

Assignment No - B10

1 TITLE :

Use Business intelligence and analytics tools to recommend the combination of share purchases and sales for maximizing the profit.

2 MATHEMATICAL MODEL :

mathematical model is given as below,

$S = fs, e, X, Y, Fme, DD, NDD, Mem \text{ sharedg}$

Where,

s = Initial State

e = End State

X=input Datasets of share market.

Y=output Bar chart of frequency distribution of share market.

Fme=Algorithms used (Apriori)

for eg. `fnextdistance()`, `estimate()`, `pathFind()`

DD=Deterministic Data Share market data.

NDD=Non-Deterministic Data.

Mem-shared=memory shared by the applications.

3 THEORY :

Definition: It is a place where shares of public listed companies are traded. The primary market is where companies float shares to the general public in an initial public offering (IPO) to raise capital.

Description: Once new securities have been sold in the primary market, they are traded in the secondary market where one investor buys shares from another investor at the prevailing market price or at whatever price both the buyer and seller agree upon. The secondary market or the stock exchanges are regulated by the regulatory authority. In India, the secondary and primary markets are governed by the Security and Exchange Board of India (SEBI).

A stock exchange facilitates stock brokers to trade company stocks and other securities. A stock may be bought or sold only if it is listed on an exchange. Thus, it is the meeting place of the stock buyers and sellers. India's premier stock exchanges are the Bombay Stock Exchange and the National Stock Exchange.

Conclusion: Hence we have used business intelligence and analytics tools KNIME to recommend the combination of share purchases and sales for maximizing the profit.

- Input:
Training Data:

StockPastData.xlsx - LibreOffice Calc

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	Sr. no	Month	Open Price	High Price	Low Price	Close Price	No. of Shares	No. of Trades	Total Turnover (Rs.)	Deliverable Quantity	% Deli. Qty to Traded Qty	Spread High-Low	Spread Close-Open	class		
2	1	Jan-10	1698	1709	1401.15	1425.05	8451497	277151	1E+010	3800092	44.96	307.85	-272.95	Buy		
3	2	Feb-10	1425	1581.45	1371	1566.85	6570519	249773	1E+010	2214388	33.7	210.45	141.85	sell		
4	3	Mar-10	1585	1669.8	1541.25	1626.35	4004937	157827	6E+009	1578083	39.4	128.55	41.35	sell		
5	4	Apr-10	1635.25	1660.9	1550	1608.35	3562036	138175	6E+009	1254116	35.21	110.9	-26.90	buy		
6	5	May-10	1600	1680	1475.1	1628.6	6617594	253920	1E+010	2022276	30.56	204.9	28.6	sell		
7	6	Jun-10	1629.7	1843.75	1587	1804.55	5741781	214626	1E+010	2342270	40.79	256.75	174.85	sell		
8	7	Jul-10	1795	1949	1780.15	1797.1	4608597	196938	9E+009	1587965	34.46	168.85	2.1	sell		
9	8	Aug-10	1806	1887	1763.7	1812.45	3152577	147259	6E+009	985226	31.25	123.3	6.45	sell		
10	9	Sep-10	1820	2074.6	1685	2044.7	4099375	173992	8E+009	1596139	38.94	389.6	224.7	sell		
11	10	Oct-10	2044.7	2117	1928.8	2021.85	4271818	175502	9E+009	1649326	38.61	188.2	-22.85	buy		
12	11	Nov-10	2028	2212	1907.25	1949.85	3481912	154793	7E+009	1432830	41.15	304.75	-78.15	buy		
13	12	Dec-10	1950.05	2064	1918.7	1979.05	2943884	135409	6E+009	1041244	35.37	145.3	29	sell		
14	13	Jan-11	1990	1998.1	1555	1641.15	7856177	350361	1E+010	3008010	38.29	443.1	-348.85	buy		
15	14	Feb-11	1650	1723.7	1463.05	1528.05	7305209	375368	1E+010	2270278	31.08	260.65	-121.95	buy		
16	15	Mar-11	1545	1932.95	1503.05	1653.25	6775106	330537	1E+010	1897025	28	429.9	108.25	sell		
17	16	Apr-11	1666.5	1768.35	1592.9	1597.9	4606579	218976	8E+009	1110957	24.12	175.45	-68.6	buy		
18	17	May-11	1619	1668.9	1475	1644	8311549	406743	1E+010	1848284	22.24	193.9	25	sell		
19	18	Jun-11	1642.7	1836.95	1635	1822.65	4301218	212793	7E+009	1180032	27.43	201.95	179.95	sell		
20	19	Jul-11	1840	1867.85	1720	1725.95	3810304	179662	7E+009	1042195	27.35	147.85	-114.05	buy		
21	20	Aug-11	1736.3	1768	1518	1609.8	5599962	305000	9E+009	1327908	23.71	250	-126.5	buy		
22	21	Sep-11	1635	1719.9	1350	1358.2	7549618	389843	1E+010	2247671	29.77	369.9	-276.8	buy		
23	22	Oct-11	1347	1453.4	1268.4	1413.25	7608120	388131	1E+010	1998421	26.27	185	66.25	sell		
24	23	Nov-11	1397.15	1406.85	1175	1268.8	7471239	352718	1E+010	1979655	26.5	231.85	-128.35	buy		
25	24	Dec-11	1305	1334.9	971	995.1	1E+007	522573	1E+010	3466045	29.19	363.9	-309.9	buy		
26	25	Jan-12	1006.7	1388	991	1310.6	1E+007	486157	1E+010	1953877	19.09	397	303.9	sell		
27	26	Feb-12	1303	1529.8	1278.3	1308.1	1E+007	413017	1E+010	2779025	27.43	251.5	5.1	sell		

Sheet 2 / 2 PageStyle_Monthly Sum=0 100%

StockPastData.xlsx - LibreOffice Calc

</

- output

Table View - 2:5 - Interactive Table									
File Hilite Navigation View Output									
Row ID	S Col0	S Col1	S Col2	S Col3	S Col4	S Col5	S Col6	S Col7	S Predicti...
Row5	TCS	5.0	c3	No	Low	High	1.0	Sell	Sell
Row7	TCS	7.0	c1 c2	Yes	High	Low	4.0	Buy	Buy
Row10	Wipro	10.0	c2 c3	No	Low	High	2.0	Sell	Sell
Row12	Wipro	12.0	c1	Yes	High	Low	4.0	Buy	Buy
Row13	KPIT	13.0	c1	Yes	High	Low	5.0	Buy	Buy
Row17	KPIT	17.0	c3 c4	Yes	High	Low	5.0	Buy	Buy
Row18	KPIT	18.0	c3 c4	No	Low	High	4.0	Sell	Sell
Row20	Docomo	20.0	c1 c3	Yes	High	Low	4.0	Buy	Buy
Row22	Docomo	22.0	c2	No	Low	High	3.0	Sell	Sell
Row26	Docomo	26.0	c2	No	Low	High	3.0	Sell	Sell
Row33	Airtel	33.0	c1	Yes	High	Low	5.0	Buy	Buy
Row39	Facebook	39.0	c1 c3	Yes	High	Low	5.0	Buy	Buy
Row42	Facebook	42.0	c1	Yes	High	Low	4.0	Buy	Buy
Row50	Google	50.0	c1 c2	No	Low	High	3.0	Sell	Sell
Row59	Apple	59.0	c3 c4	No	Low	High	4.0	Sell	Sell
Row60	Apple	60.0	c1 c3	Yes	High	Low	5.0	Buy	Buy
Row61	Apple	61.0	c1 c3	Yes	High	Low	4.0	Buy	Buy
Row62	Apple	62.0	c1	Yes	High	Low	4.0	Buy	Buy
Row67	Apple	67.0	c2	No	Low	High	3.0	Sell	Sell
Row68	Apple	68.0	c1 c2	Yes	High	Low	4.0	Buy	Buy
Row69	Apple	69.0	c1 c2	Yes	High	Low	5.0	Buy	Buy
Row71	TATA	71.0	c2 c3	No	Low	High	2.0	Sell	Sell
Row76	TATA	76.0	c3 c4	Yes	High	Low	5.0	Buy	Buy
Row78	TATA	78.0	c3 c4	Yes	High	Low	5.0	Buy	Buy
Row80	ICICI	80.0	c1 c3	Yes	High	Low	5.0	Buy	Buy
Row81	ICICI	81.0	c1 c3	Yes	High	Low	4.0	Buy	Buy
Row83	ICICI	83.0	c1	Yes	High	Low	4.0	Buy	Buy
Row86	ICICI	86.0	c3	No	Low	High	2.0	Sell	Sell
Row89	ICICI	89.0	c2	No	Low	High	3.0	Sell	Sell
Row94	SBI	94.0	c2 c3	No	Low	High	1.0	Sell	Sell
Row97	SBI	97.0	c2 c3	No	Low	High	3.0	Sell	Sell
Row99	Micromax	99.0	c3 c4	Yes	High	Low	5.0	Buy	Buy

Share.xls - LibreOffice Calc

Align Left (Ctrl+L)

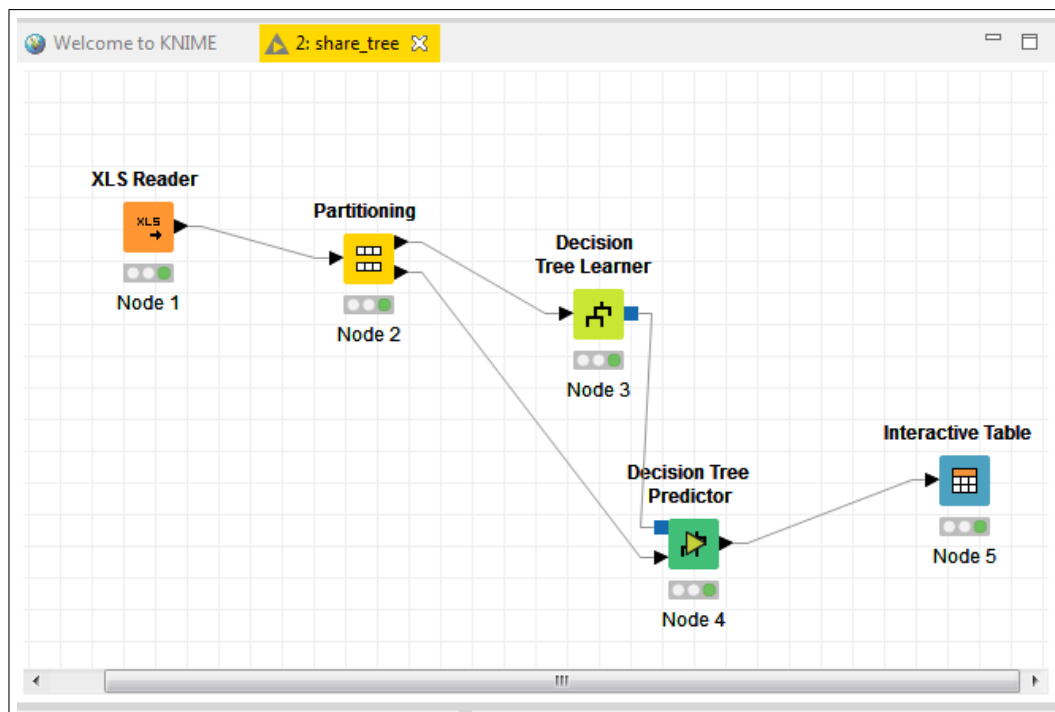
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
78	TATA	77 c3 c4	Yes	High	Low		5	Buy										
79	TATA	78 c3 c4	Yes	High	Low		5	Buy										
80	TATA	79 c3 c4	No	Low	High		4	Sell										
81	ICICI	80 c1 c3	Yes	High	Low		5	Buy										
82	ICICI	81 c1 c3	Yes	High	Low		4	Buy										
83	ICICI	82 c1	Yes	High	Low		4	Buy										
84	ICICI	83 c1	Yes	High	Low		4	Buy										
85	ICICI	84 c1	Yes	High	Low		4	Buy										
86	ICICI	85 c2	No	Low	High		3	Sell										
87	ICICI	86 c3	No	Low	High		2	Sell										
88	ICICI	87 c3	No	Low	High		3	Sell										
89	ICICI	88 c3	No	Low	High		1	Sell										
90	ICICI	89 c2	No	Low	High		3	Sell										
91	SBI	90 c1 c2	Yes	High	Low		4	Buy										
92	SBI	91 c1 c2	Yes	High	Low		5	Buy										
93	SBI	92 c1 c2	No	Low	High		3	Sell										
94	SBI	93 c2 c3	No	Low	High		2	Sell										
95	SBI	94 c2 c3	No	Low	High		1	Sell										
96	SBI	95 c1	Yes	High	Low		4	Buy										
97	SBI	96 c1	Yes	High	Low		5	Buy										
98	SBI	97 c2 c3	No	Low	High		3	Sell										
99	SBI	98 c3 c4	Yes	High	Low		5	Buy										
100	Micromax	99 c3 c4	Yes	High	Low		5	Buy										
101	Micromax	100 c3 c4	Yes	High	Low		5	Buy										
102	Micromax	101 c3 c4	No	Low	High		4	Sell										
103	Micromax	102 c1 c3	Yes	High	Low		5	Buy										
104	Micromax	103 c1 c3	Yes	High	Low		4	Buy										
105	Micromax	104 c1	Yes	High	Low		4	Buy										
106	Micromax	105 c1	Yes	High	Low		4	Buy										
107																		
108																		
109																		
110																		
111																		

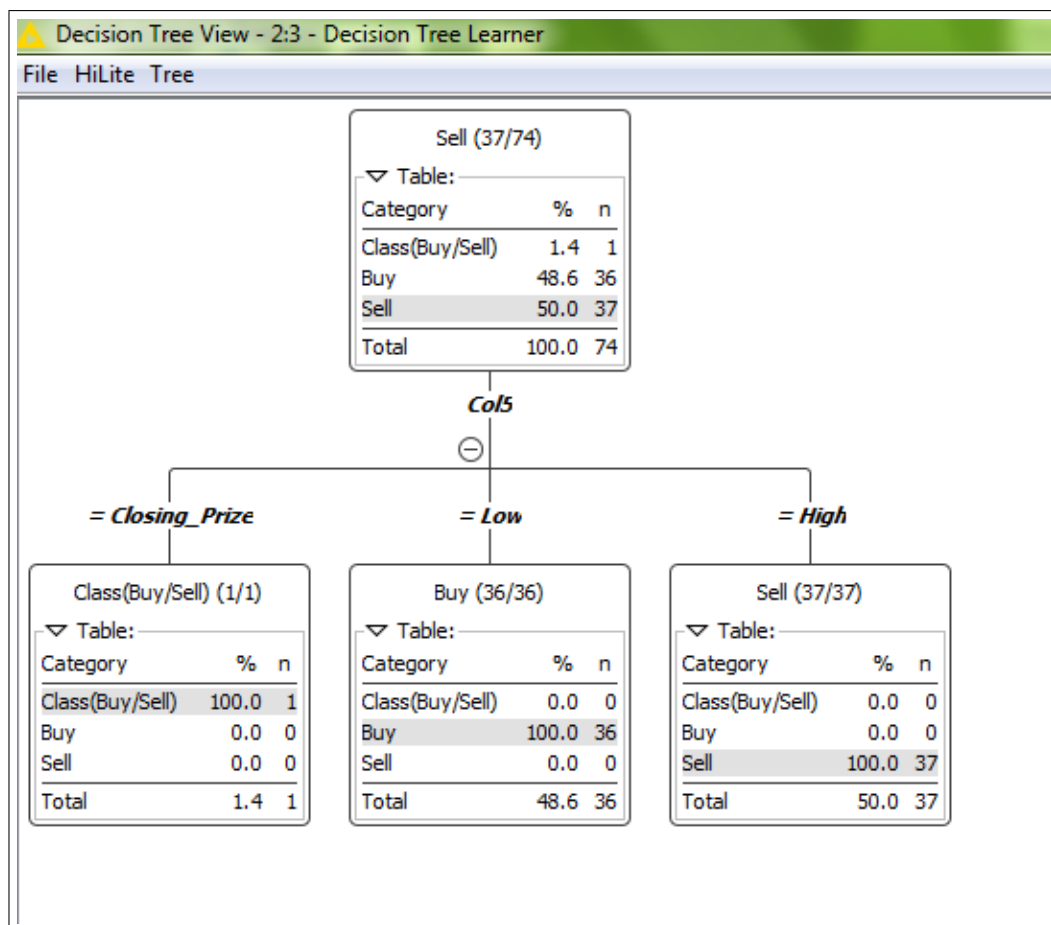
Sheet 1 / 1

PageStyle_Share.trn

Sum=0

100%





Roll No.	Name of Student	Date of Performance	Date of Submission	Sign.
309	Apurve Deshpande	15/12/2015	5/01/2016	