**Document Reference**

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| --- | --- |
| Document Number | SS-2023 |
| Document Name | **SHANKARA STATISTICS WEBAPP** |
| PO reference | NA |
| Customer Name | TANTRAGYAAN |
| Customer Project |  |
| Customer Email Id. |  |
| Customer Contact No |  |

**Document Information**

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**Revision History**

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| --- | --- | --- |
| **Revision Number** | **Updated date** | **Change Description** |
| 0.1 | 19/10/2023 | Initial Draft for review |
| 0.2 | 21/10/2023 | Updated the filters module |
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Patent Information

-NA-

# INTRODUCTION

Shankara Statistics is the population statistics monitoring platform wrt to Total Population participated in screening, Male and Female statistics, Age groups , Cormorbidities summary , Habits summary, Coverage map, Remote view summary , Follow up percentage , In person review summary, Doctor recommendation etc,

The Shankara Statistics is a web-app which runs on any browser like Chrome, Mozilla, or IE. The Webapp fetches the data from the database and displays it on UI .

## Purpose

The purpose of this document is to capture the software design aspects for the Shankara Statistics and detail architecture, interfaces, dependencies and traceability of the design to the requirements.

## Scope

The scope of the document is limited to software design aspects of Shankara Statistics and their interactions and shall embellish architecture, design decomposition, data flow, definitions and detailed component design.

## Audience

The Audience for this document is limited to designers and developers of Shankara Statistics

## Definitions / Acronyms / Abbreviation

### Definitions

(a) Field Worker: Person using the svasthya app to conduct the survey of the patients.

### Acronyms and Abbreviations

|  |  |
| --- | --- |
| **Abbreviation** | **Full Form** |
| SS | Shankara statistics |
| FW | Field Worker |

## 

## Bibliography

# SOFTWARE OVERVIEW

Shankara Statistics is the population statistics monitoring platform wrt to Total Population participated in screening, Male and Female statistics, Age groups , Cormorbidities summary , Habits summary, Coverage map, Remote view summary , Follow up percentage , In person review summary, Doctor recommendation etc,

The Shankara Statistics is a web-app which runs on any browser like Chrome, Mozilla, or IE. The Webapp fetches the data from the database and displays it on UI .

# SOFTWARE ARCHITECTURE

Shankara Statistics Webapp has following modules.

* + Coverage Statistics
    - Total Number of people
    - Male and Female statistics
    - Agegroup statistics
    - Coverage map
    - Comorbidities Summary
    - Habits Summary
  + Remote Review Summary
    - Review Percentage
    - Doctor recommendation
    - Followup covergae
  + InPerson Review Summary
    - Inperson review percentage
    - Doctor recommendation
    - Followup effectiveness

# DESIGN CONSIDERATIONS

## Libraries

The basic libraries which can be used for display are Bootstrap for UI and Echarts library for plotting the graphs.

## Design pattern

The application follows a Model View Controller design where we have view in html and css, Model and Controller are in Javascript.

## Standards

NA

## Protocols

The application follows the http protocol standard

## Technology

### IDE

VSCode IDE is used for the development. VSCode Go Live server is being used to test the application.

### OS and System Requirement

As the IDE supports Linux OS . Ubuntu operating system is being used for development .

### Compiler

Changes are made, saved and run using default Chrome browser.

### Debugger

Google Chrome has the default debugger which is used for debugging .

### Testing

Testing to be carried out on various browsers like Chrome, Firefox, IE, and systems with different versions of OS (Windows and Ubuntu ).

# MODULE DESCRIPTION

## General Description

The section elaborates the software modules involved in Shankara statistics Webapp and their functionalities.

Following are the different modules in the application

* + Screening Statistics
    - Total Number of people
    - Male and Female statistics
    - Agegroup statistics
    - Coverage map
    - Comorbidities Summary
    - Habits Summary
  + Remote Review Summary
    - Review Percentage
    - Doctor recommendation
    - Followup covergae
  + InPerson Review Summary
    - Inperson review percentage
    - Doctor recommendation
    - Followup effectiveness

The following section extends the module level details and lists the top level subroutines associated with each module.

## Software Modules

#### Filters

#### Identification: filtersModule

#### Type: Module

#### Purpose:

Filters module shall have three dropdowns populated with the following data

* Field Worker ids from ashaworkers node.
* Hardcoded names for village/panchayat
* Day, Week and Custom From and to date range from calendar
* Fetch the data based on the filter from patients node and save in array.

#### **Database Structure:**

**Node:ashaworkers**

#### Coverage Statistics

#### Identification: coverageModule

#### Type: Module

#### Purpose:

The Coverage Statistics is to display the statistics of people having surveyed, male and female statistics, age group percentage, Coverage map, Comorbidities summary and Habits summary

#### Function:

The Coverage Statistics is to display the statistics of people having surveyed, male and female statistics, age group percentage, Coverage map, Comorbidities summary and Habits summary. Default filters All shall be applied

* Loop through the filtered array ids which are in the node Form1 and find the Total no of people surveyed display the number as text
* Loop through the filtered array ids which are in the node Form1 and find the gender from the node patients for the all the filtered ids and calculate the male and female percentage seperately and display as pie chart
* Loop through the filtered array ids which are in the node Form1 and Segregate the ids in node form1 into different agegroup from getting the age from the node patients and calculate the percentage and display as piechart.
* Loop through the filtered array ids which are in the node Form1 and Find the locations from the location node and display the drop pin along with the timestamp in the location node.
* Loop through the filtered array ids which are in the Node Form1 and Find the percentage of people having diabetes, hypertension , cancer seperately from patients node
* Loop through the filtered array ids which are in the Node Form1 and Find the habits from the patients node for all the form1 node ids and display percentage of Tobacco consumption users, Alcohol consumption users, non consumption of Alocohol, Non consumption of tobacco users and quit percentage of tobacco , quit percentageof alcohol.

#### **Database Structure:**

**Node:form1**

**Node:patients**

### **Remote review summary**

#### Identification: remotereviewModule

#### Type: Module

#### **Purpose:**

Remote review summary shall be used to display the percentage of ids doctors reviewed and the doctors recommendation percentage for each recommendation (Biopsy, Laser treatment, Camp visit percentage, No recommendation and no of people percentage requiring followup action

#### **Function:**

Remote review summary shall be used to display the percentage of ids doctors reviewed and the doctors recommendation percentage for each recommendation (Biopsy, Laser treatment, Next screening date percentage, No intevention percentage and no of people referred to local procedure percentage, Recommended to hospital percentage

* Fetch the total number of ids from form1 node out of filtered data.
* Fetch the total number of ids in form2 node out of form1 node and calculate the review percentage.
* Fetch the no of the ids recommended for biopsy node in the filtered data which are in form2 node , laser treatment node in form2 node , requires\_intervention node in form2 node
* Fetch the no of the ids in filtered data which are recommended for local procedure node in form2

#### **Database Structure:**

**Node:form2**

#### Inperson review summary

#### Identification: InpersonreviewsummaryModule

#### Type: Module

#### **Purpose:**

Inpersonreview summary shall display the no of peoples percentage who visited the camp and no of patients percentage whom doctor recommended and no of people who revisted the camp after followup.

#### **Function:**

Inpersonreview summary shall display the no of peoples percentage who visited the camp.

Fetch the no of ids out of filtered data which are in the node form3 and calculate the percentage out of form2.

Fetch the no of ids out of filtered data which are in the form 3 based on recommendation and calculate the percentage and display as pie chart

Fetch the no of ids out of filtered data which are in the form2 which is also in form3 to calculate the percentage of followup effectiveness

#### **Database Structure:**

**Node:form3**

# APPENDIX

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| Sl No | Content | Attachment |
| 1 | NA |  |

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