

1. INTRODUCTION

1.1 OVERVIEW

Project title- Crop Production Analysis Using IBM Cognos Dashboard

* crop production supports the huge population of a country. all individuals depend on the crop for their food. it also provides employment to a large number of people.

* from this project we are going to analyse visualization of crop production, creating dashboard, by doing all this we get to know more about crop production

* we are going to use server(IBM COGNOS ANALYTICS)

* we are going to understand the dataset.

* it has 2 lakhs of data set and 6 features.

1.2 PURPOSE

By the end of the project, we are going to learn

* The key features of IBM COGNOS.

* Plotting different graphs using visualization.

* creating a dashboard.

* IBM research india designed and built a suite of agribusiness tools and solution to help the agriculture industry use the power of AI to make more informed decisions about their crops.

* using the crop production in indian data set we are going to plot graphs

* there are a lot of sample data assets on the IBM COGNOS ANALYTICS, including the one that's used in tutorial.

* you can explore the data that is shown in a visualization by using the interactive title, drilling up or down columns, and viewing the details of a data point.

2. LITERATURE SURVEY

2.1 EXISTING PROBLEM.

- * Agriculture was and will always be one of the most important occupations since it is responsible for feeding the world and providing terms.

- * However, due to modernization and the ever - increasing population , agriculture is facing some hurdles lately. these issues are impacting the production of agricultural crops both in qualitative as well as in quantitative terms.

- * The problems of agriculture are many , but the article below discusses a few of the most influential ones that end up governing the agricultural sector widely.

- * These problem vary from small to big and different for different countries all over the world. Despite that , the underlying issues of agriculture faced globally.

- * Agriculture is the science , art and practice of cultivating plants and livestock. agriculture was the key development in the rise of sedentary hymen civilization , where by farming of domesticated species created food surpluses the enabled people to lives in cities.

- * India as different like cotton, rice fruits,plants , vegetable etc.

- * Estimations of every single fields of every state is difficult to stock it.

- * the every dataset column as nearly 2 lakhs above data points its difficult to identify every single estimations of filed in all purposes of fruits, vegetables and many crops.

3.2 PROPOSED SLOUTION

- * By using IBM COGNOS ANALYTIC we are going to detect the data set format survey in easy format by the service IBM COGNOS ANALYTICS DASHBOARD.

- * By creating a dashboard you can explore your data and easily communicate the analysis and insights that you discover.

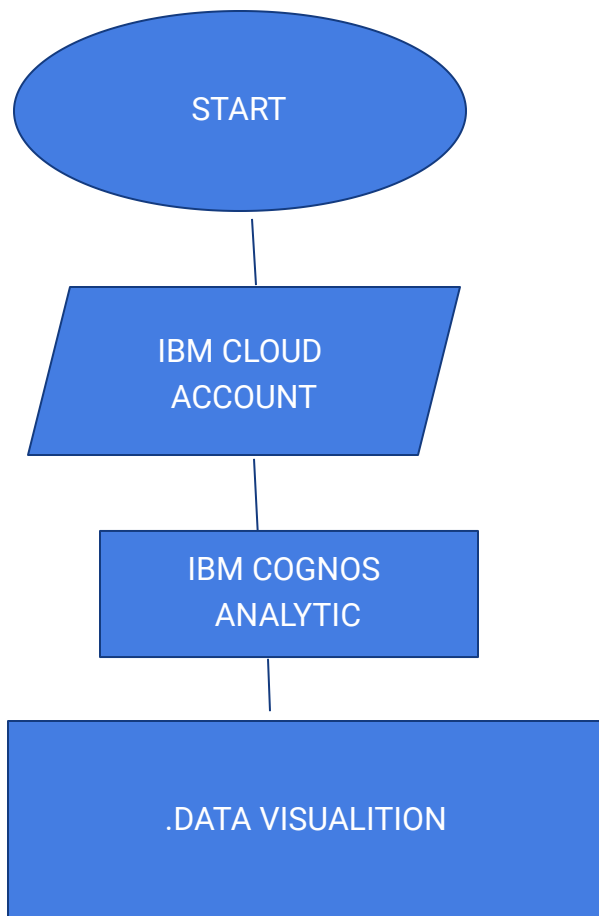
- *dashboard helps you to monitor events or activities at a glance by providing key insights an a analyze your data .

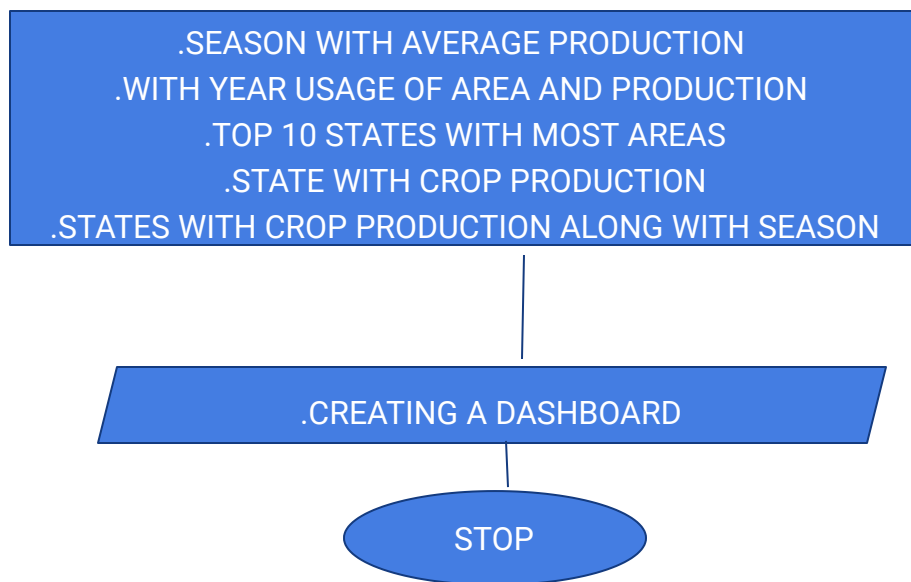
- * IBM COGNOS ANALYTICS provide templates that contain predefined and grid lines for easy

arrangement and alignment of the visualization

3 . THEORITICAL ALALYSIS

3.1 BLOCK DIAGRAM





3.2 HARDWARE/SOFTWARE BDESIGNING

*Hardware and software requirement of the project

software requirements

about this accelerator all customer desire the capability to squeeze the maximum performance out the IBM COGNOS ANALYTIC investment . cog nos analytic is but a part of software and hardware environment . a single bottleneck in either the software or hardware has a ripple effect for the entire system. software products compatibility reports provide up to date information about supported environment and minimum requirement for the product/data.

COG NOS ANALYTICS ON PREMISES 11.1x

COG NOS ANALYTICS ON PREMIES(11.17.7),(11.1.6),(11.1.5).....

REQUIREMENT BY TYPE	REQUIREMENT BY PLATFORM	SUPPLEMENTARY INFORMATION

.Operating system	.AIX	,Supported and tested client drivers 11.1.7
.Software(including application servers,data sources,and web browsers)	.Linux .Mobile OS .Windows	
. Hardware		.Supported and tested client driver 11.7.0

*The hardware requirements depends on our IBM COGNOS environment . we may require additional resources,such as disk space.

*requirement RAM with recommended:4GB

NOTE:Although it is possible to run controller using the minimum specifications ,unless there are exceptional circumstance it is best use at least the recommended specifications.

*operating system specification is microsoft windows 2008R enterprise edition, RAM with minimum 4GB , CPU cores of 4, web server is microsoft internet information services(IIS),data base for IBM cog nos business intelligence content store must be one of the following types are:

- Oracle
- DB2
- Microsoft SQL server
- TCP/IP connectivity to microsoft SQL server
- Sybarite

database for IBM COGNOS controller data must be one of the following types are:

- DB2
 - Oracle
 - Microsoft SQL server
-

oracle client data base if are using oracle client as database, the following components are the minimum requirement:

- oracle network utilities:
- oracle data base utilities
- SQL*PLUS
- Oracle JDBC/OCI interface
- Oracle window interface

NOTE:

We must install both the 32 bit and 64 bit on server.

data base for financial analytics publisher requires DB2, oracle,microsoft SQL server wed browser microsoft internet explorer.

reporting tool for financial analytics is IBM cog nos TM1, other TM1 supported viewers.

other are microsoft excl is required only to use the IBM cog nos controller link for microsoft excel.

4.EXPERIMENTAL INVESTIGATIONS

Analysis or the investigation made while working on the solution.

*while working on the solution we investigated on the what is crop production , IBM COGNOS ANALYTICS and how to build different visualizations and creating a dashboard exporting it.

*the key role on the investigation is collection of dataset with its all data points of every state because our solution mainly need this so we worked on the these aspects.

CROP PRODUCTION:

Crop production is the process of growing crops for domestic and commercial purposes . some of the crop produced on a large scale include rice , wheat, maize ,jute,etc.

- *soil preparation
- *sowing of seeds
- *irrigating the soil
- *harvesting of crops
- *storage of crops

THE FACTORS AFFECTING CROP PRODUCTION ARE:

- Soil fertility
- Availability of water
- Diseases
- Pests
- Climate

THE MAJOR FOOD CROP ARE:

- * potato
- * rice
- * soybeans

etc.....,

THE MAJOR FRUIT CROP ARE:

- * Grapes
- * Banana

etc.....,

Locally and across the globe,our researcher study the biology and production of fruit and vegetable crops inclining tomatoes,peppers,etc.....,

IBM CLOUD ACCOUNT :

* IBM CLOUD is set of cloud computing services for Business offered by the information technology company IBM .

- *It combines platform as a service (Paas) with infrastructure as a services (Haas).

- *The platform scales and supports both small development teams and organizations, and large enterprise businesses.

- *IBM COGNOS business intelligence is a web based integrated business intelligence suit by IBM.

- * IBM acquired soft layer, a public cloud platform for its lads offering.

- *IBM introduces the blue mix platform as a service (pas)

DATA COLLECTION:

- the data collection on crop production by

- *Agricultural problem early.

- *establish data collection.

- * format data to make it consistent.

- *reduce data .

- * join transactional and attribute data.

IBM COGNOS ANALYTICS:

IBM COGNOS ANALYTICS is a web based integrated business intelligence suite by IBM . it provides a tool set for reporting, analytics ,scorecards, and monitoring of events and metrics . creating amazing meaning full dashboard using cog nos analytics.

CREATING A DASHBOARD:

Dashboard track k pi , metrics and other data points one visual, central place . they give level view of work helping to make quick decision and keeping everyone up to date.

TO EXPORT THE DASHBOARD:

TO save the dashboard as image ,select image, the select location for download dialog box

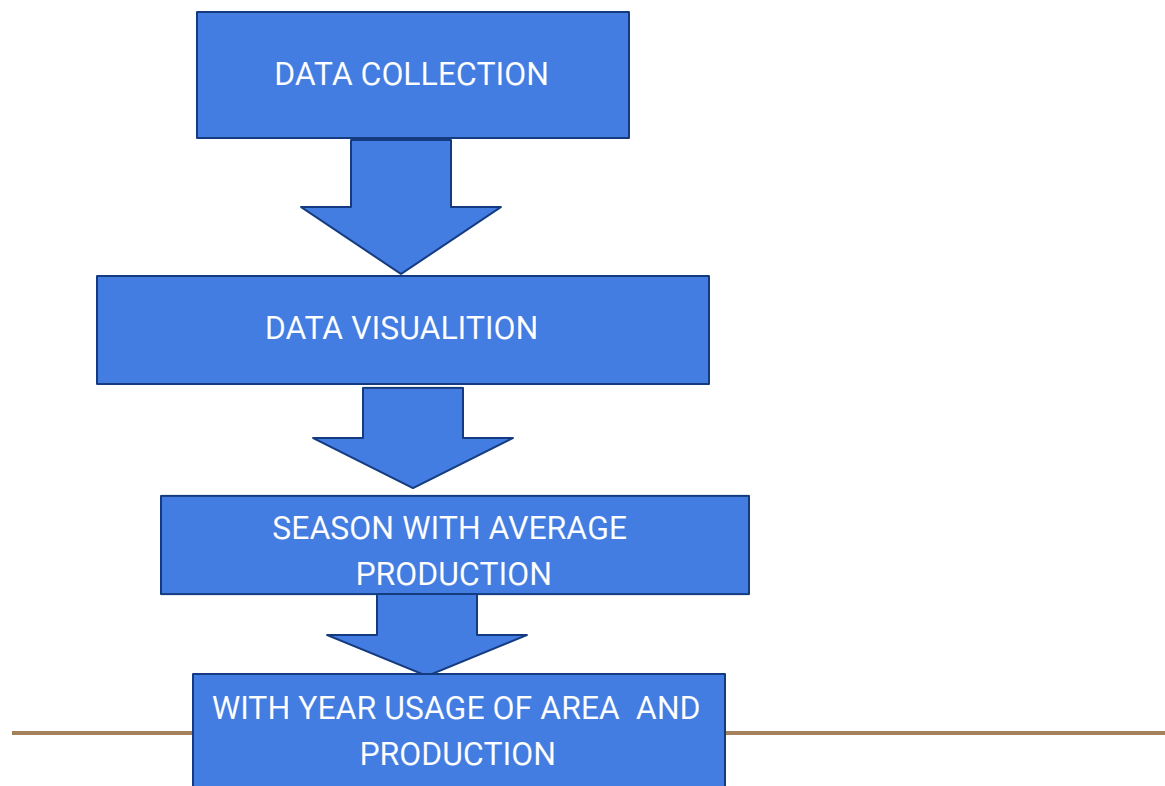
opens...

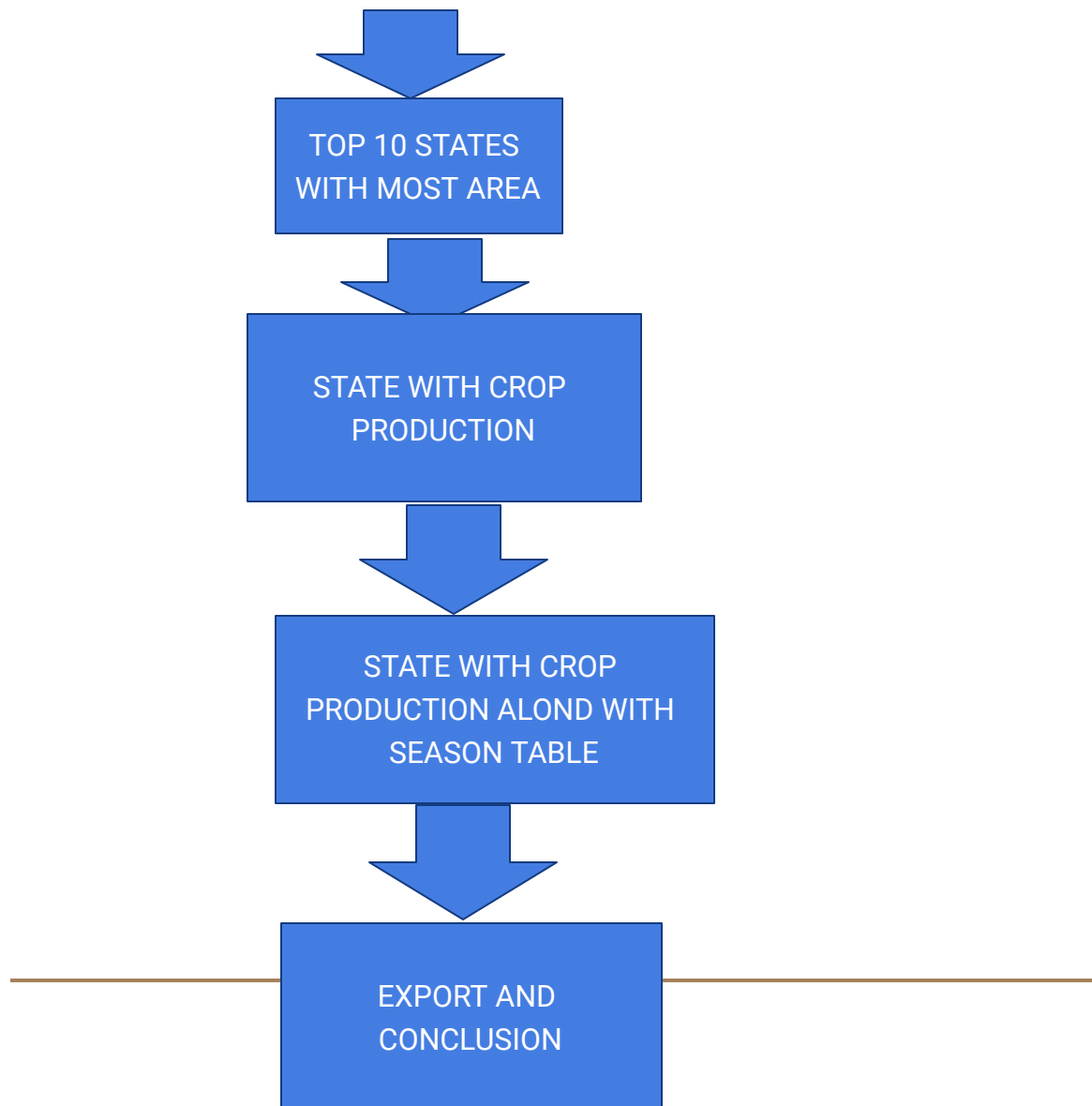
to save the dashboard as a flash file , select MHT, then do one the following.

to save the dashboard as a pdf file, select dashboard is exported and displayed in a browser window.

5.FLOW CHART

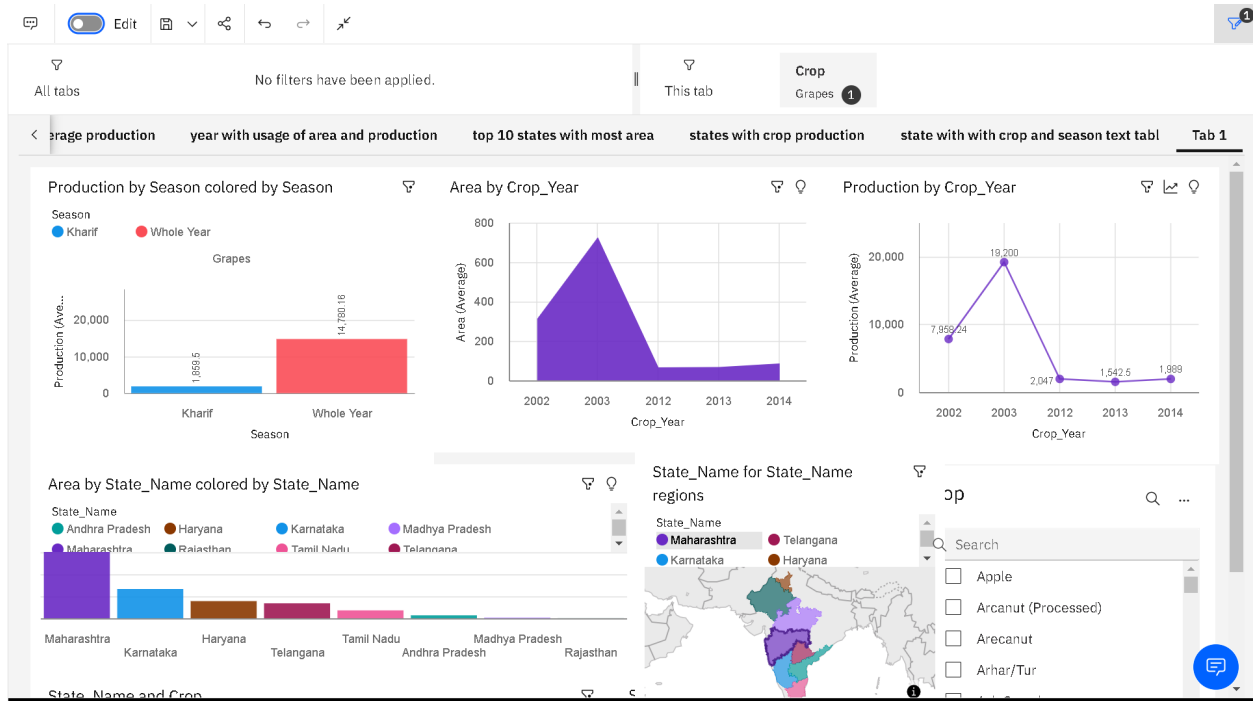
Diagram showing the control flow of the solution .

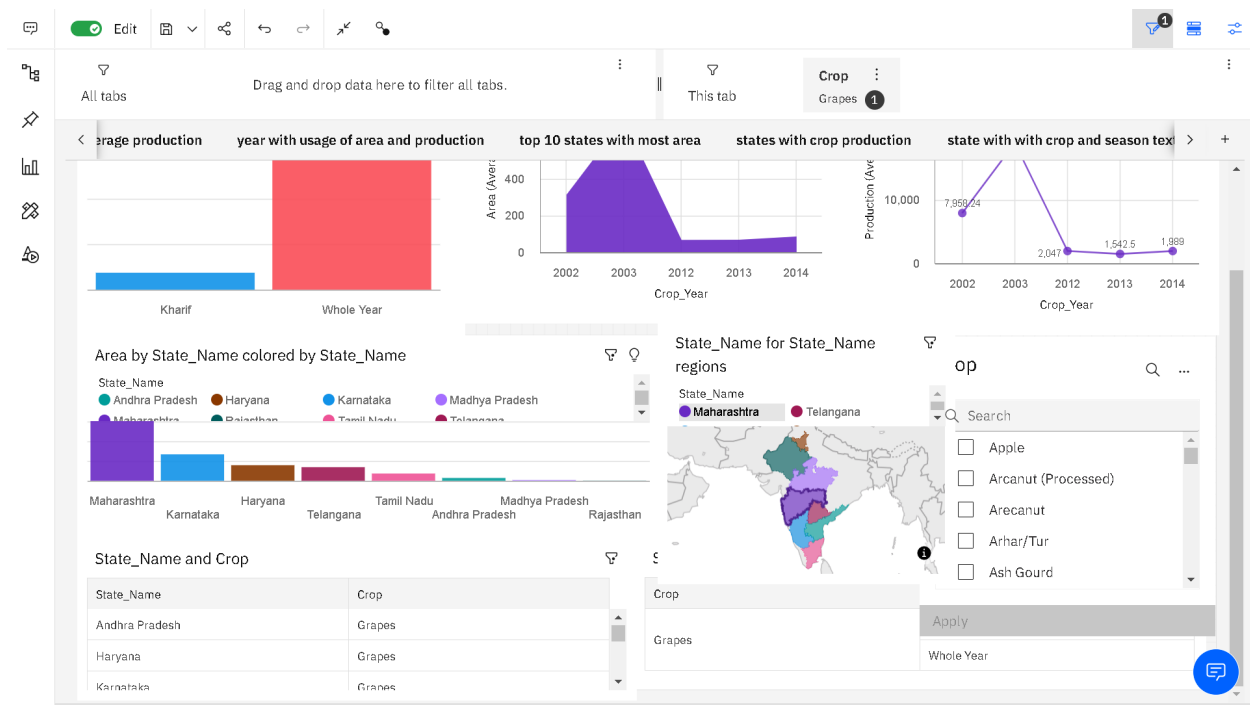




6 RESULT

Final finding (output) of the project along with screenshots.





7. ADVANTAGES AND DISADVANTAGES

LIST OF ADVANTAGES OF DISADVANTAGE OF THE PROPOSED SOLUTION.

ADVANTAGE:

The various advantage to integrating with cog nos 10.2.2 for generating reports.

-Lower costs-reduce maintenance due to complete report coverage and

zero-footprint environment.

- Faster results shortens reporting time due to seamless integration and adaptive authoring.
- Improved decision making report and dashboards present data in easily understood formats.
- Adaptive authoring automatically adjust report layout when objects are added, moved ,or removed.
- Ability to work with data using familiar business terms.
- Ability to use a variety of charts cross tabs,bar or 3D BAR,pie or doughnut , line , gauge, funnel, scatter,dot density, waterfall, and so forth.
- Ability to create complex, multi page layouts using different data sour es.
- high performance data access across all sources.
- complete connectivity regardless of environment.
- open architecture that leverages XML,SOAP , AND WSDL.
- Multiple export format - excel, portable document format (pdf),extensible markup language (XML),hypertext markup language (HTML), and comma separated value .
- Multilingual capabilities automatically deliver reports in the users working language.
- Ability to inter grate seamlessly with the selling and fulfillment foundation , without the user having to login in to the application again.

DISADVANTAGES;

- Cog nos business intelligence solution, like products from business objective , also have a number of disadvantages. chief among them is complexity.
 - Cog nos business intelligence software is difficult to meloy , setup and maintain.
-

-Cog nos business intelligence products have also gained a reputation as being difficult to use of the ESB architecture

- With multiple moving parts , locally deployed software and other technical challenges , cog nos business intelligence products have had a much harder time gaining acceptance in sub enterprise deployments .

- cog nos business intelligence solution have also not been accepted eagerly in departmental or divisional deployments were cog nos business intelligence advantages offset by the high IT. requirements placed by cog nos business intelligence products.

8.APPLICATIONS

The areas where this solution can be applied:

- *Query performance

- * General production system performance

- * Aggregate view of data vs transaction view

- * complete SOL

- * Normalized databases are typically tuned for simple queries

9.CONCLUSION

-By the end of this project we got to know the fundamental concepts and we can work IBM cog nos analytic. We can understand the plotting of graphs.able to create a meaning full dashboard.we can know to create multiple analysis using the analyzed chart we create visualization . we got to know about IBM account. we get to know about implementing cross tabs and SQL queries

10. FUTURE SCOPE

ENHANCEMENT THAT CAN BE MADE IN THE FUTURE .

Cog nos is the one of the leading BI suites in the market for data modelling and reporting so lettering this be definitely helpful in our career growth in BI domain . IBM cog nos TM1 from 10 has been around for decent time and has officially experienced a few minor and real updates.we can scope the better job in future with easy experience.

11 BIBILOGRAPHY

Reference of previous works or wed site visited/books referred for analyses about the project solution previous findings etc....

<https://knoema.com/insigts?tag=crop%20dashboard>

<https://agrionline.nic.in/dash.html>
