Assignment A6: BAI tools

1 Title

Use Business intelligence and analytics 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 Objective

To understand the concepts of the business analytics and how to implement it using properly.

4 Learning Outcome

Successfully using business analysis to maximise profits .

5 Software and Hardware Requirement

1. 64 bit open source LINUX/Windows
2. Pentaho tools suite
3.Multicore machine.

6 Mathematical Model :

Let S be the solution perspective of the class line such that
S={ s, e , X, Y, Fme , DD, NDD ,Fs, shared_mem }
Where
s- start state of the program.

X ={f1(default)}
e = it is the end state i.e. maximising profits.
e-{Y }
where Y is the output of the program.

Fme- is the set of member function.
Fme be a function to analyse the given data.

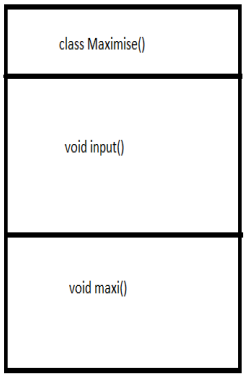
Fme-{F1,F2}

f1=acceptinput(); -function for accepting input from user data f2=maximise()
-function for maximising profits

DD- Deterministic case..
here the data should be under the limit set by the program

NDD-Non Deterministic Data.
data should be of the same format throughout

7 Class Diagram :



8 Theory

Business Intelligence: -
Business intelligence (BI) is a technology-driven process for analyzing data and presenting actionable information to help corporate executives, business managers and other end users make more informed business decisions. BI encompasses a variety of tools, applications and methodologies that enable organizations to collect data from internal systems and external sources, prepare it for analysis, develop and run queries against the data, and create reports, dashboards and data visualizations to make the analytical results available to corporate decision makers as well as operational workers.
The potential benefits of business intelligence programs include accelerating and improving decision making; optimizing internal business processes; increasing operational efficiency; driving new revenues; and gaining competitive advantages over business rivals. BI

systems can also help companies identify market trends and spot business problems that need to be addressed.
Business intelligence combines a broad set of data analysis applications, including ad hoc analysis and querying, enterprise reporting, online analytical processing (OLAP), mobile BI, real-time BI, operational BI, cloud and software as a service BI, open source BI, collaborative BI and location intelligence. BI technology also includes data visualization software for designing charts and other infographics, as well as tools for building BI dashboards and performance scorecards that display visualized data on business metrics and key performance indicators in an easy-to-grasp way. BI applications can be bought separately from different vendors or as part of a unified BI platform from a single vendor.
BI Programs:
BI programs can also incorporate forms of advanced analytics, such as data mining, predictive analytics, text mining, statistical analysis and big data analytics. In many cases though, advanced analytics projects are conducted and managed by separate teams of data scientists, statisticians, predictive modelers and other skilled analytics professionals, while BI teams oversee more straightforward querying and analysis of business data.
BI Tools:
Business Intelligence tools provide companies reliable information and true insights in order to improve decision making social collaboration. With business intelligence youll be able to produce much better company results. The BI tools provide the means for efficient reporting, thorough analysis of (big) data, statistics analytics and dashboards displaying KPIs.
Bring your company data to life with BI tools
Bring your company data to life by combining, analyzing and visualizing all that data very easily. The tools will help you to see and understand the success factors of your business more quickly.
And where things (might) go wrong and where you need to make adjustments. They give employees and managers the possibility to improve business processes on a daily basis by using correct information and relevant insights.
Selecting the wrong tool might hurt
Companies who are not successful often have an issue with their information infrastructure. They may have selected the wrong Busi-

ness Intelligence tool or perhaps they dont use business intelligence-tools at all. They have not been able to implement BI and are still in the dark and that hurts company results.

How can you easily select one of the tools for your organization?

Step 1: Define the key bi tool selection criteria, both the user and IT requirements.
Step 2: With a list of questions you need to contact all the vendors to get the answers.
Step 3: Validate and analyze all the information from the Business Intelligence vendors.
Step 4: Make a short list for a proof-of-concept (POC) and perform the POC.
Step 5: Choose the tool / platform that suits your needs and price criteria best.

How can you compare BI tools very quickly?
Business Intelligence tools come in many different flavors. All the tools run on the Windows platform for example, but only a few support the different flavors of Unix and Linux. Some have excellent functionality for pixel perfect reporting and others do better in dash-boarding and predictive analytics.

KPIs

What are Key Performance Indicators (KPIs) and how do you choose which ones to use?
It is difficult to determine what are genuine KPIs, a little like looking for a needle in a haystack. The problem being that we are trying to shed light on is the (future) performance of our most critical internal processes which will allow us to achieve the organizations (strategic) goals within the chosen policies. A KPI should be important enough that achieving it will have a huge impact on the total performance of the organization (or part of the organization).
The King of KPIs, David Parmenter, said once Key performance indicators (KPIs), while used commonly around the world, have never until now been clearly defined. This is the reason that it is essential to understand which types of (performance) indicators actually ex-

ist:

1. Key Results Indicators (KRIs):
These are complex indicators based on the total achievement of a broad range of actions, for example, the profitability of a company, the level of satisfaction of the employees, or customer satisfaction levels.
2. Performance Indicators (PIs):
These are very specific indicators, they tell us what we need to achieve in a given area and are not particularly key to achieving efficient performance in the organizations internal processes. Examples are: the profit achieved from the companys 10 largest customers or the revenue growth percentage for a given product or service. These can, of course, be very useful things to measure, but in general they are not critical for achieving better performance in multiple result areas of the organization at the same time. By concentrating solely on performance in terms of, for example, revenue growth we often miss the fact that we are no longer making any profit because the customers and employees have become dissatisfied.
3. Indicators (IND):
These are measures of a single action which can form the basis for any KRI, PI or KPI. They are, in general, neither critical, nor key in achieving major performance improvement. Some examples are: number of new customers, gross revenue, number of lost customers, number of orders etc.
4. Key Performance Indicators (KPIs):
These are the indicators that measure one activity or action, they are directly connected to an organizations strategic goals and improvement measured using these indicators can (and should) mean a dramatic improvement of the performance in more multiple organizational areas. Examples are: the number of minutes that the departure of an airplane is delayed, or the number of times a product cannot be sold due to lack of inventory.
KPIs can often be recognized as missed chances as seen by the lost sales example or when, if the value of a KPI decreases it causes rework. Rework means that actions have to be carried out again because they didnt work correctly the first time.

Following Stock Market KPIs can be created based on share market

data:
Who are Market Gainers :(Top 5) Which stocks show max gain from opening value
Who are Market Losers (bottom 5): Which stocks show max loss from opening value
How one stock is comparing with other stocks based on Gain or loss.
percentage change in Stock Value—Gain Or loss
The volume of stocks.
Sector Wise Performance (Stock market sectors are a way of classifying stocks, wherein stocks in similar industries are grouped together.)

9 Screen shot :

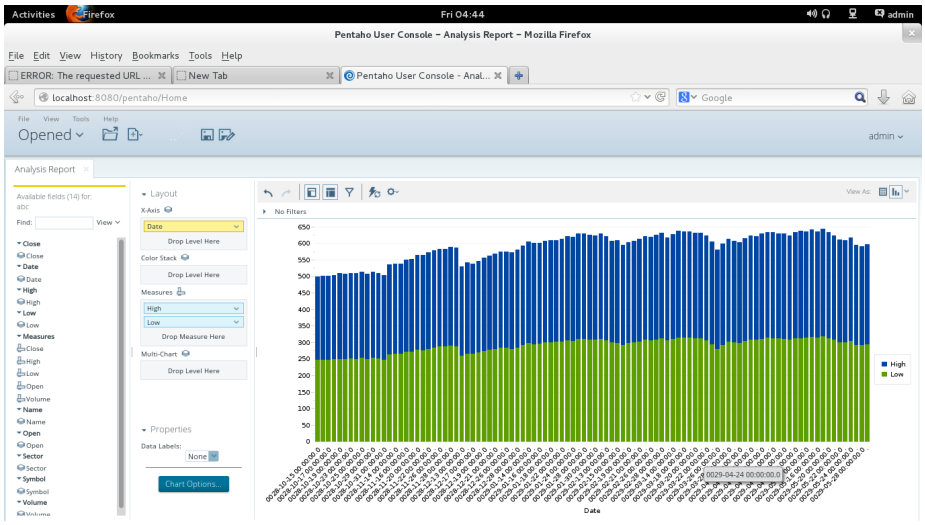


Figure 1: share market analysis

10 Conclusion

Successfully used BAI tools to maximise profits.