Assignment No - B10

Roll No.4431

1 Title

BIA tools

2 Problem Definition

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

3 Learning Objectives

1. To understand the concept of Business Analytics and Intelligence.

2. To identify BAI opportunities in real world businesses.

4 Learning Outcomes

1. Ability to apply BAI tools to real world business problems.

2. Acquire proficiency over BAI and its theoretical aspects by applying them
   in practical.

5 Related Mathematics

mathematical model is given as below,

S=fs,e,X,Y,Fme,DD,NDD,Mem 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()g
DD=Deterministic Data Share market data.
NDD=Non-Deterministic Data.
Mem-shared=memory shared by the applications.

6 Concepts related theory

Definition: It is a place where shares of pubic 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 marketwhere 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.

7 Output

- Input:

  Training Data:

StockPastData.xlsx - LibreOffice Calc

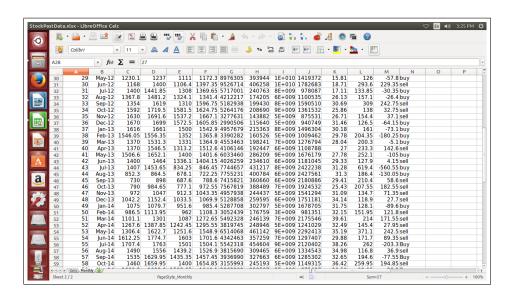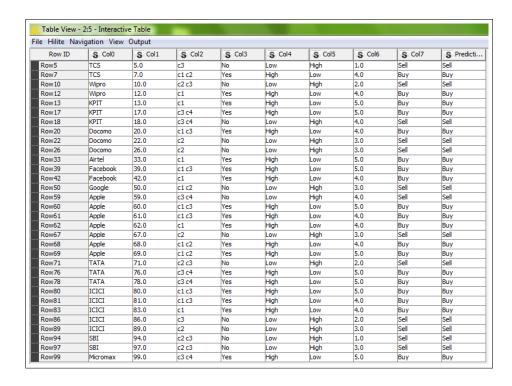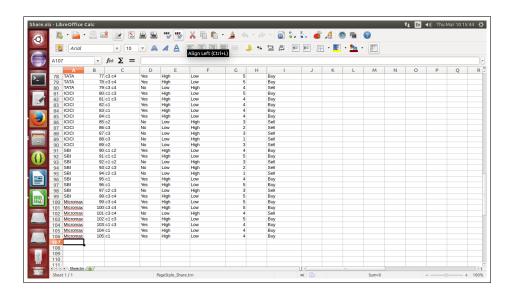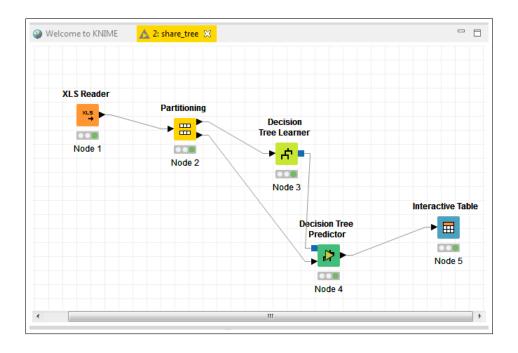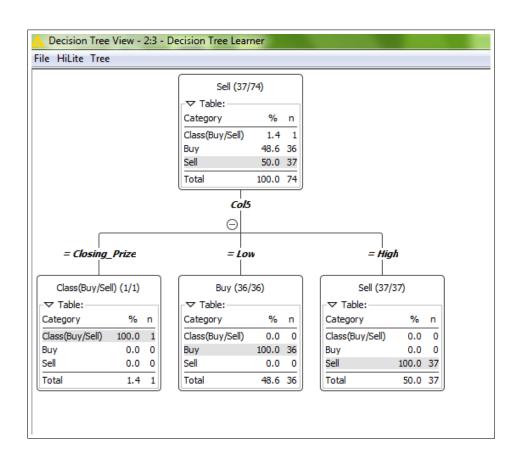|	A	B	C	D	E	F	G	H	I	J	K	L	M	N
30	29	May-12	1230.1	1237	1111	1172.3	8976305	393944	1E+010	1419372	15.81	126	-57.8	buy
31	30	Jun-12	1168	1400	1106.4	1397.35	9526714	406258	1E+010	1782683	18.71	293.6	229.35	sell
32	31	Jul-12	1400	1441.85	1308	1369.65	5717001	240763	8E+009	978087	17.11	133.85	-30.35	buy
33	32	Aug-12	1367.8	1481.2	1324.1	1341.4	4212217	174205	6E+009	1100535	26.13	157.1	-26.4	buy
34	33	Sep-12	1354	1619	1310	1596.75	5182938	199430	8E+009	1590510	30.69	309	242.75	sell
35	34	Oct-12	1592	1719.5	1581.5	1624.75	5264176	208690	9E+009	1361532	25.86	138	32.75	sell
36	35	Nov-12	1630	1691.6	1537.2	1667.1	3277631	143882	5E+009	875531	26.71	154.4	37.1	sell
37	36	Dec-12	1670	1699	1572.5	1605.85	2990506	115640	5E+009	940749	31.46	126.5	-64.15	buy
38	37	Jan-13	1616	1661	1500	1542.9	4957679	215363	8E+009	1496304	30.18	161	-73.1	buy
39	38	Feb-13	1546.05	1556.35	1352	1365.8	3390282	160526	5E+009	1009462	29.78	204.35	-180.25	buy
40	39	Mar-13	1370	1531.3	1331	1364.9	4553463	198241	7E+009	1276794	28.04	200.3	-5.1	buy
41	40	Apr-13	1370	1546.5	1313.2	1512.6	4106146	192447	6E+009	1108788	27	233.3	142.6	sell
42	41	May-13	1506.6	1652.1	1400	1401.6	6033460	286209	9E+009	1676179	27.78	252.1	-105	buy
43	42	Jun-13	1400	1464	1336.1	1404.15	4026259	234610	6E+009	1181045	29.33	127.9	4.15	sell
44	43	Jul-13	1407	1453.65	834.25	846.45	7744657	431217	8E+009	2422238	31.28	619.4	-560.55	buy
45	44	Aug-13	852.3	864.5	678.1	722.25	7755231	400784	6E+009	2427561	31.3	186.4	-130.05	buy
46	45	Sep-13	730	898	687.6	788.6	7415821	360660	6E+009	2180886	29.41	210.4	58.6	sell
47	46	Oct-13	790	984.65	777.1	972.55	7567819	388489	7E+009	1924532	25.43	207.55	182.55	sell
48	47	Nov-13	972	1047	912.3	1043.35	4957938	244437	5E+009	1541294	31.09	134.7	71.35	sell
49	48	Dec-13	1042.2	1152.4	1033.5	1069.9	5128858	259595	6E+009	1751181	34.14	118.9	27.7	sell
50	49	Jan-14	1075	1079.7	951.6	985.4	5287708	302797	5E+009	1678705	31.75	128.1	-89.6	buy
51	50	Feb-14	986.5	1113.95	962	1108.3	3052439	176759	3E+009	981351	32.15	151.95	121.8	sell
52	51	Mar-14	1101.1	1301	1087	1272.65	5492328	246139	7E+009	2175546	39.61	214	171.55	sell
53	52	Apr-14	1267.6	1387.85	1242.45	1295.55	3819745	248946	5E+009	1241029	32.49	145.4	27.95	sell
54	53	May-14	1306.4	1622.7	1251.6	1548.9	6514068	461142	9E+009	2292413	35.19	371.1	242.5	sell
55	54	Jun-14	1612.25	1774.7	1603	1701.6	4342463	357259	7E+009	1297407	29.88	171.7	89.35	sell
56	55	Jul-14	1707.4	1763	1501	1504.1	5542318	454604	9E+009	2120402	38.26	262	-203.3	buy
57	56	Aug-14	1490	1556	1439.2	1526.9	3815690	309465	6E+009	1334543	34.98	116.8	36.9	sell
58	57	Sep-14	1535	1629.95	1435.35	1457.45	3936990	327663	6E+009	1285302	32.65	194.6	-77.55	buy
59	58	Oct-14	1460	1659.95	1400	1654.85	3155993	245193	5E+009	1149315	36.42	259.95	194.85	sell

Sheet 2 / 2 — PageStyle_Monthly — Sum=27 — 100%

- output

Table View - 2:5 - Interactive Table

File Hilite Navigation View Output

Row ID	Col0	Col1	Col2	Col3	Col4	Col5	Col6	Col7	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

4

Decision Tree View - 2:3 - Decision Tree Learner

File HiLite Tree

Sell (37/74)

▽ Table:

Category	%	n
Class(Buy/Sell)	1.4	1
Buy	48.6	36
Sell	50.0	37
Total	100.0	74

Col5

⊖

= Closing_Prize

Class(Buy/Sell) (1/1)

▽ Table:

Category	%	n
Class(Buy/Sell)	100.0	1
Buy	0.0	0
Sell	0.0	0
Total	1.4	1

= Low

Buy (36/36)

▽ Table:

Category	%	n
Class(Buy/Sell)	0.0	0
Buy	100.0	36
Sell	0.0	0
Total	48.6	36

= High

Sell (37/37)

▽ Table:

Category	%	n
Class(Buy/Sell)	0.0	0
Buy	0.0	0
Sell	100.0	37
Total	50.0	37

8   Conclusion:

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