IE 582 HW 4

Haizhou Wang

Q1.

a.

Total number of transactions : 10

Supports:

b.

Confidence:

c.

Total number of transactions : 5

|  |  |
| --- | --- |
| Customer ID | Items |
| 1 | a,b,c,d,e |
| 2 | a,b,c,d,e |
| 3 | b,c,d,e |
| 4 | a,b,c,d |
| 5 | a,b,d,e |

d.

e.

After changing the basket to per customer, the number of each item increased. Therefore, the support increased, making confidence increased as well.

Q2.

a.

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b.

Code:

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Results:

United Kingdom:

StockCode TotalPrice

DOT 206248.77

23843 168469.60

22423 142273.29

85123A 98723.75

47566 93658.53

France:

StockCode TotalPrice

POST 15454.00

M 9492.37

23084 7277.20

22423 2816.85

21731 2169.75

Australia:

StockCode TotalPrice

23084 3375.84

22722 2082.00

21731 1987.20

22720 1983.20

22423 1978.20

Netherlands:

StockCode TotalPrice

23084 9568.48

22326 7991.40

22629 7485.60

22630 6828.60

22328 4039.20

Germany:

StockCode TotalPrice

POST 21001.00

22423 9061.95

22326 3598.95

M 2296.25

22328 1982.40

Norway:

StockCode TotalPrice

POST 2870.5

M 840.3

22693 538.8

22635 527.4

22634 487.6

EIRE:

StockCode TotalPrice

22423 7844.25

M 7049.66

C2 5240.00

22838 4265.55

22960 3097.50

Switzerland:

StockCode TotalPrice

POST 4002.00

22326 1300.80

22554 977.55

22423 924.15

22551 733.80

Spain:

StockCode TotalPrice

POST 5852.00

84997D 3957.75

84997C 3671.15

22423 2049.00

84997B 1044.76

Poland:

StockCode TotalPrice

POST 360.00

21232 196.32

37448 191.52

22722 177.60

22666 167.40

Portugal:

StockCode TotalPrice

M 4223.94

POST 2508.00

22139 463.35

22411 387.40

20725 354.75

Italy:

StockCode TotalPrice

POST 1663.00

22720 252.45

22847 247.20

22139 222.75

22960 217.50

Belgium:

StockCode TotalPrice

POST 4269.00

22326 1181.40

22630 643.80

22629 643.80

22423 599.25

Lithuania:

StockCode TotalPrice

20967 135.0

22271 122.4

22750 120.0

22751 105.0

22569 90.0

Japan:

StockCode TotalPrice

23084 6100.32

22328 3812.10

21218 858.00

20750 762.00

21217 751.80

Iceland:

StockCode TotalPrice

84558A 371.70

23076 249.60

22423 191.25

23084 153.84

22727 135.00

Channel Islands:

StockCode TotalPrice

22423 517.8

85099B 460.7

22720 408.0

85099C 399.6

23199 399.6

Denmark:

StockCode TotalPrice

POST 744.00

22625 734.40

22624 696.15

22467 575.10

22179 428.40

Cyprus:

StockCode TotalPrice

22827 580.00

15056N 392.70

85123A 386.40

22423 382.50

M 320.69

Sweden:

StockCode TotalPrice

22492 1895.40

22720 1767.15

POST 1509.00

23297 1240.80

85232B 1188.00

Finland:

StockCode TotalPrice

POST 3650.00

84997D 2063.28

84997C 1367.40

84997A 919.60

M 551.20

Austria:

StockCode TotalPrice

POST 1456.0

22584 302.4

22582 302.4

20679 214.2

15056N 214.2

Bahrain:

StockCode TotalPrice

72802B 231.24

23076 120.00

23077 75.00

22890 59.70

22649 39.60

Israel:

StockCode TotalPrice

22423 551.10

23240 254.70

22326 244.80

22192 183.60

23236 159.98

Greece:

StockCode TotalPrice

POST 335.00

22423 175.20

72760B 135.84

22692 135.00

48129 135.00

Hong Kong:

StockCode TotalPrice

M 5563.81

84997D 488.40

84997B 455.20

22326 384.90

22452 318.60

Singapore:

StockCode TotalPrice

M 12158.9

48138 340.8

22655 250.0

22197 216.0

20685 205.8

Lebanon:

StockCode TotalPrice

22423 153.0

85066 102.0

22606 102.0

21906 81.0

22842 71.4

United Arab Emirates:

StockCode TotalPrice

22423 153.0

23007 89.7

23008 89.7

23009 89.7

47590B 65.4

Saudi Arabia:

StockCode TotalPrice

22553 19.8

22555 19.8

22556 19.8

22361 17.7

22362 17.7

Czech Republic:

StockCode TotalPrice

22326 70.8

84347 61.2

22231 52.2

21428 51.0

47594B 46.8

Canada:

StockCode TotalPrice

POST 550.94

37370 534.24

20727 82.50

84077 60.48

22383 49.50

Unspecified:

StockCode TotalPrice

22960 70.50

23236 69.36

23234 69.36

23076 60.00

22138 54.45

Brazil:

StockCode TotalPrice

22423 175.20

22722 82.80

21430 81.36

22366 67.50

22699 61.20

USA:

StockCode TotalPrice

23328 162.72

22423 114.75

21121 90.00

21122 90.00

21123 90.00

European Community:

StockCode TotalPrice

POST 141.0

22843 54.0

22842 54.0

22314 53.1

85036B 51.0

Malta:

StockCode TotalPrice

POST 655.00

72741 117.45

22423 89.25

23173 79.60

22796 59.70

RSA:

StockCode TotalPrice

21340 38.25

22605 29.90

23298 29.70

22526 25.50

85066 25.50

c.

Results:

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We only find two rules. The result implies that no matter what customer buys, we should always recommend item 85099B and 85123A.

Code:

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