**python lab1.py 1000/1000-out1.csv .03 .9**

Frequent Item Sets: 33

Chocolate Eclair[sup=0.034]

Vanilla Eclair[sup=0.037]

Almond Tart[sup=0.041]

Apricot Tart[sup=0.056]

Chocolate Tart[sup=0.051]

Pecan Tart[sup=0.04]

Ganache Cookie[sup=0.044]

Chocolate Meringue[sup=0.038]

Vanilla Meringue[sup=0.047]

Walnut Cookie[sup=0.061]

Almond Croissant[sup=0.049]

Chocolate Croissant[sup=0.042]

Blueberry Danish[sup=0.055]

Green Tea[sup=0.062]

Vanilla Frappuccino[sup=0.074]

Single Espresso[sup=0.059]

Lemon Cake, Lemon Tart[sup=0.04]

Napoleon Cake, Strawberry Cake[sup=0.049]

Truffle Cake, Gongolais Cookie[sup=0.058]

Apple Pie, Coffee Eclair[sup=0.033]

Blackberry Tart, Coffee Eclair[sup=0.031]

Almond Twist, Coffee Eclair[sup=0.03]

Bottled Water, Berry Tart[sup=0.034]

Lemon Cookie, Raspberry Cookie[sup=0.033]

Lemon Lemonade, Raspberry Cookie[sup=0.031]

Lemon Cookie, Lemon Lemonade[sup=0.031]

Lemon Cookie, Raspberry Lemonade[sup=0.03]

Marzipan Cookie, Tuile Cookie[sup=0.053]

Cheese Croissant, Orange Juice[sup=0.038]

Chocolate Coffee, Chocolate Cake, Casino Cake[sup=0.038]

Cherry Tart, Opera Cake, Apricot Danish[sup=0.038]

Apricot Croissant, Hot Coffee, Blueberry Tart[sup=0.032]

Apple Croissant, Apple Tart, Apple Danish, Cherry Soda[sup=0.031]

Association Rules: 9

Chocolate Cake, Casino Cake ---> Chocolate Coffee[sup=0.038, conf=0.95]

Chocolate Coffee, Casino Cake ---> Chocolate Cake[sup=0.038, conf=0.974358974359]

Opera Cake, Apricot Danish ---> Cherry Tart[sup=0.038, conf=0.974358974359]

Cherry Tart, Opera Cake ---> Apricot Danish[sup=0.038, conf=0.926829268293]

Hot Coffee, Blueberry Tart ---> Apricot Croissant[sup=0.032, conf=0.969696969697]

Apricot Croissant, Hot Coffee ---> Blueberry Tart[sup=0.032, conf=1.0]

Apple Tart, Apple Danish, Cherry Soda ---> Apple Croissant[sup=0.031, conf=1.0]

Apple Croissant, Apple Danish, Cherry Soda ---> Apple Tart[sup=0.031, conf=1.0]

Apple Croissant, Apple Tart, Cherry Soda ---> Apple Danish[sup=0.031, conf=1.0]

**python lab1.py 5000/5000-out1.csv .03 .9**

Frequent Item Sets: 35

Chocolate Eclair[sup=0.0382]

Vanilla Eclair[sup=0.046]

Almond Tart[sup=0.0386]

Apricot Tart[sup=0.0422]

Pecan Tart[sup=0.0444]

Ganache Cookie[sup=0.0388]

Raspberry Cookie[sup=0.064]

Lemon Cookie[sup=0.0642]

Chocolate Meringue[sup=0.0452]

Vanilla Meringue[sup=0.0398]

Walnut Cookie[sup=0.0706]

Almond Croissant[sup=0.0456]

Chocolate Croissant[sup=0.0432]

Almond Bear Claw[sup=0.0428]

Blueberry Danish[sup=0.04]

Lemon Lemonade[sup=0.0648]

Raspberry Lemonade[sup=0.0678]

Green Tea[sup=0.062]

Cherry Soda[sup=0.067]

Lemon Cake, Lemon Tart[sup=0.0336]

Napoleon Cake, Strawberry Cake[sup=0.0422]

Truffle Cake, Gongolais Cookie[sup=0.0472]

Blackberry Tart, Coffee Eclair[sup=0.0356]

Apple Croissant, Apple Tart[sup=0.0316]

Apple Tart, Apple Danish[sup=0.0324]

Bottled Water, Berry Tart[sup=0.0366]

Blackberry Tart, Single Espresso[sup=0.0314]

Vanilla Frappuccino, Chocolate Tart[sup=0.0348]

Marzipan Cookie, Tuile Cookie[sup=0.0496]

Apple Croissant, Apple Danish[sup=0.033]

Cheese Croissant, Orange Juice[sup=0.043]

Chocolate Coffee, Chocolate Cake, Casino Cake[sup=0.0312]

Cherry Tart, Opera Cake, Apricot Danish[sup=0.0408]

Apricot Croissant, Hot Coffee, Blueberry Tart[sup=0.0328]

Apple Pie, Hot Coffee, Almond Twist, Coffee Eclair[sup=0.0308]

Association Rules: 9

Chocolate Cake, Casino Cake ---> Chocolate Coffee[sup=0.0312, conf=0.912280701754]

Chocolate Coffee, Casino Cake ---> Chocolate Cake[sup=0.0312, conf=0.901734104046]

Opera Cake, Apricot Danish ---> Cherry Tart[sup=0.0408, conf=0.944444444444]

Cherry Tart, Opera Cake ---> Apricot Danish[sup=0.0408, conf=0.935779816514]

Hot Coffee, Blueberry Tart ---> Apricot Croissant[sup=0.0328, conf=0.937142857143]

Apricot Croissant, Hot Coffee ---> Blueberry Tart[sup=0.0328, conf=0.942528735632]

Hot Coffee, Almond Twist, Coffee Eclair ---> Apple Pie[sup=0.0308, conf=1.0]

Apple Pie, Hot Coffee, Coffee Eclair ---> Almond Twist[sup=0.0308, conf=1.0]

Apple Pie, Hot Coffee, Almond Twist ---> Coffee Eclair[sup=0.0308, conf=1.0]

**python lab1.py 20000/20000-out1.csv .03 .9**

Frequent Item Sets: 39

Chocolate Eclair[sup=0.0426]

Vanilla Eclair[sup=0.0427]

Almond Tart[sup=0.04055]

Apple Tart[sup=0.06925]

Apricot Tart[sup=0.04275]

Pecan Tart[sup=0.04155]

Ganache Cookie[sup=0.0433]

Raspberry Cookie[sup=0.06945]

Lemon Cookie[sup=0.06825]

Chocolate Meringue[sup=0.0445]

Vanilla Meringue[sup=0.0424]

Almond Croissant[sup=0.04205]

Apple Croissant[sup=0.071]

Chocolate Croissant[sup=0.0446]

Apple Danish[sup=0.06755]

Almond Bear Claw[sup=0.04425]

Blueberry Danish[sup=0.04115]

Lemon Lemonade[sup=0.06655]

Raspberry Lemonade[sup=0.06845]

Green Tea[sup=0.06215]

Cherry Soda[sup=0.0653]

Lemon Cake, Lemon Tart[sup=0.037]

Napoleon Cake, Strawberry Cake[sup=0.04455]

Truffle Cake, Gongolais Cookie[sup=0.04335]

Blackberry Tart, Coffee Eclair[sup=0.03675]

Hot Coffee, Coffee Eclair[sup=0.0317]

Apple Pie, Hot Coffee[sup=0.03085]

Bottled Water, Berry Tart[sup=0.0357]

Blackberry Tart, Single Espresso[sup=0.03015]

Walnut Cookie, Chocolate Tart[sup=0.03055]

Vanilla Frappuccino, Chocolate Tart[sup=0.03675]

Marzipan Cookie, Tuile Cookie[sup=0.04855]

Vanilla Frappuccino, Walnut Cookie[sup=0.03095]

Cheese Croissant, Orange Juice[sup=0.0439]

Hot Coffee, Almond Twist[sup=0.03085]

Chocolate Coffee, Chocolate Cake, Casino Cake[sup=0.0339]

Cherry Tart, Opera Cake, Apricot Danish[sup=0.041]

Apple Pie, Almond Twist, Coffee Eclair[sup=0.03415]

Apricot Croissant, Hot Coffee, Blueberry Tart[sup=0.0326]

Association Rules: 9

Chocolate Cake, Casino Cake ---> Chocolate Coffee[sup=0.0339, conf=0.945606694561]

Chocolate Coffee, Casino Cake ---> Chocolate Cake[sup=0.0339, conf=0.949579831933]

Opera Cake, Apricot Danish ---> Cherry Tart[sup=0.041, conf=0.945790080738]

Cherry Tart, Opera Cake ---> Apricot Danish[sup=0.041, conf=0.939289805269]

Almond Twist, Coffee Eclair ---> Apple Pie[sup=0.03415, conf=0.942068965517]

Apple Pie, Coffee Eclair ---> Almond Twist[sup=0.03415, conf=0.91677852349]

Apple Pie, Almond Twist ---> Coffee Eclair[sup=0.03415, conf=0.949930458971]

Hot Coffee, Blueberry Tart ---> Apricot Croissant[sup=0.0326, conf=0.913165266106]

Apricot Croissant, Hot Coffee ---> Blueberry Tart[sup=0.0326, conf=0.928774928775]

**python lab1.py 75000/75000-out1.csv .03 .9**

Frequent Item Sets: 38

Chocolate Eclair[sup=0.0423733333333]

Vanilla Eclair[sup=0.04252]

Almond Tart[sup=0.04204]

Apple Tart[sup=0.0682266666667]

Apricot Tart[sup=0.04236]

Pecan Tart[sup=0.0433733333333]

Ganache Cookie[sup=0.04324]

Raspberry Cookie[sup=0.06764]

Lemon Cookie[sup=0.0680133333333]

Chocolate Meringue[sup=0.0419333333333]

Vanilla Meringue[sup=0.0423866666667]

Walnut Cookie[sup=0.0678533333333]

Almond Croissant[sup=0.0427333333333]

Apple Croissant[sup=0.0672933333333]

Chocolate Croissant[sup=0.04324]

Apple Danish[sup=0.0676933333333]

Almond Bear Claw[sup=0.04244]

Blueberry Danish[sup=0.0440933333333]

Lemon Lemonade[sup=0.06824]

Raspberry Lemonade[sup=0.0677466666667]

Green Tea[sup=0.0624666666667]

Cherry Soda[sup=0.0619866666667]

Single Espresso[sup=0.0679733333333]

Lemon Cake, Lemon Tart[sup=0.0368533333333]

Napoleon Cake, Strawberry Cake[sup=0.0431466666667]

Truffle Cake, Gongolais Cookie[sup=0.04392]

Blackberry Tart, Coffee Eclair[sup=0.0364133333333]

Hot Coffee, Coffee Eclair[sup=0.03156]

Apple Pie, Hot Coffee[sup=0.0310266666667]

Bottled Water, Berry Tart[sup=0.0378]

Vanilla Frappuccino, Chocolate Tart[sup=0.03596]

Marzipan Cookie, Tuile Cookie[sup=0.05092]

Cheese Croissant, Orange Juice[sup=0.0430666666667]

Hot Coffee, Almond Twist[sup=0.03092]

Chocolate Coffee, Chocolate Cake, Casino Cake[sup=0.0333866666667]

Cherry Tart, Opera Cake, Apricot Danish[sup=0.0411066666667]

Apple Pie, Almond Twist, Coffee Eclair[sup=0.03432]

Apricot Croissant, Hot Coffee, Blueberry Tart[sup=0.0328266666667]

Association Rules: 9

Chocolate Cake, Casino Cake ---> Chocolate Coffee[sup=0.0333866666667, conf=0.939587242026]

Chocolate Coffee, Casino Cake ---> Chocolate Cake[sup=0.0333866666667, conf=0.947408248203]

Opera Cake, Apricot Danish ---> Cherry Tart[sup=0.0411066666667, conf=0.955376510691]

Cherry Tart, Opera Cake ---> Apricot Danish[sup=0.0411066666667, conf=0.947740547187]

Almond Twist, Coffee Eclair ---> Apple Pie[sup=0.03432, conf=0.924568965517]

Apple Pie, Coffee Eclair ---> Almond Twist[sup=0.03432, conf=0.920930232558]

Apple Pie, Almond Twist ---> Coffee Eclair[sup=0.03432, conf=0.935659760087]

Hot Coffee, Blueberry Tart ---> Apricot Croissant[sup=0.0328266666667, conf=0.936834094368]

Apricot Croissant, Hot Coffee ---> Blueberry Tart[sup=0.0328266666667, conf=0.928006030908]