Volume 9, No. 2, March-April 2018



International Journal of Advanced Research in Computer Science

RESEARCH PAPER

Available Online at www.ijarcs.info

HANDS ON MEDICATION USING DATA VISUALISATION TOOL

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Abstract: Tableau is a Data Visualization tool that is extensively used for Business Intelligence but it is not limited to it. This can also be used to provide information about medicines to people. It helps to craft interactive graphs and charts in the form of dashboards and worksheets which helps individuals to understand in an effective way. And all of this is made probable with gesticulation as easy as drag and drop! It helps people to know in detail about the diseases and its symptoms, first-aid and safety measures are provided so that they can be medicated easily within the reach of the people. If there is any serious issue or drastic symptoms of the diseases the top doctors for the particular diseases in the city with their details plotted in a map view so that the patient can concern a doctor. This information is very much useful for each and every individual and health sector.

Keywords: A Data Visualization, Tableau, first-aid, health

I. INTRODUCTION

Many people suffer from different types of diseases that they are not aware off. Before taking some medicines or any type of action on their suffering they must get the knowledge on the problem. They must have a clear idea on their condition. No one can just simply take whatever medicine they get without knowing the actual condition.

Through our scheme work "MEDICATION IN HANDS" we can know the symptoms of particular diseases before going to the doctor we can take necessary precautions and first-aid if necessary. We can consult the specialist for a particular disease with the help of the information provided in our project Medication in hands.

This application is meant for showing a particular to medication in hands

The main goal of this application is to get full fledged data about a particular place of hospital and people are medicated easily.

Some of the elements have been presented in this application, they are:

II. DATA COLLECTION

Our tableau project MEDICATION IN HANDS that helps each and every single person when they are in need to know about their health condition and what action they have to take for that condition. It consist of the symptoms, causes, disease name, first-aid that can be done at home, medicines recommended for that particular disease, approximate cost of the medicine, if any surgery required or not, if required what is it, cost of the surgery, doctors available for that disease treatment, doctors location, doctors contact number for appointment ,hospital location. This all data is helpful for each and every person in need.

Table I

S. No	Diseases	Symptoms	Causes
First-aid	Medicine	Safety measures	Surgery

Approx-surgery cost	Name doctor	of	the	Qualification	Hospital name
Contact number	Latitude			Longitude	Area

2.1 Datatypes for the Collected Attributes:

Fields and Datatypes

1. DISEASE varchar 2. SYMPTOMS =varchar 3. CAUSES varchar 4. FIRST-AID varchar 5. MEDICINE varchar 6. SAFETY EASURES= varchar 7. SURGERY varchar 8. APPROX SURGERY COST=numeric 9. Name of the doctor= varchar 10. Qualification= varchar 11. Hospital Name= varchar 12. Contact number= numeric 13. latitude numeric 14. longitude = numeric 15. area varchar 16.Specialist varchar

This tableau software consists of important tools such as file, dashboard, map and server.

DASHBOARD: A dashboard is a collection of several worksheets and supporting information shown in a single place so you can compare and monitor a variety of data simultaneously.

For example, you may have a set of views that you review every day. Rather than flipping through each worksheet, you can create a dashboard that displays all the views at once.

FILE: The new option will be used for creating a tableau file and load all the necessary attributes into it.

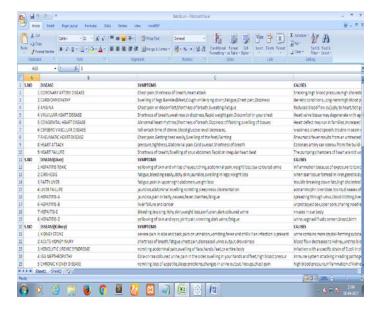
The tableau file will be saved with an extension ". tbsl". These files can be of various types of formats of data like Excel
Text file

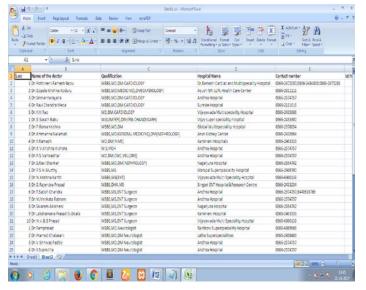
Access
JSON file
Spatial file

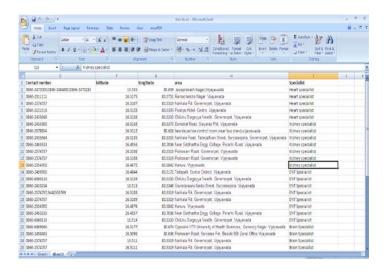
Statistical file More...

MAPS: The application need to visualize the data geographically, we can plot the data on a map in Tableau.

SERVER: Tableau Server public is the option where the tableau application is linked with the web application to get the information. The Tableau Software [1] is an online solution for sharing, distributing, and collaborating on content created in Tableau Shareable. Create workbooks and views, dashboards, and data sources in Tableau Desktop, and then publish this content to the server.





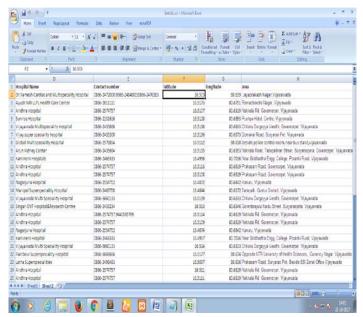


III. DATA PREPROCESSING

Latitude is an angle which ranges from 0° at the Equator to 90° (North or South) at the poles

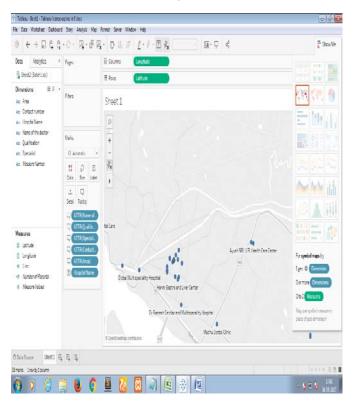
Longitude is a geographic coordinate that specifies the eastwest position of a point on the Earth's surface [2].

With the help of Latitude and Longitude we can spot a particular location of the specific doctor and hospital in the map[3].

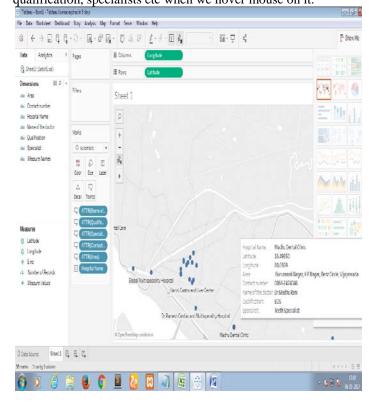


IV. EXPERIMENTAL RESULTS AND DATA VISUALIZATION

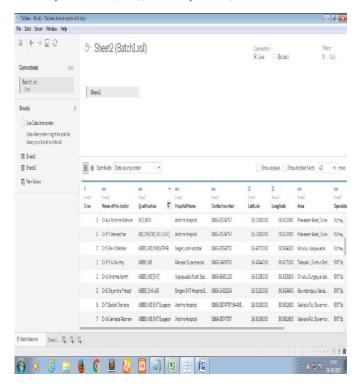
Over all display of hospitals and their names we specified in our project work [4,5] according to their locations using latitude and longitude



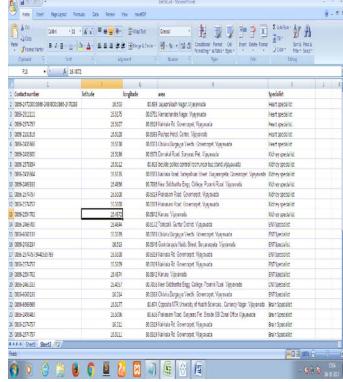
Details of a particular hospital like hospital name, latitude, longitude, area, contact number, name of the doctor, qualification, specialists etc when we hover mouse on it.



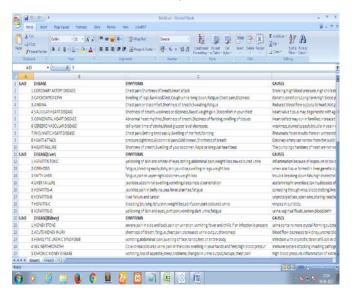
Detailed view of the doctors information in our sheet2 like doctors name, qualification, contact number, area, specialist, latitude longitude details of the hospital etc



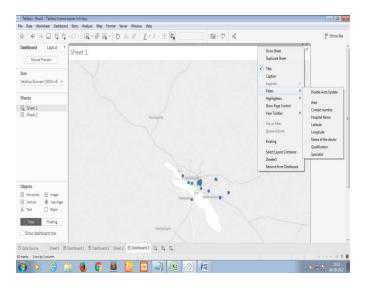
Data sets in our project sheet2 using which we provided the information like contact number, latitude, longitude, area, specialist in our map



Snapshot of the diseases related to heart, liver, kidney and the information about the disease symptoms and their causes.



View of the map, in which we display filters like area, contact number, hospital name, and latitude, and longitude, name of the doctor, qualification, specialist, and these filters can be used to display the data.



V. CONCLUSION

We are able to successfully created an interactive graphs and charts in the form of dashboards and worksheets which helped people to understand in an most effective way. We made it possible with gestures as simple as drag and drop. It helped the people to know in detail about the diseases and its symptoms[6], first-aid and safety measures are also provided so that they can be medicated easily within the reach of the people. If there is any serious issue or drastic symptoms of the diseases the eminent expertise doctors for the particular diseases in the city with their details plotted in a map view so that the patient can concern a doctor.

VI. REFERENCES

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- [6] Keet , *Tableau for health care*, Corporate renianssance group, 2015.

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