

A project report on

INSIGHTVIEW ENHANCEMENTS

Submitted in partial fulfilment of the requirements
for the award of the degree of

MASTER OF COMPUTER APPLICATIONS of



Visvesvaraya Technological University
Belgaum, Karnataka

By

SHEELA KUMARI
1CR17MCA17



CMR INSTITUTE OF TECHNOLOGY
132, IT Park Road, Kundalahalli, Bangalore-560037
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Under the guidance of

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Ms Uma. B

Assistant Professor,
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2019-2020

CMR INSTITUTE OF TECHNOLOGY

Department of Master of Computer Applications

Bangalore - 560 037



CERTIFICATE

This is to certify that the project work entitled

INSIGHTVIEW ENHANCEMENTS

*Submitted in partial fulfilment of the requirement
for the award of the degree of
Master of Computer Applications of the
Visvesvaraya Technological University, Belgaum, Karnataka
bonafide work carried out by*

SHEELA KUMARI

1CR17MCA17

during the academic year 2019-2020.

Signature of the Guide

Ms. Uma. B

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PRINCIPAL, CMRIT

External Viva

Name of the Examiners

1.

2.

Signature with date



19th May 2020

CERTIFICATE OF PROJECT COMPLETION

This is to certify that **Ms. Sheela Kumari(1CR17MCA17)**, student of **CMR Institute of Technology, Bengaluru** pursuing **MCA** has successfully completed project on **Insightview Enhancements** at Dsquare Solutions Pvt Ltd. from **2nd January 2020** to **15th May 2020**. During her tenure, she was found punctual, hardworking and inquisitive.

If you have any questions or need additional information, please do not hesitate to contact our Human Resources department.

Sincerely,


Vijayaraghavan R
Director – Delivery



DECLARATION

I, **SHEELA KUMARI**, student of 6th MCA, **CMR Institute of Technology**, bearing USN **1CR17MCA17** hereby declare that the project entitled **INSIGHTVIEW ENHANCEMENTS** has been carried out by me under the supervision of External Guide **Mr. Vijayaraghavan R**, Director and Internal Guide **Ms Uma. B**, Assistant Professor, **Dept. of Master of Computer Applications** and submitted in the partial fulfilment of the requirements for the award of the Degree of Master of Computer Applications by **Visvesvaraya Technological University** during the academic year 2019-2020. This report has not been submitted to any other Organization/University for any award of degree or certificate.

Place: Bangalore

SHEELA KUMARI

Date:

(1CR17MCA17)

ACKNOWLEDGEMENT

I would like to thank all those who are involved in this endeavour for their kind cooperation for its successful completion. At the outset, I wish to express my sincere gratitude to all those people who have helped me to complete this project in an efficient manner.

I offer my special thanks to my external project guide Mr. Vijayaraghavan R, Director, DSquare Solutions Pvt. Ltd., Bangalore, and to my Internal Project guide Ms. Uma. B, Assistant Professor, Department of MCA, CMRIT, Bangalore without whose help and support throughout this project would not have been this success.

I am thankful to Dr. SANJAY JAIN, Principal, CMRIT, Bangalore for his kind support in all respect during my study. I would like to thank my family members for their warmth, support, encouragement, kindness and patience. I am really thankful to all my friends who always advised and motivated me throughout the course.

SHEELA KUMARI

(1CR17MCA17)

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CHAPTER 1

INTRODUCTION

1.1 PROJECT DESCRIPTION

Innovation, an operation that adds values to the merchandise. For a product to maintain its competitiveness while growing within the market it is required that the product is enhanced and updated according to the market needs.

In order to begin with any enhancement projects, there are basic practices to be taken into use like:- Understanding the architecture and technicalities of the existing product, analyzing the new features to be incorporated into the existing system, there should be an action plan of the approach to be implemented, considering the most efficient cost and price engineer the product as per the plan etc.

There are various types of enhancement projects that can be carried out depending on many forms and scaling like: -

- Customizing the product more for different users
- Capabilities of the product being extended
- Usability of the product being improved
- Performance and scalability can be important factors for enhancement project
- Various emerging technologies can also be leveraged

Incorporating the feedback in the next versions involves analysis of how relevant, feasible and cost effective the change is.

This is an enhancement project of Insightview, a proprietary system owned by DSquare Solutions that has the capabilities and the abilities to take care of the large amount of data.

The areas of enhancement/ the enhancement works are as follows: -

- **Option to Add User based Favourite Reports**

There are some reports which the user visits frequently, in order to make it convenient for him, an option to make the particular report as favourite would help him to provide easy and fast access to those reports.

- **Maintenance Page**

Every system undergoes some scheduled maintenance during which the users should be informed about the ongoing upgradation as well as allowing the admin to access the system. So, maintenance page is required for it.

- **Published Report Icon**

When the user wants to make his report visible to users as well, he sends the publish request to the admin. After the admin accepts the request, there should be some indication to specify that the report is published. So, the colour of globe icon should be changed.

- **Validation during Dashboard Creation**

If the dashboards with same name are created it will lead to confusion and difficulty to identify the particular dashboards. So, it is important to have a validation check to ensure that the dashboards with same name are not created in the same parent directory.

- **Tooltip in GIS Map report**

In this report, only the first selected measure is visible in the tooltip. So, the tooltip has to be configured to show all the selected measures.

- **Icon to show applied QuickFilters**

In QuickFilters, there should be some indication of the particular filters which are selected. Otherwise the user has to go to every tab in order to find the applied filters.

- **Option to Unselect all QuickFilters**

For convenience, there should be one option to unselect all QuickFilters, else the user has to go to every filter and unselect it.

- **Tabbed View Enhancement**

In splitby window, the tabs need to be enhanced in order to differentiate them.

- In QuickFilters if the text is big, the 'x' to unselect is not visible.

- **Presentation Comment Box**

In the Presentation, if comment box is cleared, the comment reappears.

1.2 COMPANY PROFILE

DSquare Solutions may be a data science and analytics company. Bangalore-based DSquare was founded by Anand Srinivasan in 2009. Srinivasan is an alumnus of IIT Madras and Purdue University. He had worked with Sabre Corporation and Mu Sigma and Dell. DSquare brings together business analytics products and consultancy solutions to optimize time spent on informed decisions. the corporate design and develops analytical software solutions.

At DSquare Solutions we aim to induce our journey from Data to Decisions – not smarter, not faster, not smarter and faster – but smarterfaster™. We collect your data form various sources right from the basic data in raw format be it any source of data, it is brought into our system with the aim of making the data into a required format and to make it presentable by rendering it into different types of visualizations possible. The visualizations help you in making effective business decisions because we believe that the choices that are made should be considered very important that it should be considered as supreme priority in the business process.

smarterfaster™ is a proprietary Data Analytics Methodology of DSquare Solutions which illustrates their approach in providing the quality data analytics products and c0nsultancy services. InsightView is a proprietary system that has the capabilities and the abilities to take care of the large amount of data. InsightView works on the philosophy of smarterfaster where the data and decisions are considered as single entity. The data is collected from various sources of different types and all are cleaned and made to the desired format in order to provide with the insight of the data of the clients. InsightView is not just a software, it is a quality-product which satisfies customer requirements of data visualization. It brings to the clients various visualisation methods at a reasonable cost.

Hansa Cequity acquired DSquare Solutions on July 20, 2016. Hansa Customer Equity Pvt. Ltd (Hansa Cequity), may be a Mumbai-based marketing analytics firm DSquare functions as a separate entity but synergize its resources and offerings with Cequity. DSquare currently caters to the clients in IT & networking, BFSI and other industries across markets.

CHAPTER 2

LITERATURE SURVEY

2.1 EXISTING AND PROPOSED SYSTEM

2.1.1 EXISTING SYSTEM

InsightView is a proprietary system that has the capabilities and the abilities to take care of the large amount of data. InsightView works on the philosophy of smarterfaster where the data and decisions are considered as single entity. The data is collected from various sources of different types and all are cleaned and made to the desired format in order to provide with the insight of the data of the clients. InsightView is not just a software, it is a quality-product which satisfies customer requirements of data visualization. It brings to the clients various visualisation methods at a reasonable cost.

Some highlights of the system are: -

ADMIN SIDE

- Product Configurations
- Manage User Profiles
- Manage Connections
- Manage Apps

Product Configurations

Here the admin can manage the configurations of the system like configurations related to connections, filters, the default email to receive feedback from users etc. This gives control to the admin to change the configurations when necessary.

Manage User Profiles

The admin can add users by assigning them access to specific apps and other functionalities. He can also view, edit as well as delete the user profiles.

Manage Connections

This allow the connections to be made to various sources of data in order to take datasets the sources which can be used to prepare reports.

Manage Apps

Here the admin can create apps and also specify which users can access it. He can also edit the apps to add or remove the access of users to it, as well as delete any app when not in use.

USER SIDE

- User App
- Settings
- Notifications and tasks

User App

User specific apps are created by the admin and to which specific users have access. Each App contains Options to create Report, Dashboard as well as presentations.

Settings

The user can personalize his profile through this option. He can select different languages, set default report as landing page after login change password etc.

Notification and tasks

All the system messages as well as notifications of the users tasks are available under this option.

2.1.2 PROPOSED SYSTEM

The proposed project has all above mentioned enhancements mentioned in the introduction like maintenance page creation, user specific favourite reports addition, change the colour of icon to signify that the report has been published, that will have significant effect on user experience, tabbed view enhancement in reports, add options to perform sorting, validate creation of dashboards with unique name under any parent directory etc.

2.2 FEASIBILITY STUDY

Feasibility study takes project's analyse factor that includes economic, technical, legal and schedule that considers the project should be completed successfully, It is a stage where the project is designed that prescribes whether the project is possible or not.

The aim of feasibility study:

- To Examine whether the project will meet companies requirements.
- To inspect if the project can be done with existing technology within particular budget and schedule.
- Can the product be coordinated with other programming in the application area.
Following are the feasibilities
- Technical feasibility
- Operational feasibility
- Economic feasibility

Operational Feasibility – Determines whether system performs the required operations tackling all the complications and also makes sure that it satisfies all the requirements that were listed in the requirement analysis.

Economic Feasibility - The Economic Feasibilities prescribes the cost for operation i.e., To inspect whether the project is completed within the estimated budget. Most of the projects are done within the budget with the usage of open-source technologies available in the market.

Technical Feasibility – The Technologies Feasibilities prescribes that the updated web technologies are used in the project.

2.3 TOOLS AND TECHNOLOGIES USED

Front End:

- React js
- Redux
- JavaScript

Back End:

- Play Framework

Database:

- MySQL

Tools:

- Visual Studio Code Editor
- Eclipse
- MYSQL Workbench
- GIT

React Js:

React Js is web framework which is used to develop single page applications. The creation of interactive user interfaces becomes painless with React as it efficiently updates and renders the particular component whenever the data changes.

Redux:

Redux is a state container which is predictable, i.e., the state transitions of individual is tracked and is used for JavaScript applications. It is used to maintain the state of components in the application. It is not tied to React hence for that purpose react-redux library is used.

JavaScript:

JavaScript is JIT compiled programming language. It is light weight and interpreted scripting language . ES6 is used in this project as it provides many effective features.

Play Framework:

Here play framework is used for backend services with the frontend being React. The combination provides great development experience without CORS to be handled.

MySQL:

An RDBMS, Open source and free software available under a variety of proprietary licenses.

Visual Studio Code Editor:

It is source code editor for building and debugging web and cloud applications. The React project is edited in this editor.

Eclipse:

Eclipse editor is used for editing play applications. Java programming language is used to developing play applications.

MYSQL W0rk Bench:

MYSQL W0rk Bench is useful User Interface tool for data management.

GIT:

It is version control system for handling small to large projects efficiently.

2.4 HARDWARE AND SOFTWARE REQUIREMENTS

HARDWARE REQUIREMENTS

System Processor: core i3 intel (equivalent or above)

System Processor Speed: 3.20 GHz or Higher

System RAM: 8GB or greater

System Hard Disk Space: 150 GB

SOFTWARE REQUIREMENTS

a. Server Operating System

Ubuntu 16.04 LTS

b. Server Database

MYSQL 5.7

c. Tools

Visual Studio Code Editor, Eclipse, MYSQL Workbench, GIT

d. Libraries and packages

async, base64-img, bcrypt, co, compression, cors, dateformat, file-extension, helmet, jsonfile, logbro, loopback, loopback-boot, loopback-component-explorer, loopback-component-logger, loopback-component-storage, loopback-connector-mysql, loopback-connector-sendgrid, loopback3-xtotalcount, node-crontab, node-fetch, node-schedule, options, otp-generator, serve-favicon, strong-error-handler

CHAPTER 3

SOFTWARE REQUIREMENT SPECIFICATION

3.1 USERS

3.1.1 USER CHARACTERISTICS

This project used within the organization as well as it is associated vendors and branches which are spread all over India, and no one else from outside are allowed to use it. The main users of this product are given below.

- Retailers
- Sales Team
- Support Team

3.2 FUNCTIONAL REQUIREMENTS

Module Description: This module has been designed to read the user reviews form different e-commerce websites. Along with the user reviews it also takes all the metadata which helps us to create reports more efficiently. After taking all the necessary data from these websites, we can create an ADS which acts as a data repository for the user review data. From here, we can create different reports and show different forms of visualizations to the user.

i. Uploading the source data:

The application will upload the data from various e commerce websites. The overall process is as:

- Provide the product name and the URL of the product.
- After clicking on update button, the system goes to the particular web URL and retrieves all the data from the URL for that product and stores the data in the database.

ii. Viewing the Source Data:

Here we can view all the product related data on our system by just clicking on the particular table which gets created as soon as the product reviews are downloaded. This is simply for viewing purpose and the user can do the necessary checks to see if the data received is correct and consistent.

iii. Creating the ADS

As we have got the data with us, we can go ahead and create what we call an ADS (Analytical Data Source). This is the repository which can be used to create reports from the data at a later stage.

iv. Generating Reports

Reports and visualizations are a very powerful way to show some meaning from the data. Since we have an ADS already created, the next step is how to create visualizations and reports from it. In the Visualization part of the program, we can go ahead and create dimensions and measures for a particular product and start building reports from that.

3.3 NON-FUNCTIONAL REQUIREMENTS

i. Security

Since the records related to different projects are managed and maintained together, there will be a chance of data loss. And there are many different levels of users. Each user is categorized by giving some priorities. Data should be abstracted based on the assigned priorities.

ii. Speed and efficiency

Since it is a web-based application, there may be a lot of users accessing the system concurrently. Speed in accessing the projects and data collisions should be managed in very efficient manner.

iii. CPU and memory

The supported devices could have a really big selection of capabilities in terms of CPU speed and available memory. Each feature must be evaluated in the application from the point of view of CPU and memory consumption while running.

CHAPTER 4

SYSTEM DESIGN

4.1 SYSTEM PERSPECTIVE

The above figure illustrates interaction between the client and the database with the help of Data Explorer and Visualization. Wherein Data Explorer consists of processes like:

- i. Database Connector: It allows us to connect different database, web sources.
- ii. Dimension Creator: Creator who is used to support end user queries.
- iii. Measures Creator: Creator who works on numeric values where mathematical functions work. Example: Revenue Column, Average or total. Both Dimension and Measures creator work together.

Visualization consists of several processes like:

- i. Report Designer: The various reports are designed in form of charts like bar chart, column chart, grid chart, etc.
- ii. Report Editor: This facilitates one to edit the reports by changing the chart type, filters, etc

Dashboard Designer: Pages that include performance point items along with other kinds of SharePoint items. We can also create dashboard that combines report, scorecard and filters that we create using dashboard designer.

BLOCK DIAGRAM

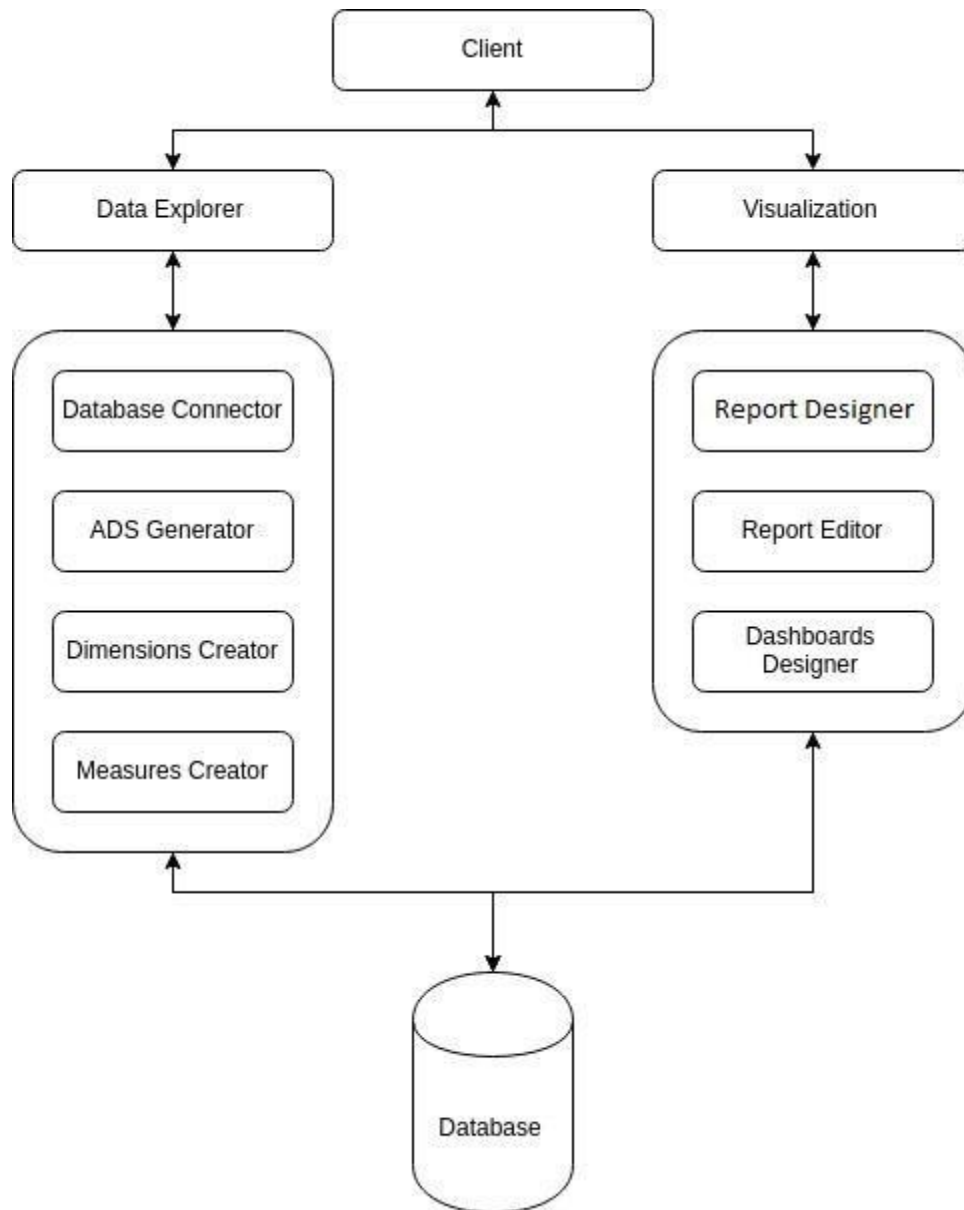


Fig. 4.1. Block Diagram

4.2 CONTEXT DIAGRAM

Data flow diagram gives an insight of the flow of the data in any system. There are different levels in DFD mainly 0level, 1level, 2level. 0Level DFD is called Context diagram. This explains the complete process at high level which can be understood by any category of audience.

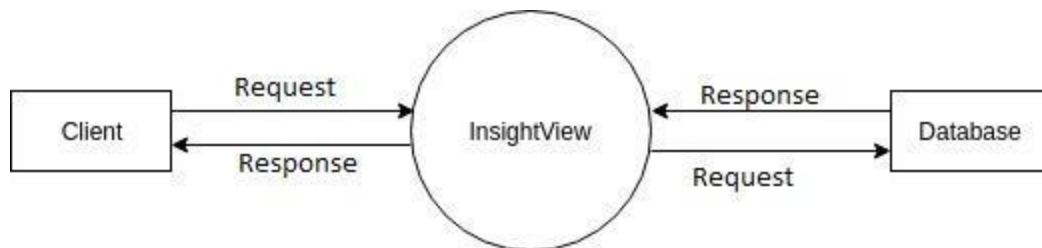


Fig. 4.2. DFD level 0

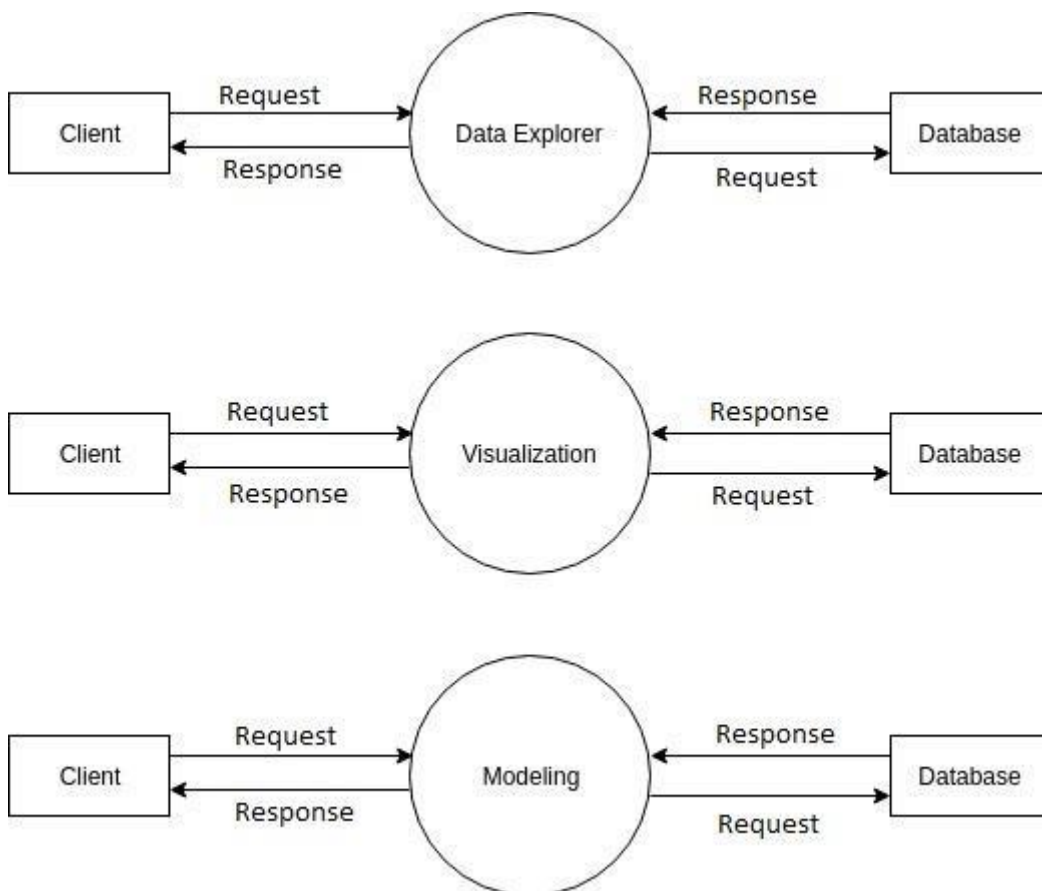


Fig. 4.3. DFD level 1

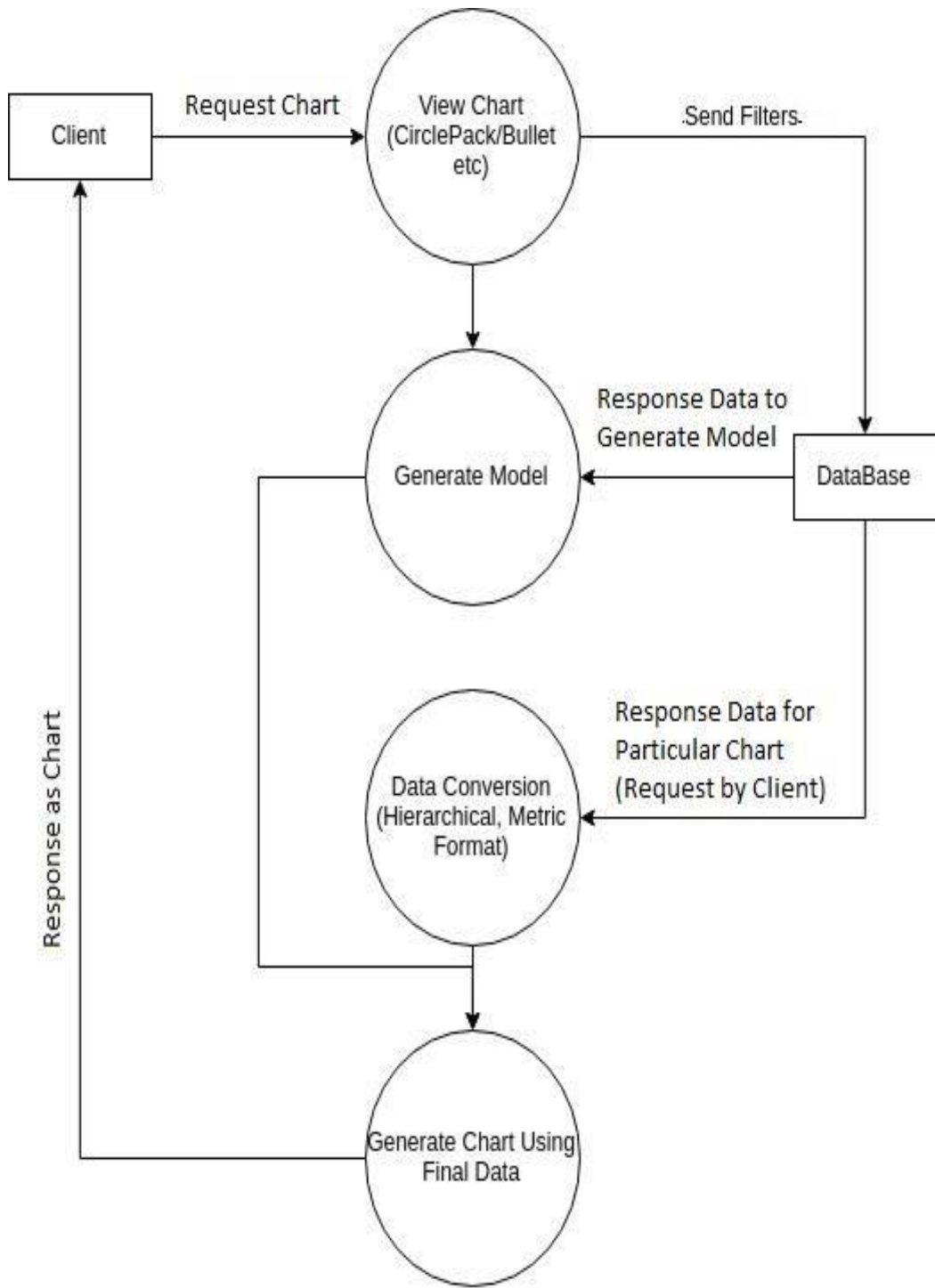


Fig. 4.4. DFD level 2

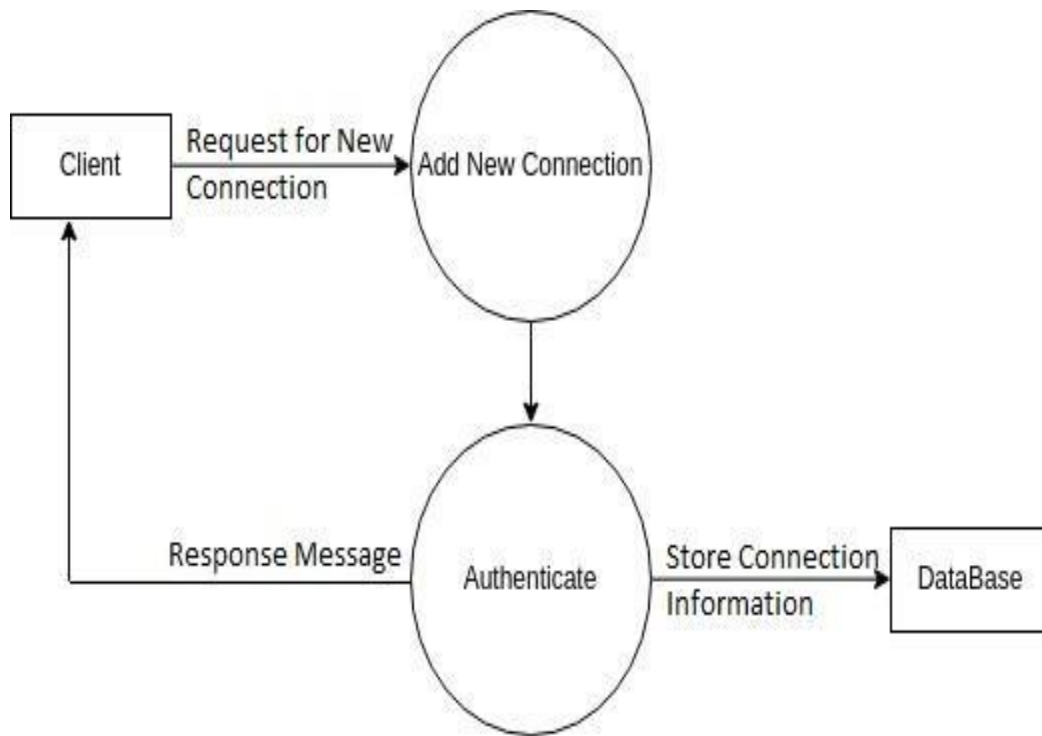


Fig. 4.5. DFD level 2

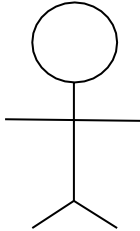
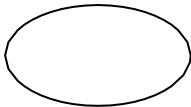
CHAPTER 5

DETAILED DESIGN

5.1 USE CASE DIAGRAM

It states the functionalities and the relationship between the user and the application, it uses actors and use cases to illustrate the operations of the system.

Notations	Notation	Name
		Use Case
		Association
		Actor
		Generalization



5.1.1 USE CASE DIAGRAM FOR INSIGHTVIEW

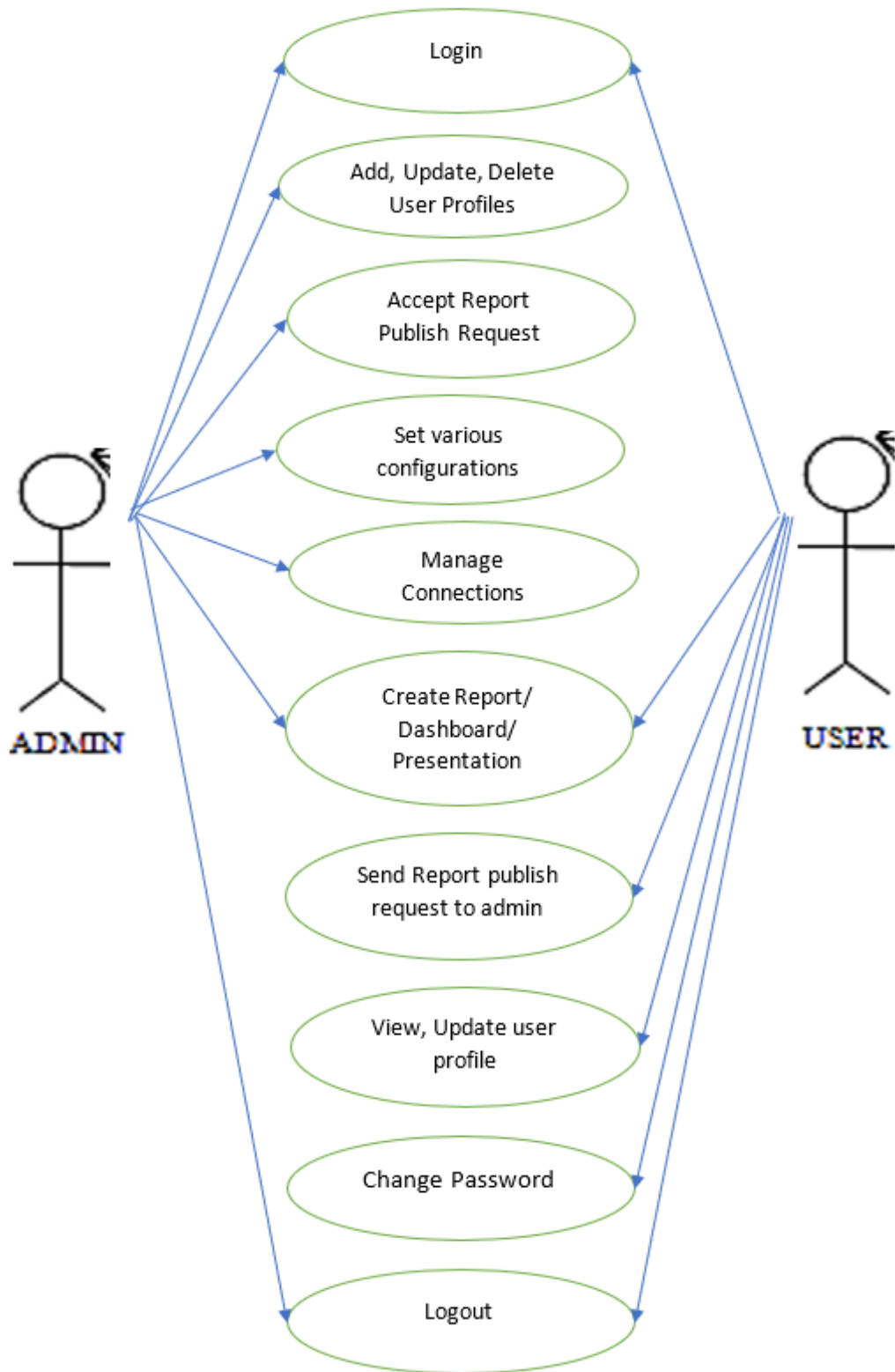


Fig 5.1 Insightview use case diag

5.2 SEQUENCE DIAGRAMS

Event diagram/Sequence diagram illustrates the objects' interactions, also it describes the system functioning order and it focuses on the message exchange between the lifelines. The below shown **Figure 5.2** and **Figure 5.3** describes the operations of admin and users in web application sequentially.

5.2.1 ADMIN SIDE

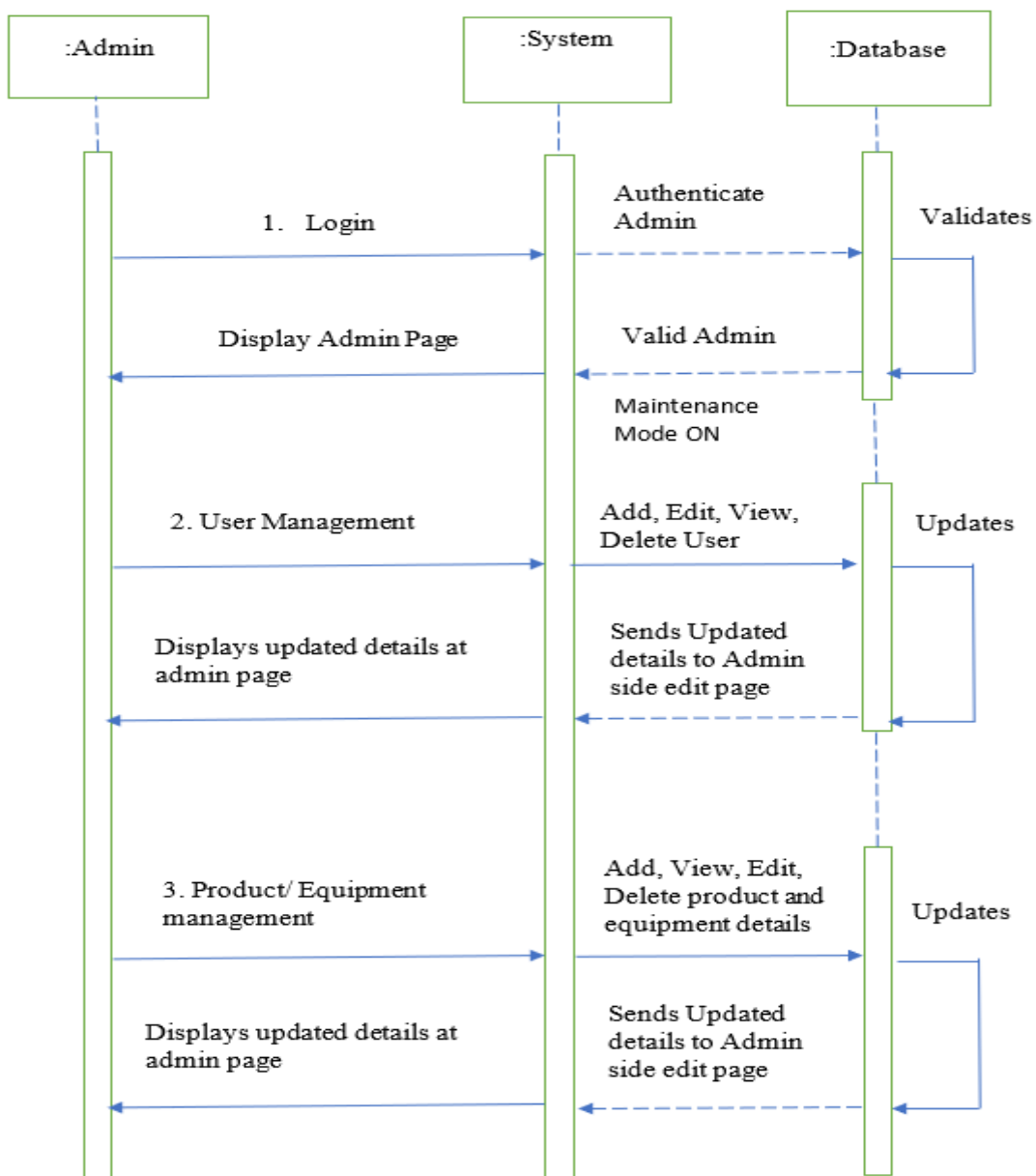


Fig 5.2: Admin side sequence diag

5.2.2 USER SIDE

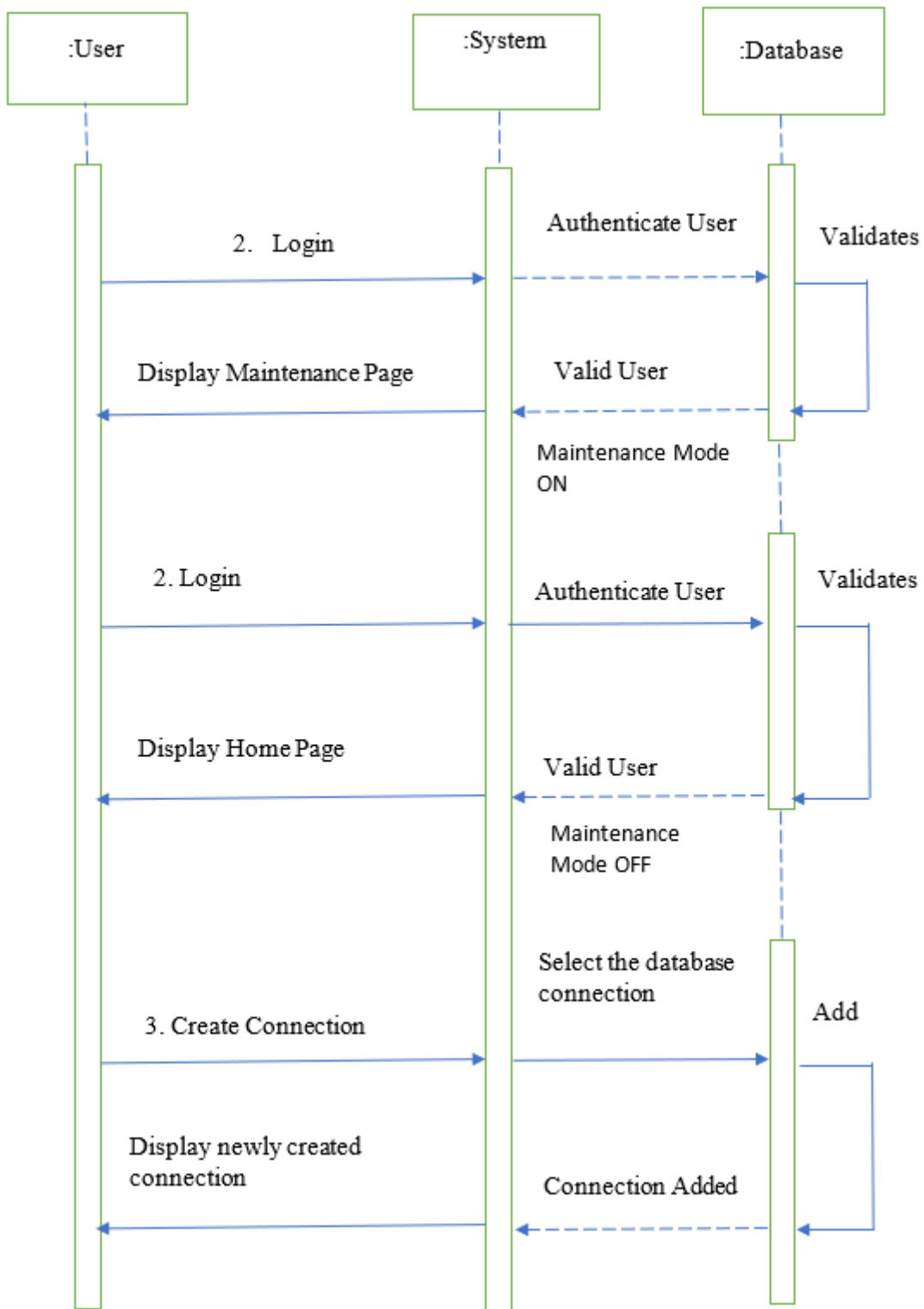


Fig 5.3: User side sequence diag

5.3 COLLABORATION DIAGRAMS

In UML, collaboration diagram illustrates the connections and interactivities between the software objects. It is also called as communication diagram. In **figure 5.4** and **figure 5.5** the collaboration diagram of admin and the users are shown.

5.3.1 ADMIN SIDE

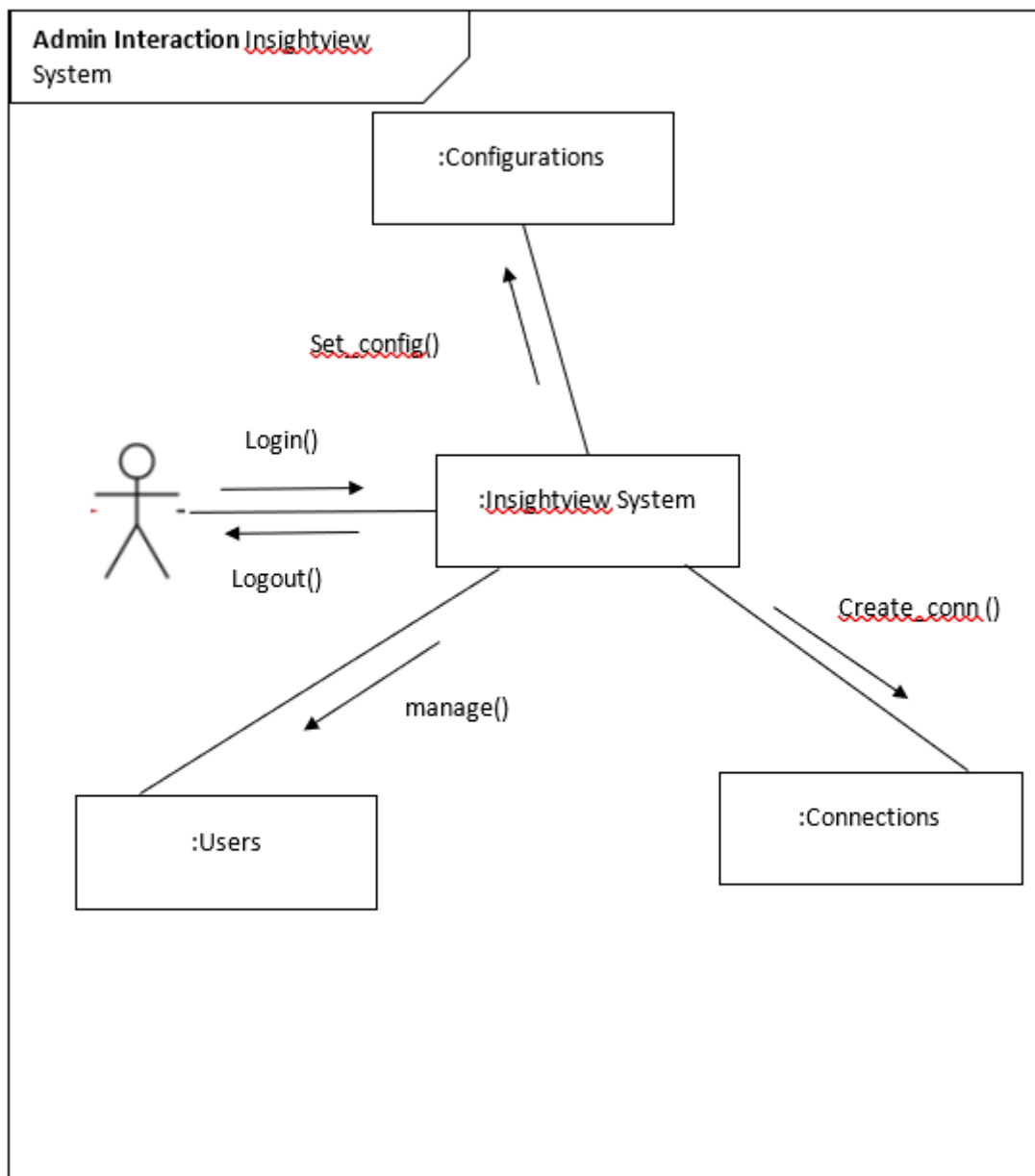


Fig 5.4: Collaboration diagram for admin

5.3.2 USER SIDE

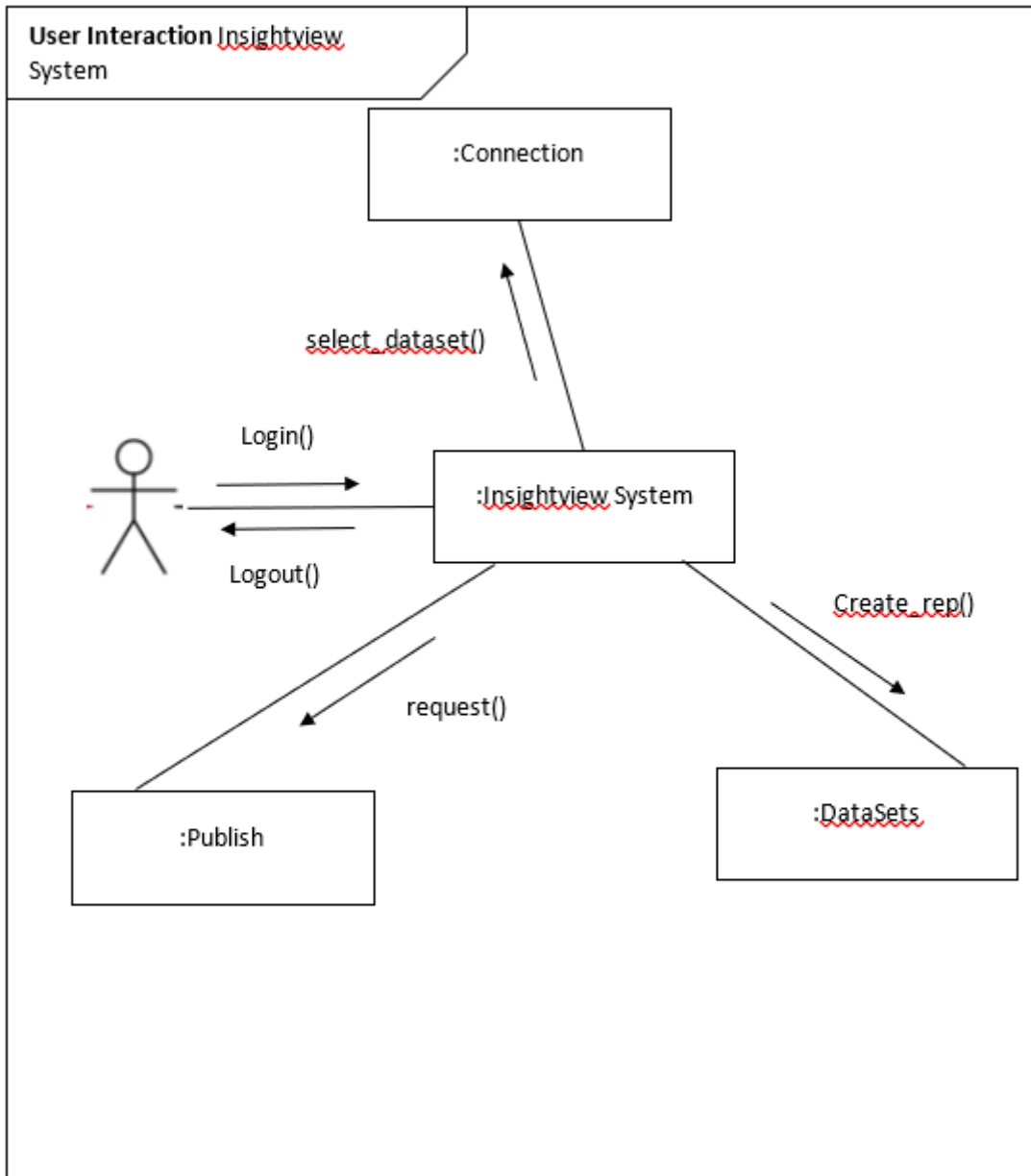


Fig 5.5: Collaboration Diagram for user

5.4 ACTIVITY DIAGRAM

Activity Diagram illustrates the control flow and it is also known as behavioural diagrams that displays the object flow which emphasis sequence, conditions of the flow. It consists of starting and end point. And between the starting and ending point the flow of the control is illustrated using various symbols like rectangles for object, arrows for connecting the symbols, diamond for decision, fork etc.

5.4.1 ADMIN SIDE

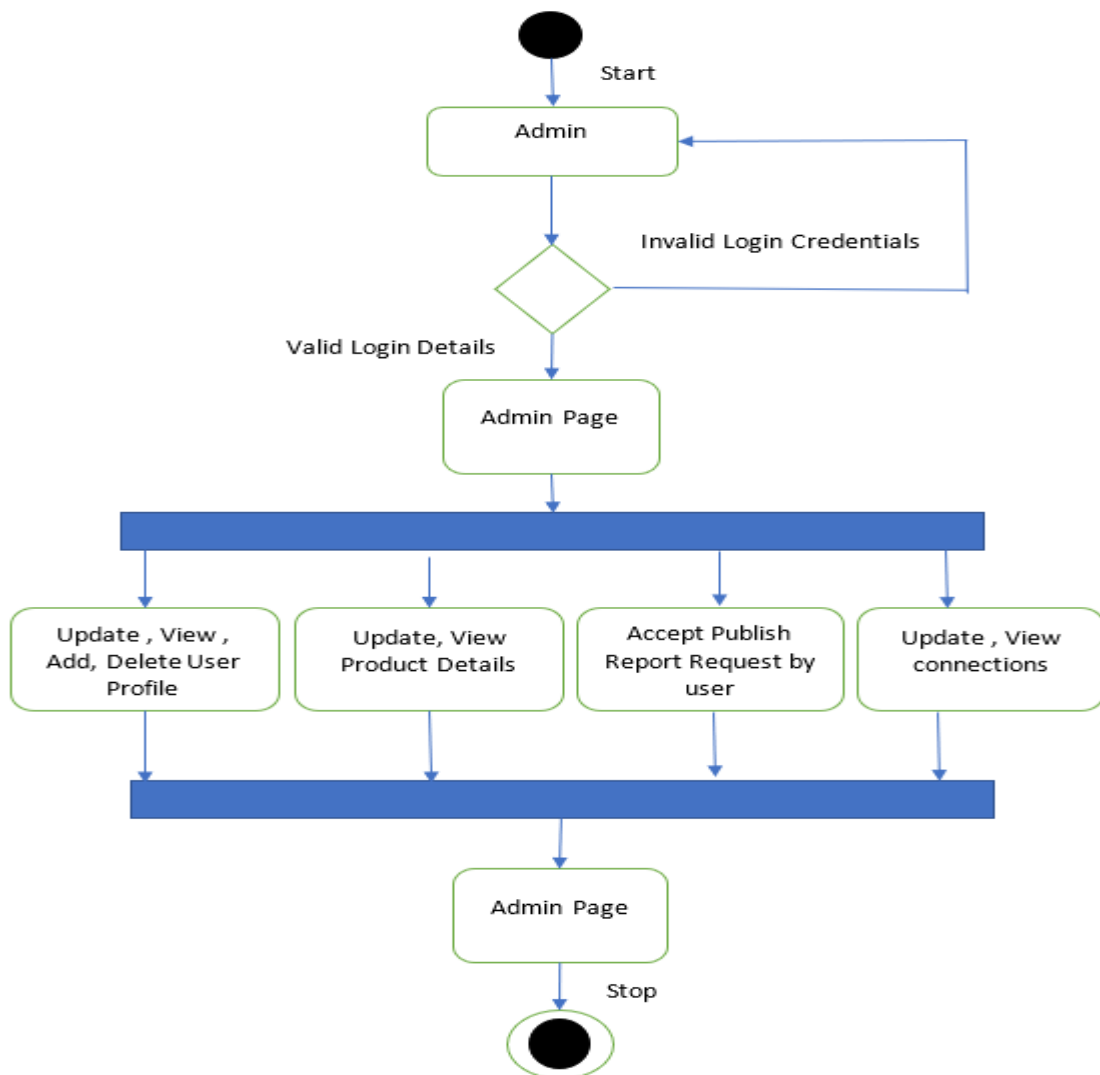


Fig 5.6: Admin side diagram

5.4.2 USER SIDE

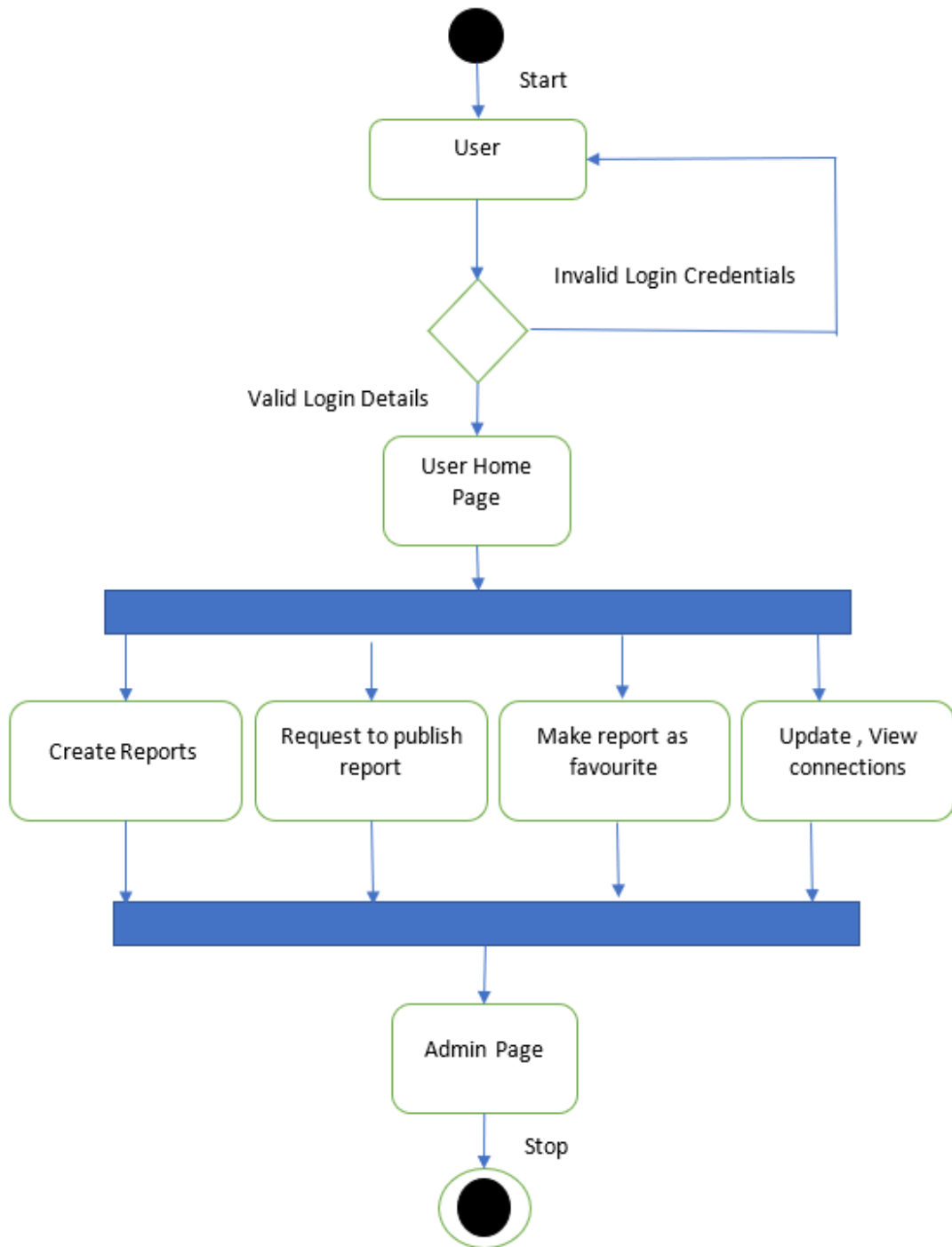


Fig 5.7: User side diagram

In above shown **Figure 5.6** and **Figure 5.7** diagrammatically describes the activities performed by admin and the user

5.5 DATABASE DESIGN

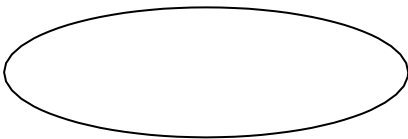
Entity Relationship Diagram defines the E-R model that describes the structure of the database . It shows the single entities of relation and single instances.

The ER Model is spoken to by methods for an ER outline. Any article, for instance, substances, properties of an element, relationship sets, traits of relationship sets, can be spoken to with the assistance of an ER outline.

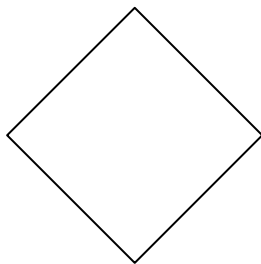
E-R DIAGRAM NOTATIONS



Rectangle denotes the Entity



Ellipse denotes the Attributes



Rhombus denotes the Relationship sets



Lines links the Attributes and Entity set

5.5.1 ER DIAGRAM FOR INSIGHTVIEW

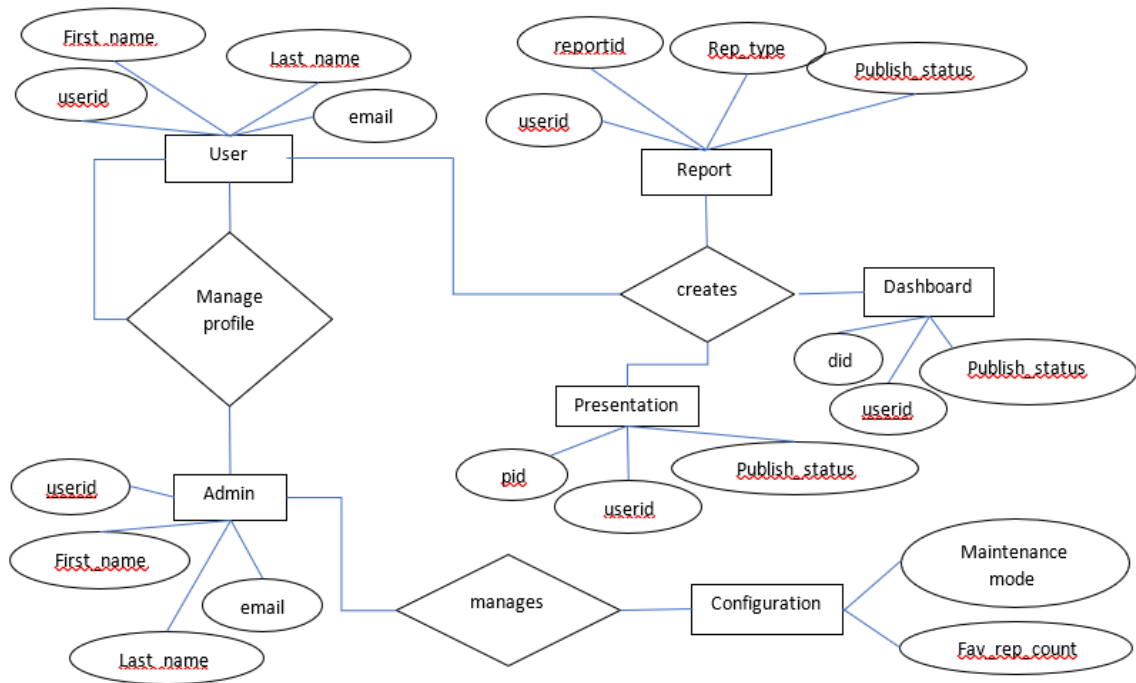


Fig 5.8: Entity Relationship Diagram/Conceptual Diagram for Insightview

The above show **figure 5.8** represents the database diagrammatically that contains entity, attributes and relationship between all the entities

CHAPTER 6

IMPLEMENTATION

6.1 SCREENSHOTS

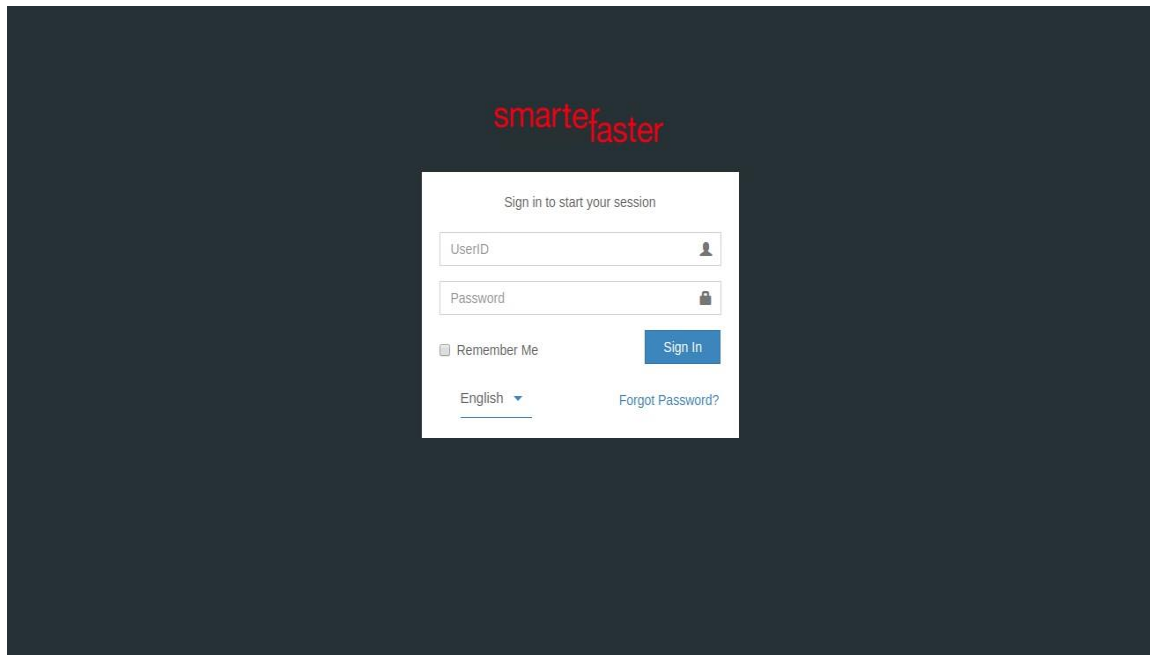


Fig. 6.1: Login Screen

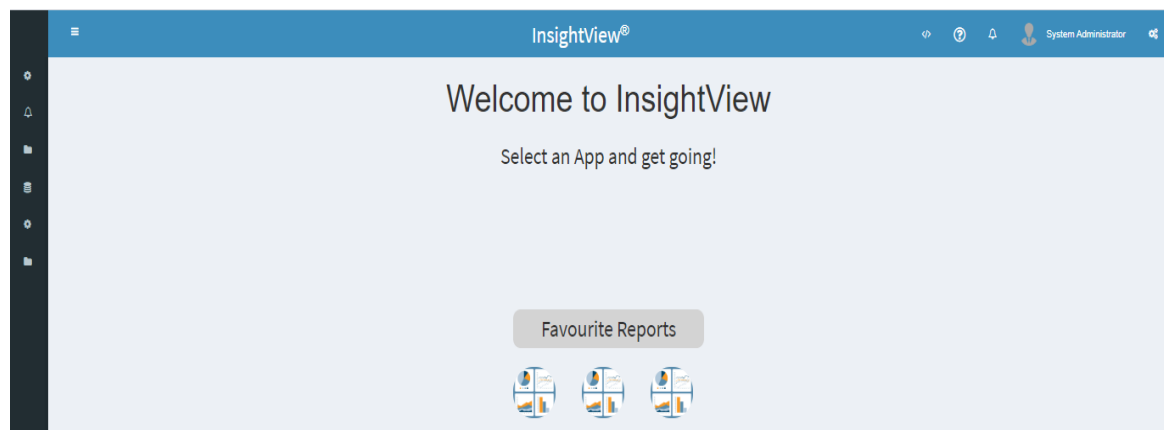


Fig. 6.2: Home Page

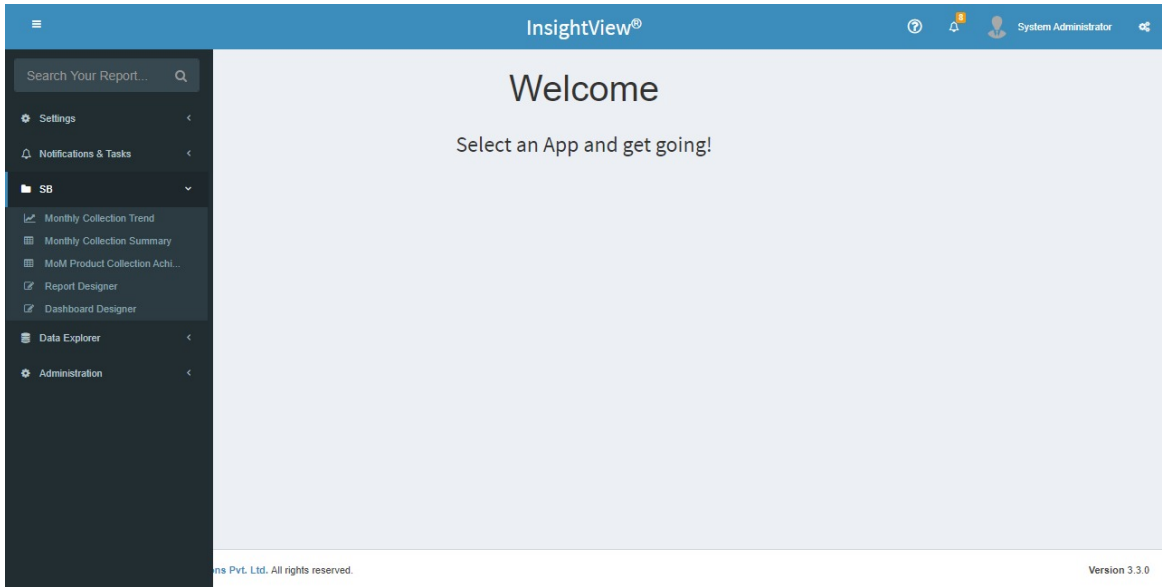


Fig. 6.3: Side Menu

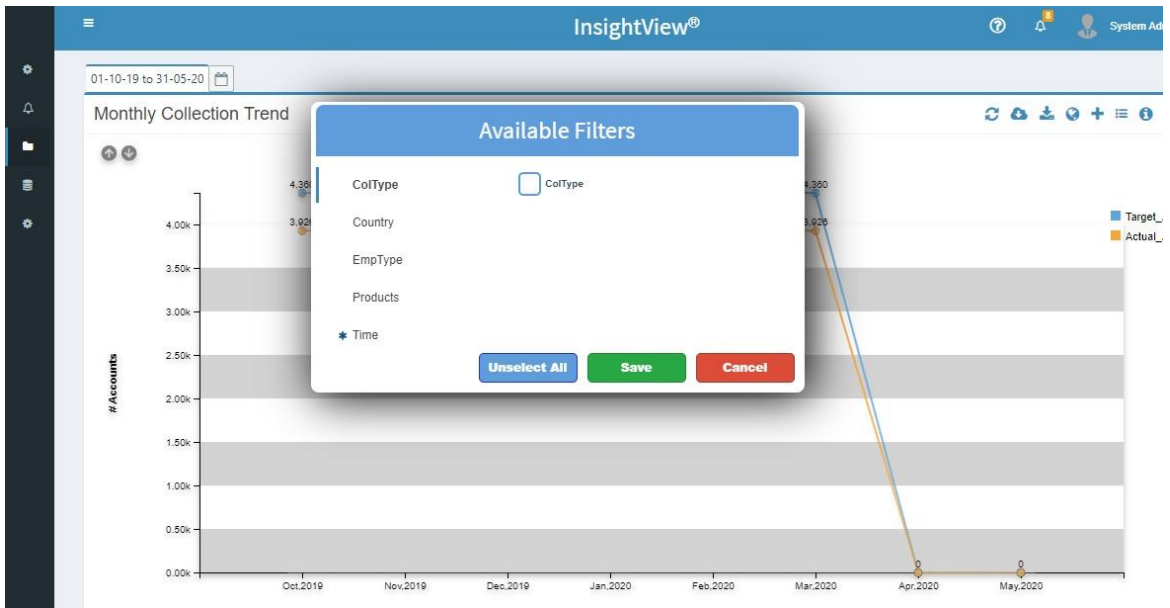


Fig. 6.4: Quick Filters

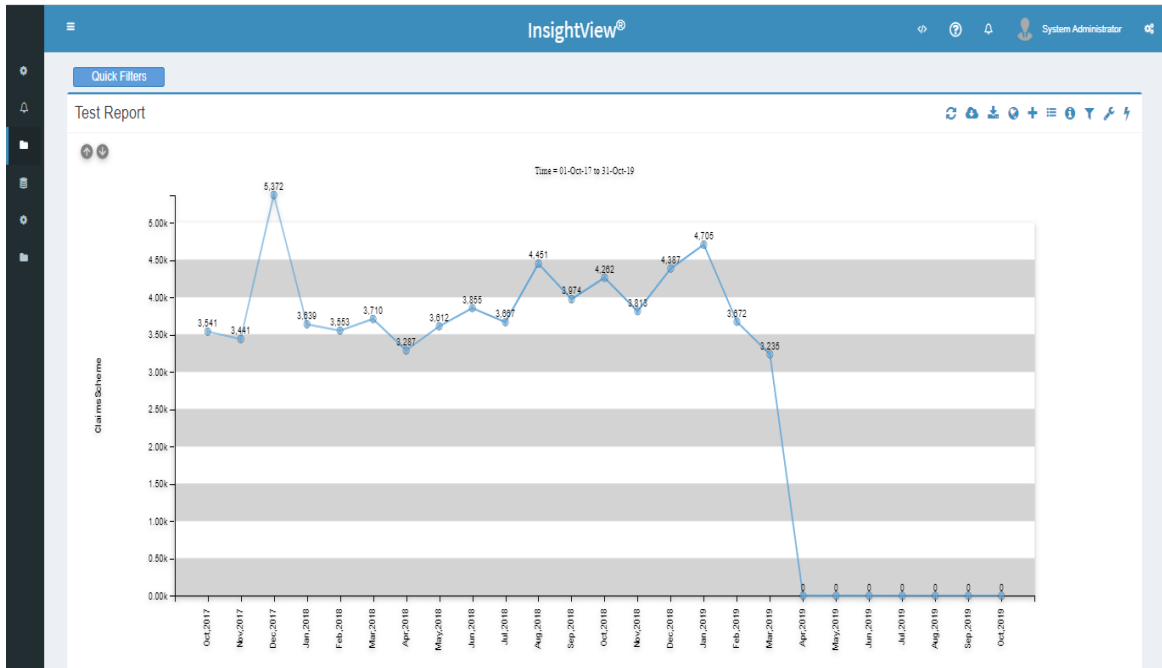


Fig 6.5: Line Chart

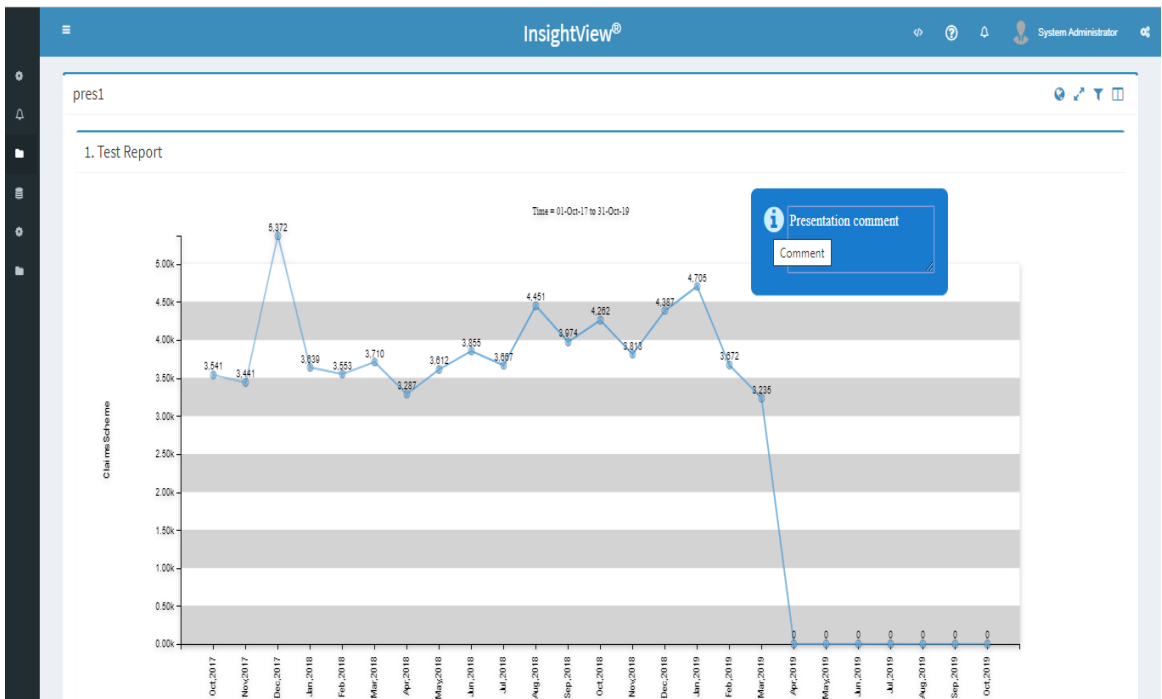


Fig 6.6: Comment Box

System	Message	Time
System	ADS: ADS Coronadaily was updated	2 months
System	Dimension: ccstate was updated	2 months
System	ADS: ADS Coronadaily was updated	2 months
System	Dimension: ccstate was updated	2 months
System	Dimension: StateLatLon was updated	2 months
System	ADS: ADS Coronadaily was updated	2 months
System	Dimension: ccstate was updated	2 months
System	ADS: ADS Coronadaily was updated	2 months
System	Dimension: StateLatLon was updated	2 months
System	ADS: ADS Coronadaily was updated	2 months
System	Dimension: ccstate was updated	2 months
System	Dimension: StateLatLon was updated	2 months
System	ADS: ADS Coronadaily was updated	2 months
System	Dimension: ccstate was updated	2 months
System	Dimension: ItemCat was updated	2 months
System	ADS: ADS Coronadaily was updated	2 months
System	Dimension: ccstate was updated	2 months

Fig 6.7: Notifications Page

System	Message	Time
System	ADS: ADS Coronadaily was updated	2 months
System	Dimension: ccstate was updated	2 months
System	ADS: ADS Coronadaily was updated	2 months
System	Dimension: ccstate was updated	2 months
System	Dimension: StateLatLon was updated	2 months
System	ADS: ADS Coronadaily was updated	2 months
System	Dimension: ccstate was updated	2 months
System	ADS: ADS Coronadaily was updated	2 months
System	Dimension: StateLatLon was updated	2 months
System	ADS: ADS Coronadaily was updated	2 months
System	Dimension: ccstate was updated	2 months
System	Dimension: StateLatLon was updated	2 months
System	ADS: ADS Coronadaily was updated	2 months
System	Dimension: ccstate was updated	2 months
System	Dimension: ItemCat was updated	2 months
System	ADS: ADS Coronadaily was updated	2 months
System	Dimension: ccstate was updated	2 months

Monthly Collection Trend

Fig 6.8: Showing status of task performed



Fig 6.9: Quick Options

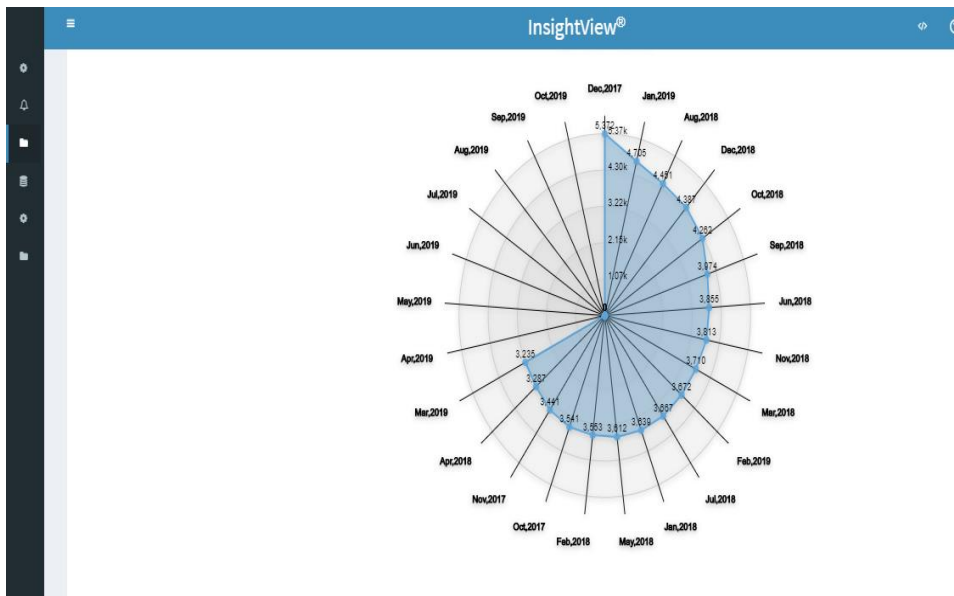


Fig 6.10: Radar Chart

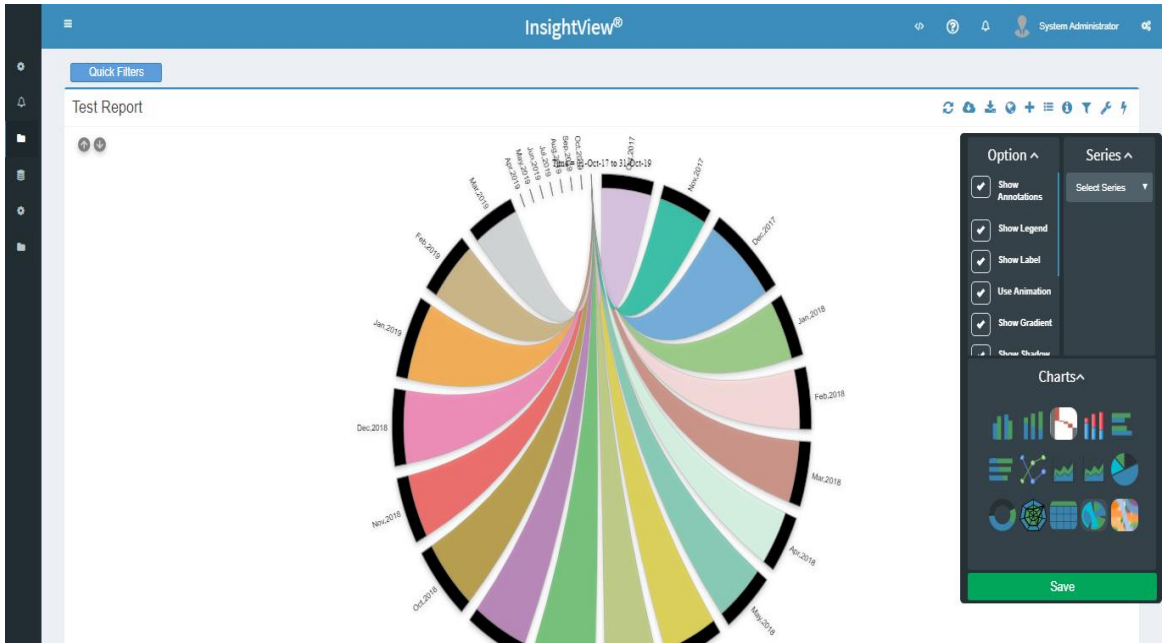


Fig 6.11: Chord Chart

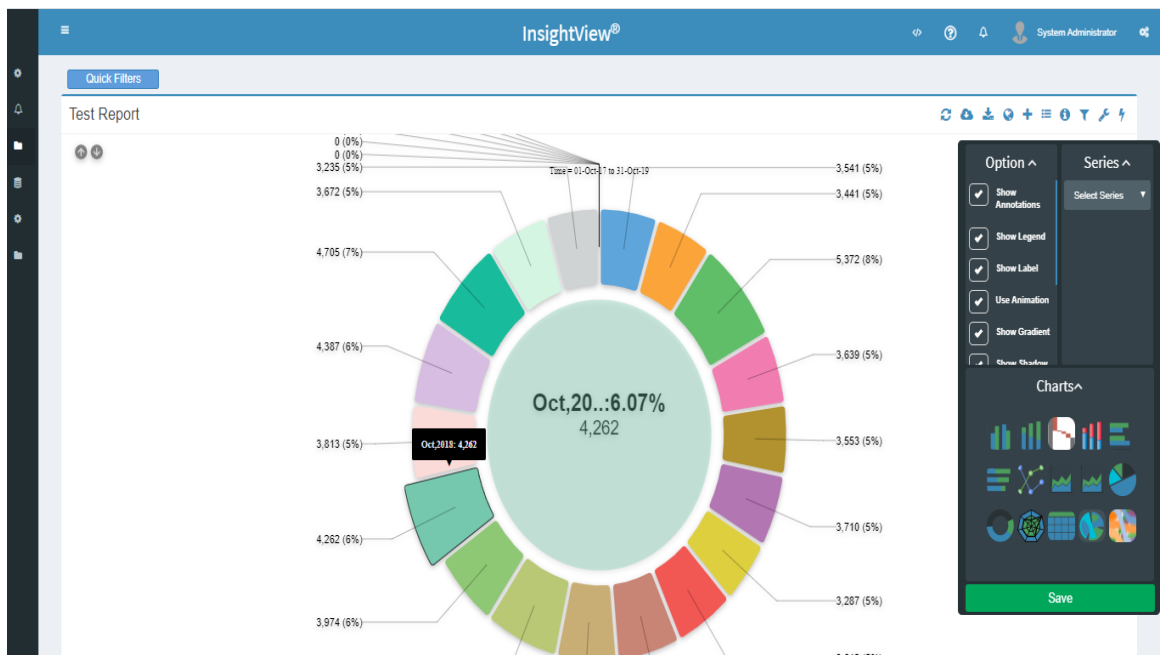


Fig 6.12: Donut chat



Fig 6.13: Unselect all Option in Quick filters

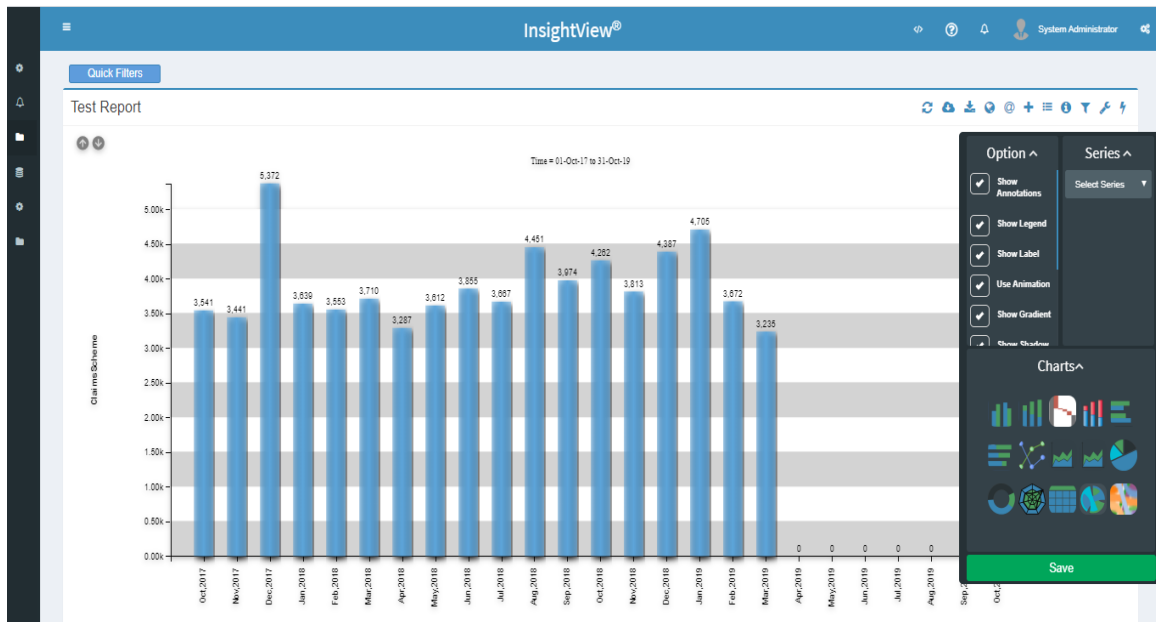


Fig 6.14: col chart

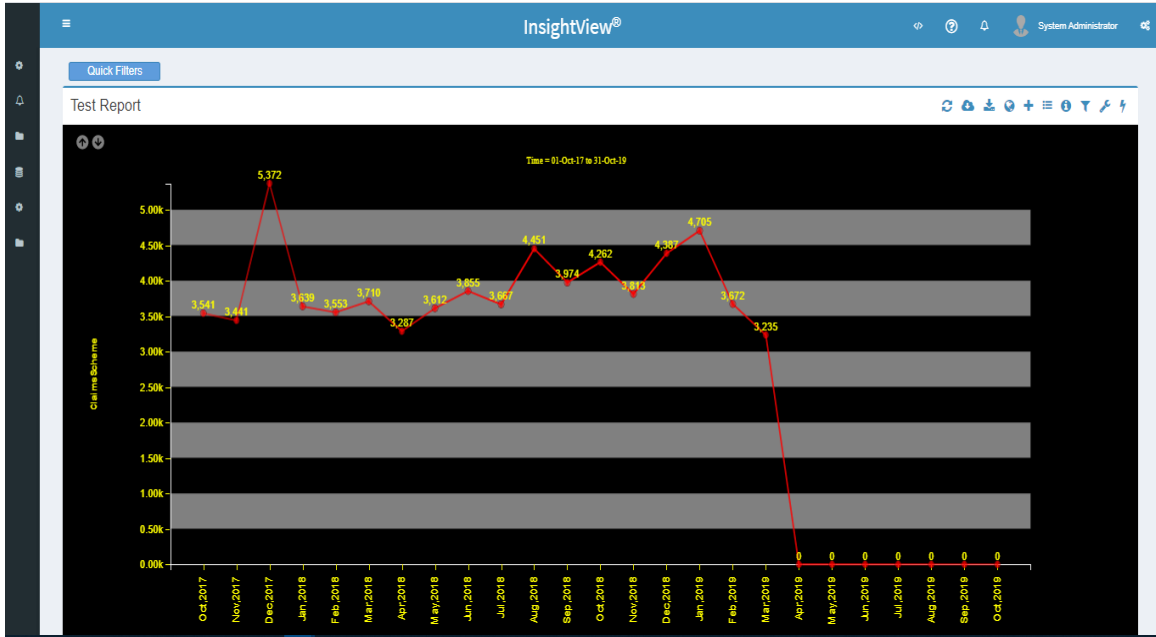


Fig 6.15: Projection Mode

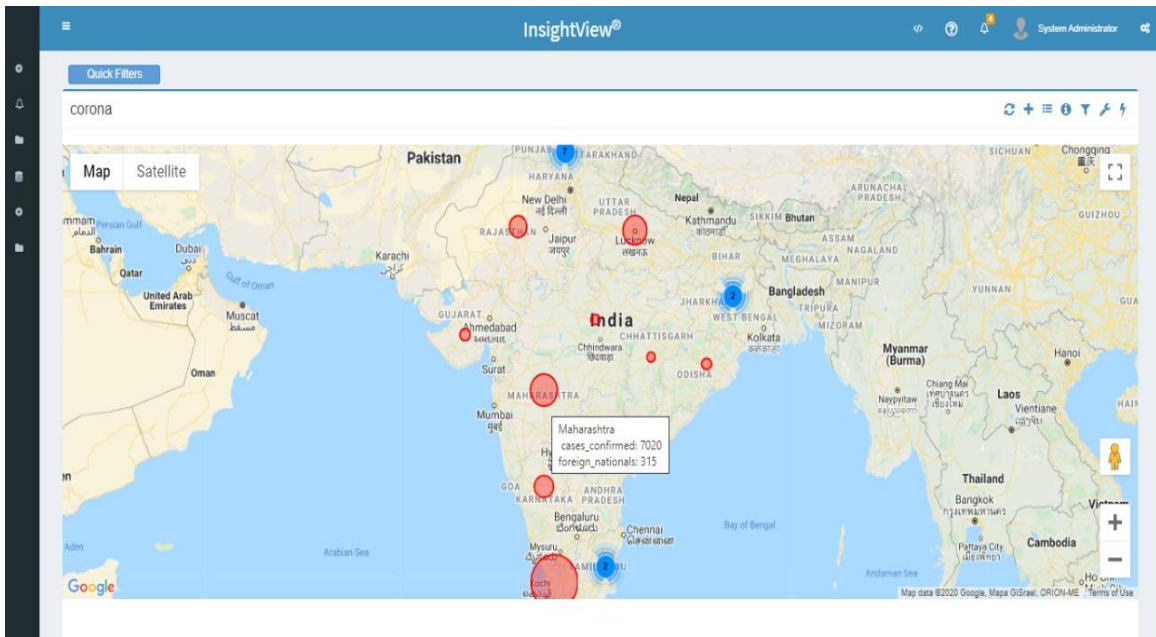


Fig 6.16: GIS Map

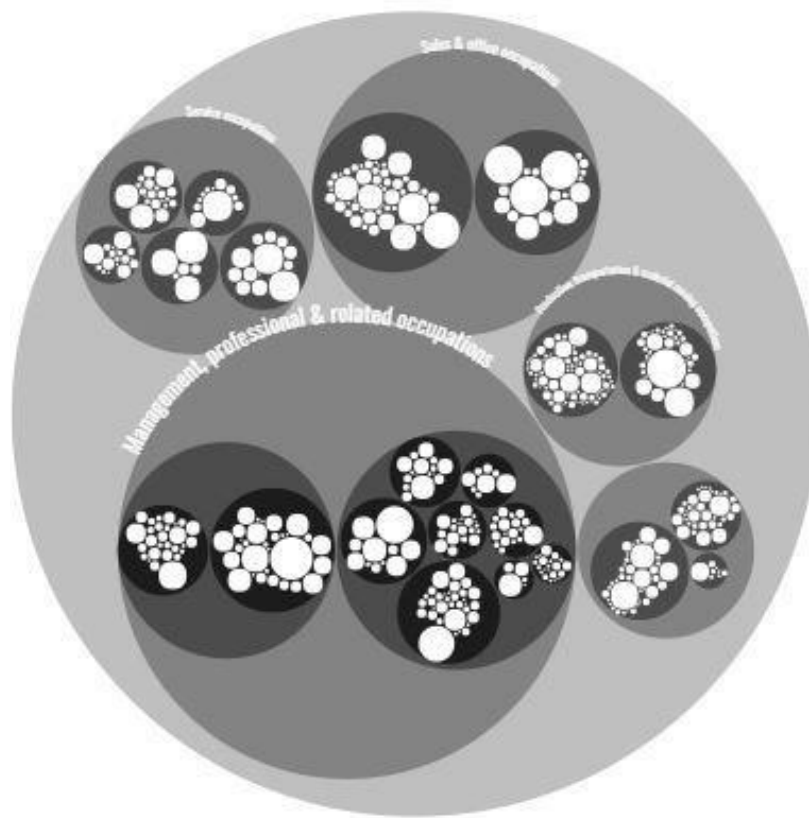


Fig. 6.17: Circle Pack Chart

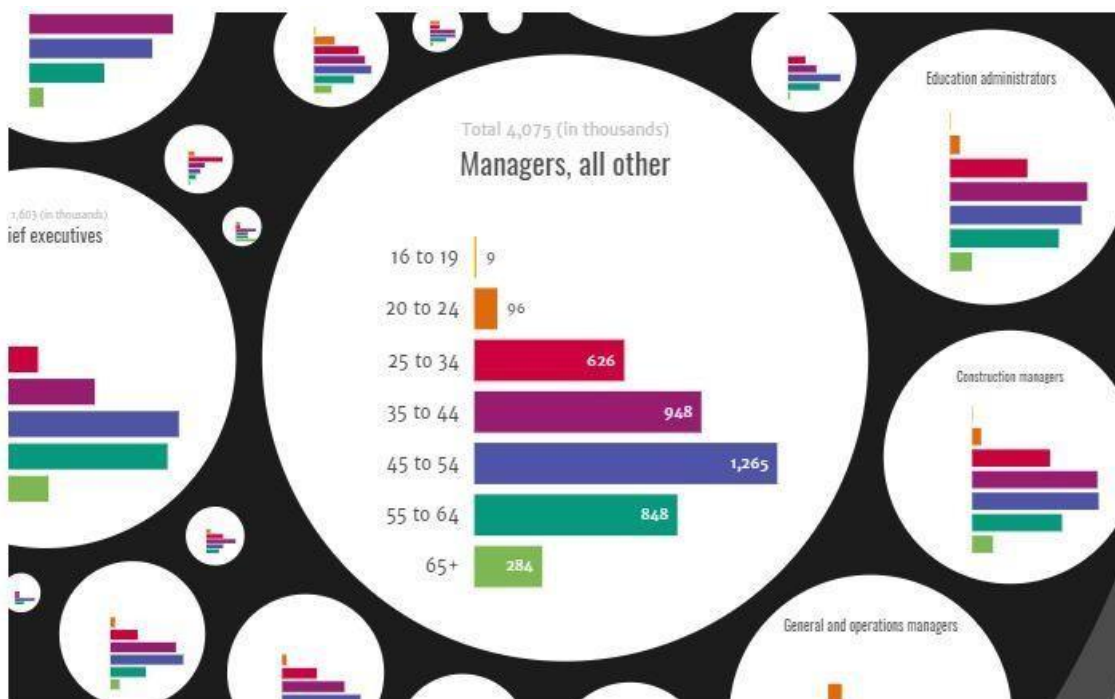


Fig. 6.18 Column Chart at Each Leaf node of Circle Pack Chart

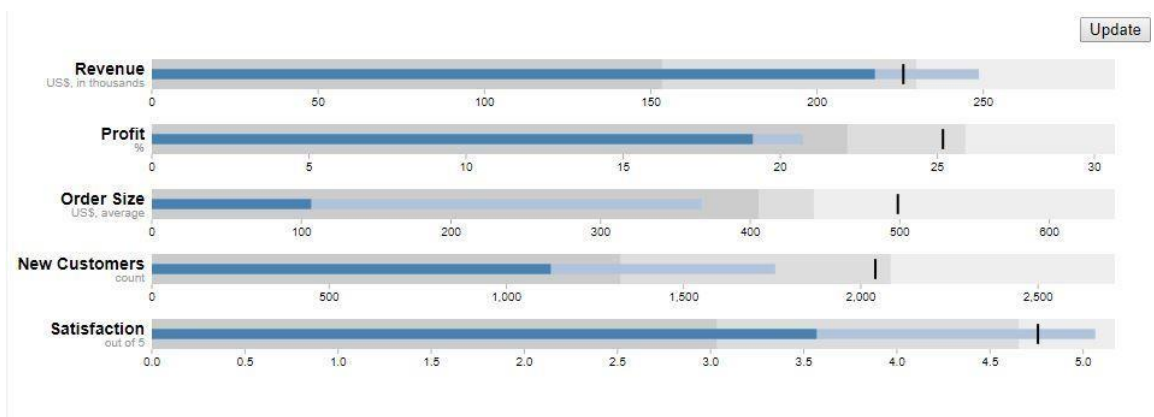


Fig. 6.19: Bullet Chart

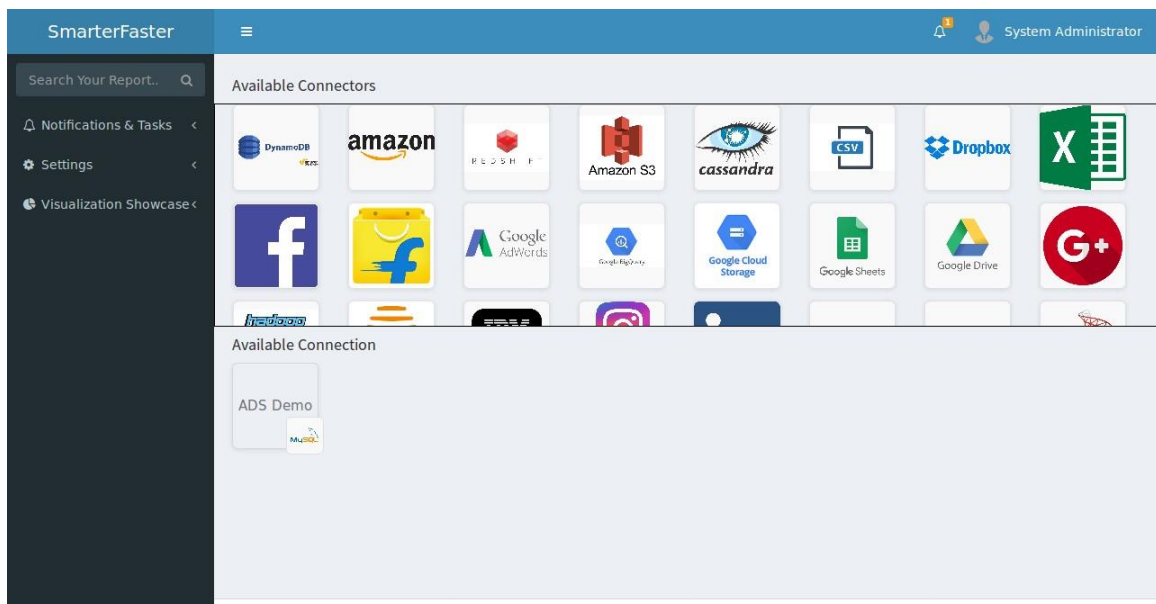


Fig. 6.20: Connectors Marketplace Home Screen

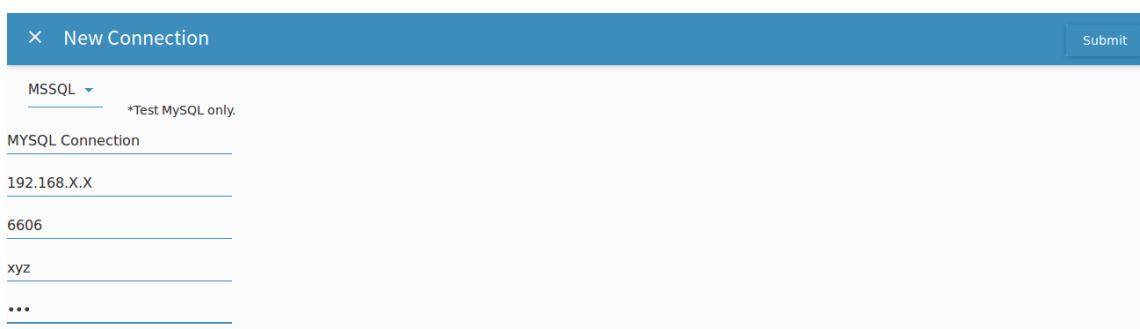


Fig. 6.21: New Connection Dialog Box

Connection Name : ADS Demo Import Table

Drag Tables here to join them (Work in Progress)

Databases

- iv31All_config
- iv31_datasources**
- iv3_vssampledata

Tables

- dsq_fb_CommentsData
- dsq_fb_PageInfo
- dsq_fb_PostData**
- dsq_twitter_pageinfo
- dsq_twitter_tweetData

Enter Table Name : Facebook Post Informarion

id	page_id	post_id	post_message	post_time	total_likes	total_comn
1	1	188563321223651_171356	Test Post	2018-03-23 12:48:	0	3
2	1	188563321223651_128677	#GarviGujarat	2017-01-15 11:13:	4	0
3	1	188563321223651_128677	#RockOn!!	2017-01-15 11:10:	2	0
4	1	188563321223651_128677	#Pongal	2017-01-15 11:07:	2	0
5	1	188563321223651_921560	#bindasss	2015-08-26 13:57:	3	0
6	1	188563321223651_844254	No Text Available fo	2015-04-01 19:19:	17	1
7	1	188563321223651_844254	#bindasss	2015-04-01 19:19:	6	0
8	1	188563321223651_842102	No Text Available fo	2015-03-28 10:44:	4	0
9	1	188563321223651_842102	#Bindasss	2015-03-28 10:44:	9	0

Fig. 6.22: Database and Table Preview for Every Connection

InsightView® System Administrator

Profile Settings


Language

English ▾

Color Palette

SCREEN ▾

User Avatar



Default Report

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Fig 6.23: Profile settings

CHAPTER 7

SOFTWARE TESTING

7.1 TEST CASES

A test suit is a set of test cases which are used by tester to determine if a system passes all the requirement tests and works properly. This process also helps in finding the issues in the requirements or issues.

There are different test cases created to make sure the component works as per functionality given in Business Requirements Document (BRD). All the APIs are tested with all possible scenarios.

Table 7.1: Test cases

SI No.	Functionality	Test Case	Input	Expected O/P
1.	Check if the connection to database is correct.	Access to clients database in AWS	Click on connection and check if Client DB access is granted	Access granted
2.	Check if data from AWS is downloaded fully	DB should have same number of columns and tables from AWS	Click on DB and select download option	Data should be downloaded into local DB
3.	Check if the data is consistent and correct	Check for NULL and fragmented values	Compare tables	There should be no conflicts

4.	Check if reports are generated successfully	Reports generated successfully without errors	Cross check DB and Report values	Report values should be same as DB values
5	Executing different processes, with multiple user logged in	Process should run efficiently	Log multiple user and execute different process	Process should run efficiently
6	Check click on "Data Explorer" does the application POPs UP.	Clicking on "Data Explorer", the application should POPs UP.	Click on the "Data Explorer" icon	Application should POP UP.
7	Check if Process data is Opened, when the Data Explorer Application is opened	Process data screen should be opened by default, when the Data Explorer Application is opened	Click on the "Data Explorer" icon	Should be opened
8	Check resizing the application screen, resizes the child Panel	Resizing the application screen should resizes the child panel	Resize the screen	Should resize
9	Check resizing the Navigation Tree, resizes the Process Data Screen	Resizing the Navigation Tree should resizes the Process Data Screen	Resize the Navigation Tree	Should resize

10	Check if the user clicks on the resume the screen, will it appear in the full screen size or in the last size, screen was closed or minimized	When user clicks on the resume the screen, it should appear in the last size, screen was closed or minimized	Click on the tool bar icons	Should resume the old size
11	Check closing the Navigation Tree, resizes the Process detail form	Closing the Navigation Tree should resizes the Process detail form	Click on the collapsible button on the Navigation Tree Header	Should resize
12	Check clicking on the Navigation Tree, resizes the Process detail form	Clicking on the Navigation Tree should resizes the Process detail form	Click on the navigation Tree Header	Should resize
13	Check opening on the Navigation Tree, resizes the Process detail form	Opening on the Navigation Tree should resizes the Process detail form	Click on the collapsible button on the navigation Tree Header	Should resize
14	Check if user can enter special symbol value in the Type field	User should not be allowed to enter special symbol value in the Type field	Enter special symbol value in the Type field	Should not be allowed
15	Check if user can enter special symbol value in the File(s) field	User should not be allowed to enter special symbol value in the File(s) field	Enter special symbol value in the File(s) field	Should not be allowed

16	Check if drop down works in Process Detail form Panel	Drop down should work in Process Detail form Panel	Click on the drop-down arrows	Should work
17	Check if user can resize the Process Details form Panel with respect to Grid	User should be allowed to resize the Process Details form Panel with respect to Grid	Resize the process details form	Should resize
18	Check if Column Header has drop- down button	Column Header should have drop-down button	Click on the drop-down arrows on column header	Should have drop down button
19	Check if the Combo box in the Process Form Details has null data as first value	Combo box in the Process Form Details should have null data as first value	Click on the combo box	Should have null value as first data
20	Check if the combo box in the Process Form Details has data	Combo box in the Process Form Details should have data	Click on the combo box	Should have data
21	Check if user can relocate the Process Data Screen on the desktop screen	User should be allowed to relocate the Process Data Screen on the desktop screen	Click on the Process Data Screen minimize icon	Should be able to relocate

22	Check if user can relocate components in the Process Details Form on the desktop screen	User should be allowed to relocate components in the Process Details Form on the desktop Screen	Click on the Process Data Screen maximize icon	Should be able to relocate
23	Check if user can enter value directly to the Grid Cell	User should be allowed to enter value directly to the Grid Cell	Enter value to the grid cell	Should be allowed
24	Check the Process Button works	Process Button should work	Click on the Process Button	Should work
25	Check if clicking the Process Form Header, collapses the Panel	Clicking the Process Form Header should collapse the Panel	Click on the Process Form Header	Should not collapse
26	Check does clicking on Apply Button works accordingly, if the Name text field in Process Detail Form is null	Clicking on Apply Button should not work accordingly, if the Name text field in Process Detail Form is null	Keep the Name field null and Click on the Apply Button	Should not work accordingly
27	Check does clicking on Apply Button works accordingly, if the Type Combo box field in Process Detail Form has null	Clicking on Apply Button should not work accordingly, if the Type combo box field in Process Detail Form has null	Keep the Type field null and Click on the Apply Button	Should not work accordingly

28	Check does clicking on Apply Button works accordingly, if the File(s) field in Process Detail Form has null	Clicking on Apply Button should not work accordingly, if the File(s) field in Process Detail Form has null	Keep the File(s) field null and Click on the Apply Button	Should not work accordingly
29	Check if there is an option for "Process Data" on right clicking the AddDataSource	There should be an option for "Process Data" on right clicking the AddDataSource	Right Click on the Data Source	Option should be available
30	Check if the option for "Process Data" on right clicking the AddDataSource, opens the screen	The option for "Process Data" on right clicking the AddDataSource should open the screen	Right Click on the Add Data Source	Option should be available

7.2 TEST REPORTS

Table 5.2 Test reports

SI No.	Input	Expected O/P	Result	Comment
1	Click on connection and check if Client DB access is granted	Access granted	Pass	Access to client DB in AWS
2	Click on DB and select download option	Data should be downloaded into local DB	Pass	
3	Compare tables	There should be no conflicts	Pass	Tables are matching.
4	Cross check DB and Report values	Report values should be same as DB values	Pass	
5	Log multiple user and execute different process	Process should run efficiently	Pass	
6	Resize the screen	Should resize	Pass	
7	Resize the Navigation Tree	Should resize	Pass	
8	Click on the drop-down arrows	Should work	Pass	
9	Click on the tool bar icons	Should work	Pass	
10	Click on the tool bar icons	Should resume the old size	Pass	
11	Enter numbers in the name field	Should not be allowed	Fail	User can enter

12	Enter numbers in the type field	Should not be allowed	Pass	
13	Enter numeric value in the File(s) field	Should not be allowed	Fail	User can enter
14	Enter special symbol value in the name field	Should not be allowed	Fail	User can enter
15	Enter special symbol value in the Type field	Should not be allowed	Pass	
16	Enter special symbol value in the File(s) field	Should not be allowed	Fail	User can enter
17	Enter alphabets value in the name field	Should be allowed	Pass	
18	Enter alphabets value in the Type field	Should not be allowed	Pass	
19	Enter alphabets value in the File(s) field	Should be allowed	Pass	
20	Click on the drop-down arrows	Should work	Pass	
21	Resize the process details form	Should resize	Fail	User cannot resize
22	Click on the drop-down arrows on column header	Should have drop down button	Pass	
23	Click on the combo box	Should have null value as first data	Pass	
24	Click on the combo box	Should have data	Pass	
25	Click on the Process Data Screen minimize icon	Should be able to relocate	Pass	
26	Click on the Process Data Screen maximize icon	Should be able to relocate	Pass	
27	Enter value to the grid cell	Should be allowed	Fail	User cannot enter

28	Click on the Process Button	Should work	Pass	
29	Click on the Process Form Header	Should not collapse	Pass	
30	Keep the Name field null and Click on the Apply Button	Should not work accordingly	Fail	Don't give any error
31	Keep the Type field null and Click on the Apply Button	Should not work accordingly	Fail	Don't give any error
32	Keep the File(s) field null and Click on the Apply Button	Should not work accordingly	Fail	Don't give any error
33	Right Click on the Data Source	Option should be available	Pass	
34	Right Click on the Add Data Source	Option should be available	Pass	

CHAPTER 8

CONCLUSION

In this project a few features are added to the system existing which will enhance its usability and functionality by integrating an important tool into it which takes care of the product reviews from various e-commerce websites. A lot of data analytics could be performed on it so as to make better decisions.

8.1 ADVANTAGES AND LIMITATIONS

- Easier to understand and interpret the data.
- In turn this makes process that much easier and meaningful.
- Convincing -- proves a point, visualization,
- Compact way to convey information

CHAPTER 9

FUTURE ENHANCEMENTS

- The queries used can be modified more according to our business needs as and when it changes.
- More options in reports section can be provided to the users in order to make improve their experience.
- Some of the features which are frequently used by the clients can be made as default.
- The UI of the product can also be enhanced.

APPENDIX A BIBLIOGRAPHY

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APPENDIX B

USER MANUAL

1. USER LOGIN

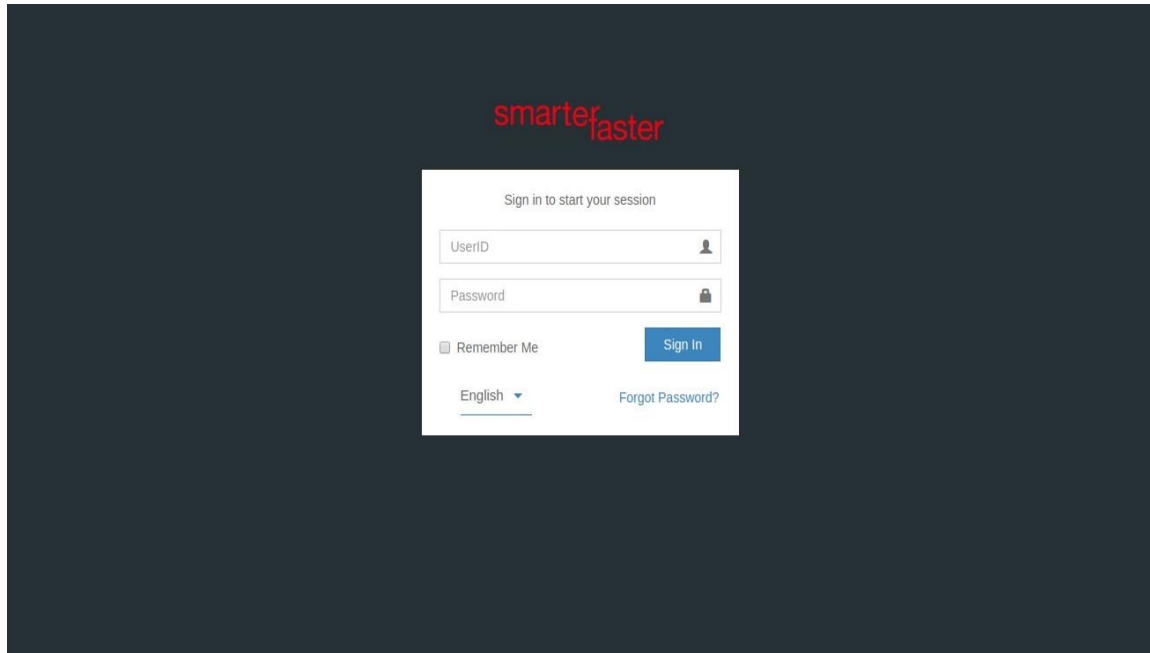


Fig a: user login

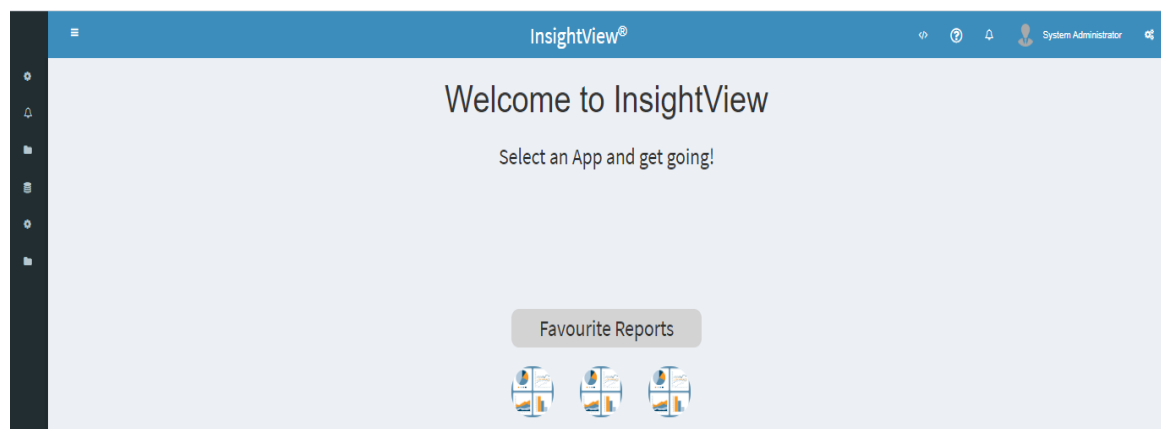


Fig b: user home page

2. CREATE CONNECTION TO DATASOURCE

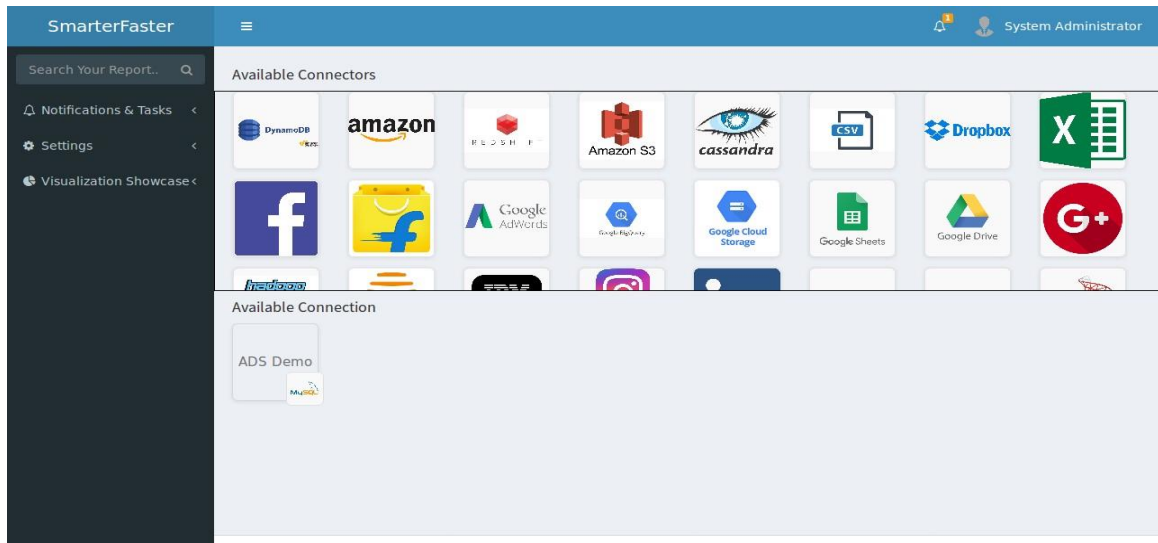


Fig c: create connections to data source

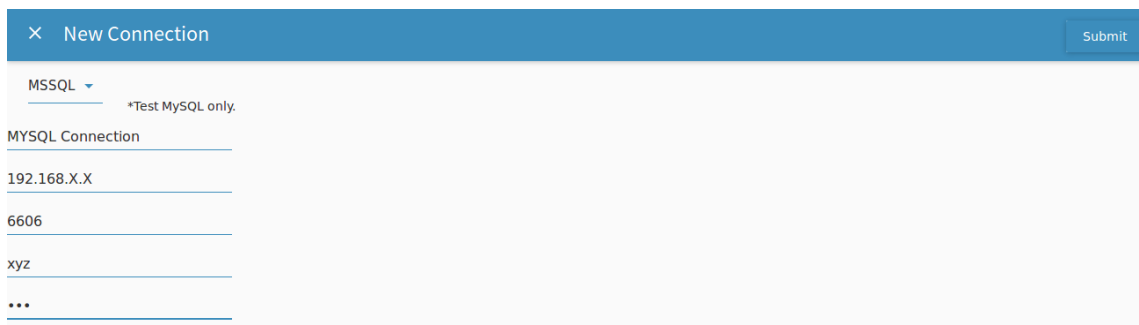


Fig d: create connections to data source

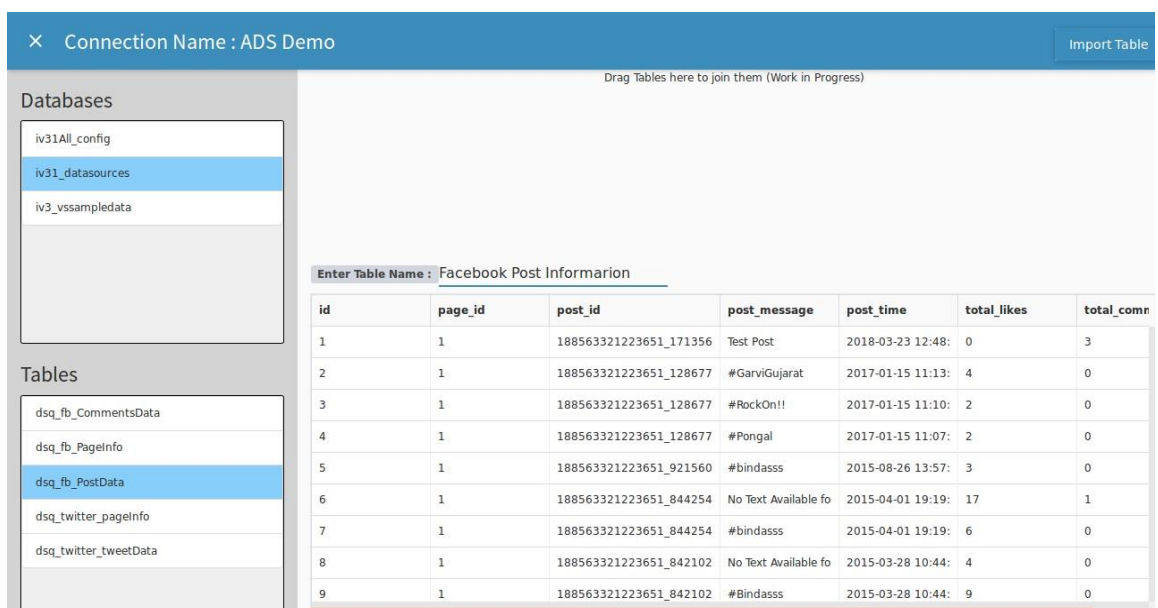


Fig e: importing table

3. CREATE REPORT

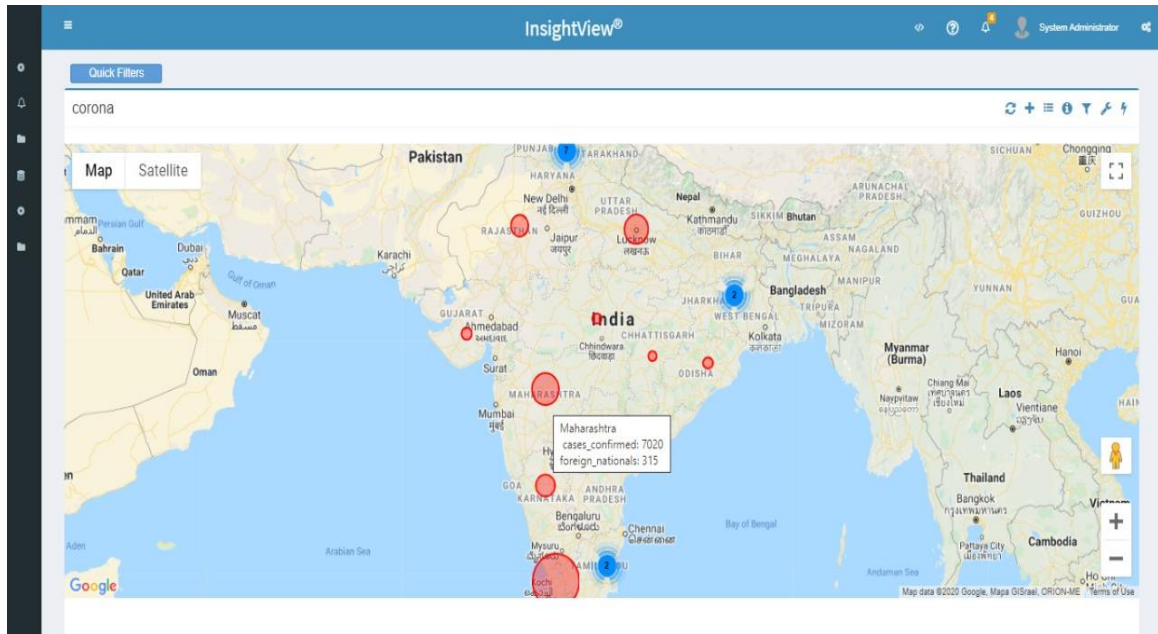


Fig f: create report

4. MANAGE USER PROFILE

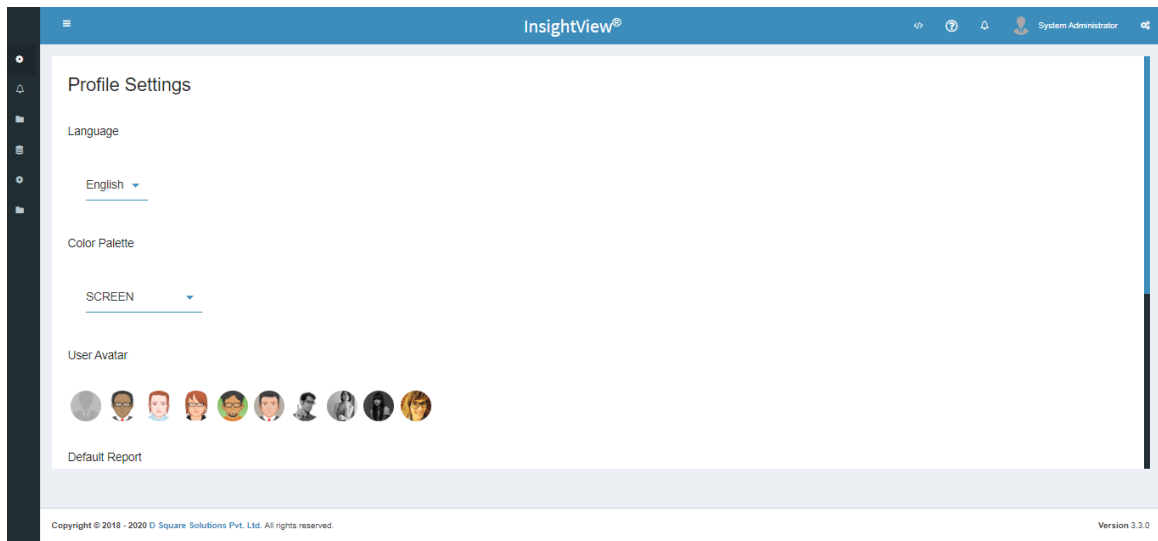


Fig g: manage user profile