.70      | Memory    | 31,440.80  | 31924  | 32288  | 30380  | 32172  | 30440  |
| Row6_LCP   | Runtime   | 17.87      | 17.81  | 17.81  | 17.88  | 17.88  | 17.96  |
| Relation B | CPUsystem | 0.02       | 0.05   | 0.03   | 0.02   | 0.01   | 0.01   |
| 84.73%     | CPUuser   | 17.85      | 17.76  | 17.79  | 17.86  | 17.88  | 17.96  |
| 46.56      | Memory    | 47,679.20  | 47592  | 47800  | 47672  | 47688  | 47644  |
| Row7_LCC   | Runtime   | 3.02       | 2.98   | 2.99   | 3.19   | 2.98   | 2.97   |
| Relation A | CPUsystem | 0.02       | 0.02   | 0.02   | 0.01   | 0.03   | 0.01   |
| 10.26      | CPUuser   | 3.00       | 2.96   | 2.97   | 3.18   | 2.95   | 2.96   |
| 30.60      | Memory    | 31,336.00  | 31224  | 31396  | 31480  | 31460  | 31120  |
| Row7_LCP   | Runtime   | 30.98      | 31.02  | 30.81  | 30.78  | 31.37  | 30.9   |
| Relation B | CPUsystem | 0.02       | 0.02   | 0.01   | 0.02   | 0.03   | 0.04   |
| 90.25%     | CPUuser   | 30.96      | 31.02  | 30.81  | 30.78  | 31.35  | 30.86  |
| 27.09      | Memory    | 27,744.00  | 27784  | 27692  | 27700  | 27760  | 27784  |
| Row8_LCC   | Runtime   | 3.00       | 3      | 2.99   | 3      | 2.99   | 3.01   |
| Relation A | CPUsystem | 0.01       | 0.02   | 0      | 0.01   | 0.02   | 0.02   |
| 10.81      | CPUuser   | 2.98       | 2.98   | 2.98   | 2.99   | 2.96   | 2.99   |
| 30.48      | Memory    | 31,214.40  | 30760  | 30624  | 31964  | 30456  | 32268  |
| Row8_LCP   | Runtime   | 32.43      | 32.18  | 32.62  | 32.39  | 32.73  | 32.21  |
| Relation B | CPUsystem | 0.02       | 0.02   | 0.02   | 0.02   | 0.02   | 0.02   |
| 90.75%     | CPUuser   | 32.42      | 32.17  | 32.61  | 32.38  | 32.72  | 32.2   |
| 46.89      | Memory    | 48,017.60  | 47960  | 48184  | 47916  | 48004  | 48024  |
| Row10_LCC  | Runtime   | 9.05       | 9.05   | 8.94   | 9.39   | 8.95   | 8.93   |
| Relation A | CPUsystem | 0.04       | 0.02   | 0.04   | 0.06   | 0.04   | 0.04   |
| 6.30       | CPUuser   | 9.01       | 9.02   | 8.9    | 9.34   | 8.9    | 8.89   |
| 42.63      | Memory    | 43,655.20  | 44924  | 43348  | 43320  | 43344  | 43340  |
| Row10_LCP  | Runtime   | 57.00      | 56.76  | 57.76  | 57     | 56.74  | 56.73  |
| Relation B | CPUsystem | 0.05       | 0.06   | 0.04   | 0.04   | 0.08   | 0.05   |
| 84.13%     | CPUuser   | 56.97      | 56.72  | 57.74  | 56.98  | 56.7   | 56.71  |
| 66.02      | Memory    | 67,601.60  | 67616  | 67624  | 67544  | 67608  | 67616  |
| Row11_LCC  | Runtime   | 9.86       | 9.81   | 9.84   | 10     | 9.85   | 9.82   |
| Relation A | CPUsystem | 0.05       | 0.05   | 0.04   | 0.04   | 0.04   | 0.06   |
| 10.32      | CPUuser   | 9.82       | 9.76   | 9.8    | 9.97   | 9.81   | 9.76   |
| 41.93      | Memory    | 42,934.40  | 42360  | 43928  | 42244  | 42220  | 43920  |
| Row11_LCP  | Runtime   | 101.78     | 104.42 | 100.99 | 101.35 | 100.72 | 101.41 |
| Relation B | CPUsystem | 0.08       | 0.08   | 0.07   | 0.09   | 0.1    | 0.04   |
| 90.31%     | CPUuser   | 101.76     | 104.4  | 100.98 | 101.32 | 100.68 | 101.42 |
| 36.79      | Memory    | 37,675.20  | 37720  | 37636  | 37728  | 37652  | 37640  |
| Row12_LCC  | Runtime   | 9.89       | 9.87   | 9.82   | 10.06  | 9.83   | 9.85   |
| Relation A | CPUsystem | 0.04       | 0.02   | 0.03   | 0.03   | 0.05   | 0.05   |

| 10.50      | CPUuser   | 9.85         | 9.84     | 9.79     | 10.03    | 9.78     | 9.8      |
|------------|-----------|--------------|----------|----------|----------|----------|----------|
| 42.90      | Memory    | 43,926.40    | 43284    | 44880    | 44796    | 43356    | 43316    |
| Row12_LCP  | Runtime   | 103.82       | 103.45   | 103.43   | 103.8    | 104.82   | 103.59   |
| Relation B | CPUsystem | 0.08         | 0.09     | 0.09     | 0.09     | 0.07     | 0.08     |
| 90.48%     | CPUuser   | 103.79       | 103.42   | 103.4    | 103.76   | 104.8    | 103.57   |
| 66.41      | Memory    | 68,008.80    | 68040    | 68040    | 68016    | 67956    | 67992    |
| Row14_LCC  | Runtime   | 44.05        | 43.71    | 43.43    | 43.66    | 43.37    | 46.09    |
| Relation A | CPUsystem | 0.35         | 0.31     | 0.35     | 0.36     | 0.36     | 0.37     |
| 3.00       | CPUuser   | 43.71        | 43.41    | 43.09    | 43.31    | 43.02    | 45.74    |
| 506.80     | Memory    | 518,962.40   | 519392   | 519456   | 517488   | 519272   | 519204   |
| Row14_LCP  | Runtime   | 132.14       | 133.81   | 131.9    | 131.34   | 131.05   | 132.59   |
| Relation B | CPUsystem | 0.46         | 0.41     | 0.46     | 0.42     | 0.46     | 0.53     |
| 66.67%     | CPUuser   | 131.74       | 133.46   | 131.49   | 130.97   | 130.65   | 132.12   |
| 1,125.21   | Memory    | 1,152,216.00 | 1152124  | 1152216  | 1152216  | 1152284  | 1152240  |
| Row15_LCC  | Runtime   | 46.57        | 45.51    | 47.63    | 45.96    | 45.9     | 47.85    |
| Relation A | CPUsystem | 0.31         | 0.28     | 0.35     | 0.32     | 0.31     | 0.31     |
| 4.99       | CPUuser   | 46.27        | 45.24    | 47.3     | 45.65    | 45.6     | 47.56    |
| 505.76     | Memory    | 517,903.20   | 517568   | 517520   | 517512   | 519348   | 517568   |
| Row15_LCP  | Runtime   | 232.49       | 235.99   | 227.75   | 236.66   | 228.9    | 233.15   |
| Relation B | CPUsystem | 0.62         | 0.53     | 0.55     | 0.63     | 0.63     | 0.74     |
| 79.96%     | CPUuser   | 231.98       | 235.57   | 227.31   | 236.14   | 228.37   | 232.52   |
| 1,125.21   | Memory    | 1,152,216.00 | 1152104  | 1152364  | 1152232  | 1152180  | 1152200  |
| Row16_LCC  | Runtime   | 46.60        | 48.33    | 45.46    | 45.86    | 45.62    | 47.71    |
| Relation A | CPUsystem | 0.34         | 0.38     | 0.3      | 0.3      | 0.33     | 0.39     |
| 5.15       | CPUuser   | 46.27        | 47.96    | 45.18    | 45.57    | 45.3     | 47.34    |
| 506.10     | Memory    | 518,251.20   | 517584   | 517504   | 517520   | 519236   | 519412   |
| Row16_LCP  | Runtime   | 240.03       | 239.86   | 250.79   | 237.96   | 235.88   | 235.67   |
| Relation B | CPUsystem | 0.59         | 0.63     | 0.55     | 0.58     | 0.7      | 0.5      |
| 80.58%     | CPUuser   | 239.55       | 239.33   | 250.36   | 237.49   | 235.3    | 235.28   |
| 1,125.22   | Memory    | 1,152,224.80 | 1152216  |          | 1152248  | 1152192  | 1152204  |
| Row18_LCC  | Runtime   | 1,470.76     | 1464.14  | 1486.63  | 1466.25  | 1466.17  | 1470.59  |
| Relation A | CPUsystem | 13.21        | 13.25    | 13.4     | 13.16    | 13.21    | 13.04    |
| 5.23       | CPUuser   | 1,454.73     | 1450.03  | 1468.01  | 1451.13  | 1449.95  | 1454.55  |
| 1,149.64   | Memory    | 1,177,232.80 | 1176460  | 1176536  | 1178372  | 1178272  | 1176524  |
| Row18_LCP  | Runtime   | 7,697.95     | 7632.57  | 7705.7   | 7876.76  | 7637.6   | 7637.12  |
| Relation B | CPUsystem | 15.29        | 15.11    | 15.52    | 15.62    | 15.32    | 14.86    |
| 80.88%     | CPUuser   | 7,685.22     | 7619.6   | 7692.36  | 7864.14  | 7624.96  | 7625.06  |
| 2,738.11   | Memory    | 2,803,821.60 | 2803772  | 2803996  | 2803784  | 2803792  | 2803764  |
| Row19_LCC  | Runtime   | 1,678.72     | 1638.95  | 1654.64  | 1793.36  | 1650.12  | 1656.51  |
| Relation A | CPUsystem | 13.50        | 13.24    | 13.06    | 14.08    | 13.43    | 13.69    |
| 8.81       | CPUuser   | 1,658.45     | 1621.12  | 1632.23  | 1770.3   | 1632.06  | 1636.56  |
| 1,149.26   | Memory    | 1,176,842.40 | 1178340  | 1176412  | 1176548  | 1176476  | 1176436  |
| Row19_LCP  | Runtime   | 14,783.74    | 14771.15 | 14875.68 | 14807.28 | 14720.96 | 14743.63 |
| Relation B | CPUsystem | 22.78        | 23.42    | 22.94    | 23.23    | 22.38    | 21.95    |
| 88.65%     | CPUuser   | 14,766.25    | 14754.05 | 14856.56 | 14789.26 | 14704.37 | 14727.01 |
| 2,737.12   | Memory    | 2,802,812.00 | 2802772  | 2802816  | 2802828  | 2802816  | 2802828  |

| Row20_LCC     | Runtime   | 1,667.04     | 1658.01  | 1662.66  | 1663.51  | 1675.05  | 1675.98  |
|---------------|-----------|--------------|----------|----------|----------|----------|----------|
| Relation A    | CPUsystem | 13.76        | 13.8     | 13.62    | 13.9     | 13.58    | 13.9     |
| 9.13          | CPUuser   | 1,639.30     | 1636.07  | 1634.67  | 1635.46  | 1651.9   | 1638.39  |
| 1,149.28      | Memory    | 1,176,864.80 | 1176448  | 1176484  | 1176548  | 1176436  | 1178408  |
| Row20_LCP     | Runtime   | 15,219.14    | 15257.72 | 15060.03 | 15394.9  | 15183.98 | 15199.08 |
| Relation B    | CPUsystem | 23.15        | 22.91    | 23.43    | 22.96    | 22.97    | 23.46    |
| 89.05%        | CPUuser   | 15,200.64    | 15241.17 | 15040.51 | 15376.53 | 15165.01 | 15179.98 |
| 2,737.92      | Memory    | 2,803,632.80 | 2803736  | 2803620  | 2803692  | 2803504  | 2803612  |
| Row22_LCC     | Runtime   | 1,590.04     | 1573.63  | 1582.45  | 1667.17  | 1545.44  | 1581.49  |
| Relation A    | CPUsystem | 15.54        | 15.58    | 15.78    | 15.96    | 15.31    | 15.07    |
| 4.56          | CPUuser   | 1,570.57     | 1554.24  | 1564.28  | 1646.5   | 1526.2   | 1561.62  |
| 1,882.34      | Memory    | 1,927,511.20 | 1926408  | 1928416  | 1928040  | 1926320  | 1928372  |
| Row22_LCP     | Runtime   | 7,250.00     | 7104.93  | 7496.64  | 7525.45  | 7044.31  | 7078.65  |
| Relation B    | CPUsystem | 21.12        | 20.72    | 21.33    | 21.58    | 21.09    | 20.88    |
| <b>78.07%</b> | CPUuser   | 7,231.51     | 7086.74  | 7478.3   | 7506.82  | 7025.5   | 7060.18  |
| 4,476.14      | Memory    | 4,583,571.20 | 4583540  | 4583576  | 4583604  | 4583548  | 4583588  |
| Row23_LCC     | Runtime   | 1,708.17     | 1701.44  | 1720.76  | 1767.51  | 1666.68  | 1684.44  |
| Relation A    | CPUsystem | 15.78        | 15.98    | 15.72    | 16.21    | 15.36    | 15.64    |
| 6.92          | CPUuser   | 1,687.22     | 1680.06  | 1703.03  | 1745.48  | 1646.42  | 1661.12  |
| 1,881.83      | Memory    | 1,926,989.60 | 1926368  | 1928048  | 1927920  | 1926296  | 1926316  |
| Row23_LCP     | Runtime   | 11,824.16    | 11675.87 | 11866.76 | 12334    | 11618.51 | 11625.67 |
| Relation B    | CPUsystem | 30.09        | 30.31    | 30.17    | 29.95    | 30.42    | 29.59    |
| 85.55%        | CPUuser   | 11,797.52    | 11646.52 | 11841.74 | 12307.98 | 11592.12 | 11599.25 |
| 4,474.63      | Memory    | 4,582,016.00 | 4581976  | 4582036  | 4582016  | 4582064  | 4581988  |
| Row24_LCC     | Runtime   | 1,722.30     | 1718.35  | 1722.77  | 1780.21  | 1677.78  | 1712.39  |
| Relation A    | CPUsystem | 15.92        | 15.86    | 15.95    | 16.34    | 15.55    | 15.92    |
| 7.51          | CPUuser   | 1,699.70     | 1695.77  | 1704.36  | 1757.13  | 1654.4   | 1686.82  |
| 1,882.35      | Memory    | 1,927,531.20 | 1926292  | 1928356  | 1928304  | 1926372  | 1928332  |
| Row24_LCP     | Runtime   | 12,933.70    | 12696.21 | 13098.66 | 13576.41 | 12600.44 | 12696.79 |
| Relation B    | CPUsystem | 30.30        | 30.21    | 30.57    | 31.4     | 29.75    | 29.59    |
| 86.68%        | CPUuser   | 12,907.62    | 12670.14 | 13073.5  | 13549.79 | 12574.36 | 12670.3  |
| 4,476.11      | Memory    | 4,583,535.20 | 4583540  | 4583568  | 4583436  | 4583584  | 4583548  |
| Row26_LCC     | Runtime   | 1,804.09     | 1803.42  | 1815.74  | 1804.08  | 1792.91  | 1804.3   |
| Relation A    | CPUsystem | 16.92        | 16.81    | 17.21    | 16.95    | 16.78    | 16.84    |
| 5.42          | CPUuser   | 1,784.93     | 1782.72  | 1796.61  | 1785.26  | 1774.11  | 1785.93  |
| 1,020.04      | Memory    | 1,044,524.00 | 1043380  | 1045196  | 1043472  | 1045280  | 1045292  |
| Row26_LCP     | Runtime   | 9,786.45     | 9593.39  | 9755.96  | 9977.31  | 10004.36 | 9601.25  |
| Relation B    | CPUsystem | 20.66        | 20.22    | 21.09    | 21.39    | 20.42    | 20.18    |
| 81.55%        | CPUuser   | 9,769.46     | 9576.97  | 9737.68  | 9960.15  | 9987.82  | 9584.66  |
| 2,477.72      | Memory    | 2,537,185.60 | 2537184  | 2537156  | 2537228  | 2537180  | 2537180  |
| Row27_LCC     | Runtime   | 2,072.61     | 2060.37  | 2078.04  | 2093.83  | 2065.51  | 2065.29  |
| Relation A    | CPUsystem | 17.11        | 16.78    | 17.16    | 17.3     | 17.2     | 17.12    |
| 9.48          | CPUuser   | 2,052.99     | 2038.72  | 2059.6   | 2075.02  | 2045.14  | 2046.49  |
| 1,019.68      | Memory    | 1,044,148.80 | 1043388  | 1045128  | 1043420  | 1045416  | 1043392  |
| Row27_LCP     | Runtime   | 19,646.80    | 19500.08 | 19888.95 | 19855.36 | 19463.49 | 19526.14 |
| Relation B    | CPUsystem | 30.26        | 30.34    | 30.54    | 30.65    | 30.1     | 29.68    |
|               |           |              |          |          |          |          |          |

| 89.45%     | CPUuser   | 19,625.60    | 19477.69 | 19868.51 | 19834.06 | 19442.48 | 19505.26 |
|------------|-----------|--------------|----------|----------|----------|----------|----------|
| 2,476.84   | Memory    | 2,536,281.60 | 2536308  | 2536264  | 2536284  | 2536280  | 2536272  |
| Row28_LCC  | Runtime   | 2,107.45     | 2080.05  | 2101.04  | 2198.12  | 2081.23  | 2076.8   |
| Relation A | CPUsystem | 17.40        | 17.35    | 17.54    | 18.04    | 17.36    | 16.7     |
| 9.69       | CPUuser   | 2,087.34     | 2056.9   | 2082.07  | 2178.42  | 2060.99  | 2058.34  |
| 1,018.93   | Memory    | 1,043,387.20 | 1043364  | 1043400  | 1043356  | 1043420  | 1043396  |
| Row28_LCP  | Runtime   | 20,422.95    | 20182.72 | 20476.04 | 21335.86 | 19759.08 | 20361.07 |
| Relation B | CPUsystem | 30.35        | 30.53    | 30.61    | 30.13    | 30.24    | 30.26    |
| 89.68%     | CPUuser   | 20,401.99    | 20161.62 | 20455.86 | 21316.01 | 19737.5  | 20338.98 |
| 2,477.69   | Memory    | 2,537,151.20 | 2537200  | 2537296  | 2537000  | 2537112  | 2537148  |
|            |           |              |          |          |          |          |          |