**WEB APPLICATION**

**PROJECT DETAILS:**

**CONTENTS**

**Abstract i**

**S.No. Topic name Pg.No.**

1. **INTRODUCTION 7-8** 
   1. **Motivation**
   2. **Problem definition**
   3. **Limitations of existing system**
   4. **Proposed system**
2. **LITERATURE SURVEY 9-11**
3. **REQUIREMENTS ANALYSIS 12-17**
   1. **Functional Requirements**
   2. **Non-Functional Requirements**
4. **DESIGN 17-28** 
   1. **UML diagrams**
   2. **Algorithm**
5. **IMPLEMENTATION & RESULTS 29-45** 
   1. **Explanation of Key functions**
   2. **Method of Implementation**
      1. **Output Screens**
6. **TESTING & VALIDATION 46-49** 
   1. **Design of Test Cases and Scenarios**
   2. **Validation**
   3. **Test cases**
7. **CONCLUSION 50-51**
8. **REFERENCES 51**

**ABSTRACT:**

Proper nutrition is crucial for everybody, but it is especially important for kids and women because inadequate nutrition wreaks havoc not only on women’s own health but also on the health of their children. Nutrition is directly linked to their overall growth and development. The right nutrition in the right amount leads to a healthier life as they grow.

**DESCRIPTION:**

Nowadays consumption of extra nutrients has become mandatory to stay healthy and to maintain good immune system. Good nutrition can help: Reduce the risk of some diseases, including heart disease, diabetes, stroke, some cancers, and osteoporosis.Reduce high blood pressure Lower high cholesterol Improve your well-being Improve your ability to fight off illness Improve your ability to recover from illness.

**SOLUTION:**

We need to design a system for health worker to monitor and trigger alarms if some women/child have not come for upcoming dose. In this case checking the reports and prescriptions of patients regularly to check if they have an appointment is tedious work, instead if we design an automated system and it automatically provide alert to the health workers so that they can communicate the same to the patients. Additionally, if mobile number of the patient is registered then provide notification to them to get the dose. This can help to promote nutrition among women and children with the help of this device for accomplishing PoshanAbhiyaan. By creating a web application, we can keep a track of dosage and decrease the rate of malnourishment in women/children.

**1.INTRODUCTION**

PoshanAbhiyaan is a multi-ministerial convergence mission with the vision to ensure attainment of malnutrition free India by 2022. The objective of POSHAN Abhiyaan to reduce stunting in identified Districts of India with the highest malnutrition burden by improving utilization of key Anganwadi Services and improving the quality of Anganwadi Services delivery. Its aim to ensure holistic development and adequate nutrition for pregnant women, mothers and children. The Ministry of Women and Child Development (MWCD) is implementing POSHAN Abhiyaan in 315 Districts in first year, 235 Districts in second year and remaining districts will be covered in the third year. There are a number of schemes directly/indirectly affecting the nutritional status of children (0-6 year's age) and pregnant women and lactating mothers. In spite of these, level of malnutrition and related problems in the country is high. There is no dearth of schemes but lack of creating synergy and linking the schemes with each other to achieve common goal. POSHAN Abhiyaan through robust convergence mechanism and other components would strive to create the synergy.

* 1. **MOTIVATION:**

Eating a healthy and nutritious diet including fresh vegetables and fruits, milk andmilk products during pregnancy is important to meet the needs of the growing foetus.Nutritious food is essential for everyone, especially pregnant women, helps in creating a stronger and better future generation. First six months a baby should be fed breastmilk only; After that complement it with adequate, safe & proper food like fruits & vegetables, to meet the additional nutrition needs of a growing infant. In this project we are creating a web application to track the daily dosage of nutrition in pregnant women and children, incase if the children and women are not meet with the daily dosage or the monthly dosage we will send them notifications about their missing dosage through the mail.

* 1. **PROBLEM DEFINITION:**

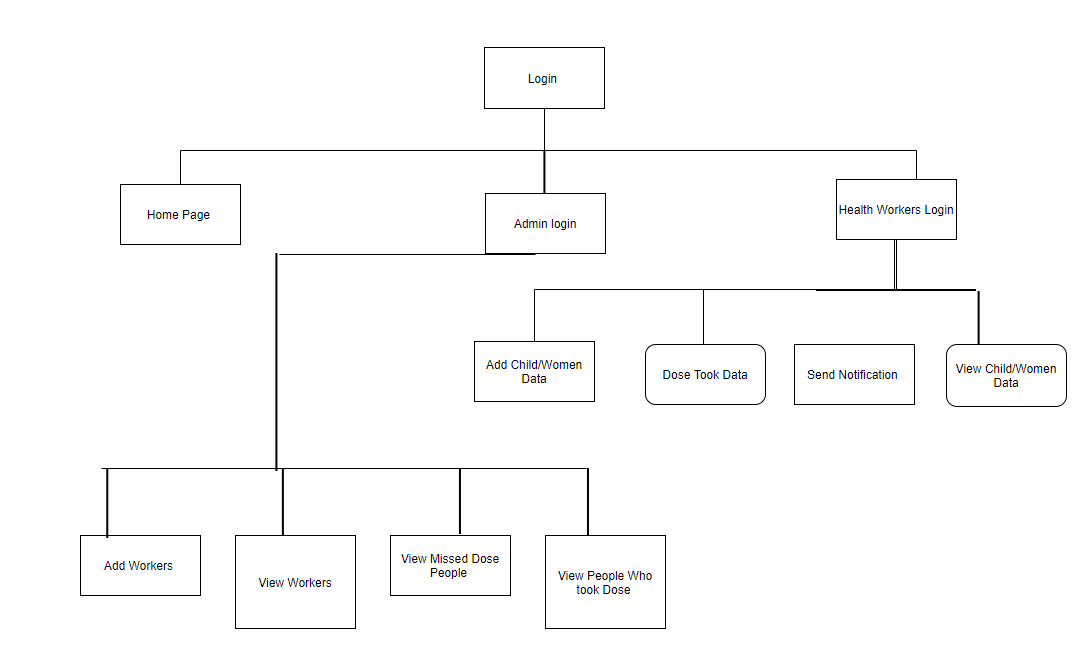
Promoting holistic nutrition among women and children through/with the help of IT for PoshanAbhiyaan. Design a system for health worker to monitor and trigger alarms if some women/child have not come for upcoming dose. Additionally, if the mobile number of the patient is registered then provide a notification to them to get the dose.

**1.3 LIMITATIONS OF EXISTING SYSTEM:**There are many issues and constraints associated with tracking the dosage of the women and child. As said pregnant women and children should meet their daily dosage of nutrition in any case possible, but due to various constraints like unable to buy, not remembering etc can cause various problems. All the applications which are available are only providing the information about dosage and the timing they have to take the dosage, but no application is providing the workers the track record of the customers about their daily consumption and the record of the missing people from the intake.

**1.4. PROPOSED SYSTEM:**

We are designing a system for health worker to monitor and trigger alarms if some women/child have not come for upcoming dose. In this case checking the reports and prescriptions of patients regularly to check if they have an appointment is tedious work, instead if we design an automated system and it automatically provide alert to the health workers so that they can communicate the same to the patients. Additionally, if mobile number of the patient is registered then provide notification to them to get the dose. This can help to promote nutrition among women and children with the help of this device for accomplishing PoshanAbhiyaan.

By creating a web application, we can keep a track of dosage and decrease the rate of malnourishment in women/children.



**2.LITERATURE SURVEY**

India has attempted several nutrition programmes over the last 40 years, with the formulation of the Integrated Child Development Services (ICDS) and the nationwide execution of the mid-day meal scheme. However, nutrition and stunting continue to persist as roadblocks for the country. Stunting has wide-ranging repercussions on human capital, poverty alleviation and the promotion of equity. It also significantly diminishes educational potential, resulting in fewer professional opportunities.

According to the National Family Health Survey 4 (NFHS-4) 2015-16, India has unacceptably high levels of stunting, despite marginal improvement over the years. India has nearly halved the proportion of its stunted children (38.4 percent) from what it was in the late 1980s (66.2 percent). The percentage of under-five children who are stunted declined to 38.4 percent from 48 percent a decade ago. Barring Puducherry, Delhi, Kerala and Lakshadweep, all other states have a higher proportion of stunted children in rural areas than in urban. Meanwhile, the percentage of children under-five who are wasted increased over the last ten years, from 19.8 percent in 2005-06 to 21 percent in 2015-16. The proportion of children who are severely wasted also increased from 6.4 percent to 7.5 percent between 2005-06 and 2015-16, respectively.

Under the ICDS umbrella, multiple schemes such as Anganwadi services, schemes for Adolescent Girls, and PradhanMantriMatruVandanaYojna (PMMVY) have been initiated. Additionally, Nutritional Rehabilitation Centres were established by the Ministry of Health and Family Welfare to treat severe malnutrition in children.

Despite a gamut of programmes and schemes targeting maternal and child health and nutrition, the uptake of nutrition services by beneficiaries has been meagre.  According to the NFHS-4 data, only 51 percent of pregnant women attended the minimum four antenatal services and only 30 percent of women consumed IFA supplements. The number of beneficiaries receiving take-home rations under the Supplementary Nutrition Programme varies from 14 to 75 percent for children, 51 percent for pregnant women, and 47.5 percent for lactating women. Although sanitation facilities have improved over the decade, less than 50 percent of household report using them.  Only about 50 percent of pregnant and lactating women are enrolled in the maternity benefit scheme across states. Despite having institutional delivery at 79 percent, the early initiation of breastfeeding remains low at 42 percent and exclusive breastfeeding at 55 percent.

A key inference after investing in a range of initiatives and programmes to fight malnutrition has been the importance of a micro-level approach with needs-based additions in order to reach and influence each individual. High levels of variation have long existed amongst the states and Union Territories while evaluating the prevalence of malnutrition. These variationshave suggested a need to develop and guide interventions in harmony with the unique circumstances of each region, rather than continuing with a single national approach.

The intergenerational cycle of malnutrition can be combatted through robust interventions for both mother (pre- and post-pregnancy) and child, thereby addressing the high burden of stunting, especially in rural areas.

Insights from the NFHS-4 on maternal and infant and young child nutrition by the International Food Policy Research Institute (IFPRI) have shown that 239 districts in India have stunting rates above 40 percent. Stunting shows wide regional differences as well: the best performing district in India has only 12.4 percent of children stunted, but on the other end, there is a district with a proportion of 65.1 percent stunted children. Almost 40 percent of the country’s districts have stunting levels above 40 percent. Similarly, while India has a district with only 1.8 percent of children wasted; there are at least seven districts where the proportion is more than 40 percent. The India average is 21 percent.

With the objective of enhancing inclusion and increasing the quality and quantity of services, the Ministry of Women and Child Development launched the National Nutrition Mission (POSHAN Abhiyaan) in 2017. The principal goal of POSHAN Abhiyaan is improving the nutritional status of children from 0-6 years, adolescent girls, pregnant women, and lactating mothers. POSHAN Abhiyaan is a three-year programme established to ensure a holistic approach, covering all 36 States and Union Territories. The strategy presents a unique opportunity to the eradication of undernutrition in the grassroots. It is an overarching multi-ministerial convergence mission that is working towards a malnutrition-free India by 2022. The mission is a conjunction of various schemes/programmes, including the PMMVY, Anganwadi Services, Scheme for Adolescent Girls of Ministry of Women and Child Development (MWCD), National Health Mission (NHM) of Ministry of Health & Family Welfare, Swachh Bharat Mission of Ministry of Drinking Water & Sanitation (DW&S), Public Distribution System (PDS) of Ministry of Consumer Affairs, Drinking Water & Toilets with Ministry of Panchayati Raj, Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) of Ministry of Rural Development (MoRD), Food & Public Distribution (CAF&PD), and other Urban local bodies through relevant Ministries.

The Food Fortification Resource Centre (FFRC) was set up to provide information to the various Ministries of the government to fortify the five staples—rice, wheat, oil, milk and salt—and provide assistance to the states on how these can be disseminated through Public Distribution System, Mid-Day Meals or the ICDS.  One of the greatest benefits of having fortified staples is that without tablet distribution or monitoring, staples containing essential micronutrients can be provided to the people.

The POSHAN Abhiyaan programme strives to achieve the SDG-2 of eliminating all forms of malnutrition by 2030, including the internationally agreed 2025 target of stunting and wasting in children under 5 years. This is a tall goal given that the decadal decline in stunting, from 48 percent in 2006 to 38.4 percent in 2016, is only one percentage point a year. It warrants an immediate alignment amongst ministries, the proper juxtaposition of health and nutrition programmes right from pregnancy until the child reaches five years of age, and critical monitoring of progress made over the course of the programme.

Between 2005 and 2015, the rate of decrease of malnutrition stagnated at one percent per annum. While the National Nutrition Mission has achieved feats, in order to reach its target of reducing stunting, undernutrition, anaemia and low birth weight to two percent, two percent, three percent and two percent, respectively, the initiative requires strengthening at several levels, from the state to the individual.

In a study by Lancet in 2013, researchers found that scaling up proven nutritional interventions could reduce global stunting by 20 percent and child mortality by 15 percent. While most research has been focused on estimating the impact of scaling up key interventions on economic growth, few studies have assessed the extent to which certain programmes reach the vulnerable sections of our society. As explained by Lancet**:**“It is the juxtaposition of coverage and efficacy that explains progress in reducing malnutrition or its absence.”

**3.REQUIREMENTS ANALYSIS**

## 3.1 FUNCTIONAL REQUIREMENTS SPECIFICATION

**MODULES:**

1. Admin
2. Worker

**Modules Description**

This project consists of two modules

1. **Admin Module:** using this module admin login to application as super user by using username as ‘admin’ and password as ‘admin’. After login admin will add workers details and provide username and password to workers. Admin can view all peoples who took dose for current month and can view all peoples who missed dose.
2. **Worker Module:** workers login to application by taking username and password from admin. After login worker will add women/child details and record dose taking start and end date and assign id to each child/women. After recording details worker will select id if person appear to take dose and dose taking details for current month will be recorded. If any women/child miss does then worker will send notification to them by using ‘Send Notification’ option from application. Here we are sending notification via email as sending SMS require Phone Network Service Providers like AIRTEL and if we want to take that service then we need to pay amount to them so email notification is free so I am using email option.

**PERFORMANCEREQUIREMENTS**

Performance is measured in terms of the output provided by the application. Requirement specification plays an important part in the analysis of a system. Only when the requirement specifications are properly given, it is possible to design a system, which will fit into required environment. It rests largely with the users of the existing system to give the requirement specifications because they are the people who finally use the system. This is because the requirements have to be known during the initial stages so that the system can be designed according to those requirements. It is very difficult to change the system once it has been designed and on the other hand designing a system, which does not cater to the requirements of the user, is of no use.

The requirement specification for any system can be broadly stated as given below:

The system should be able to interface with the existing system

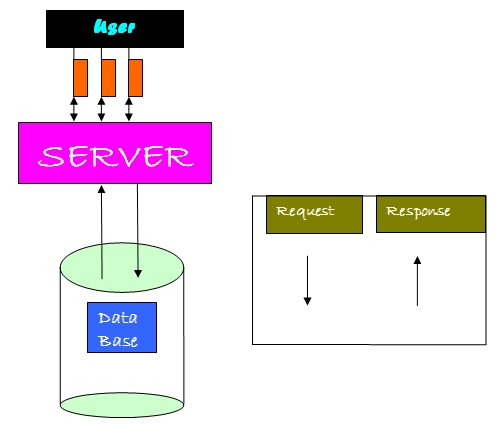
* The system should be accurate
* The system should be better than the existing system

The existing system is completely dependent on the user to perform all the duties.

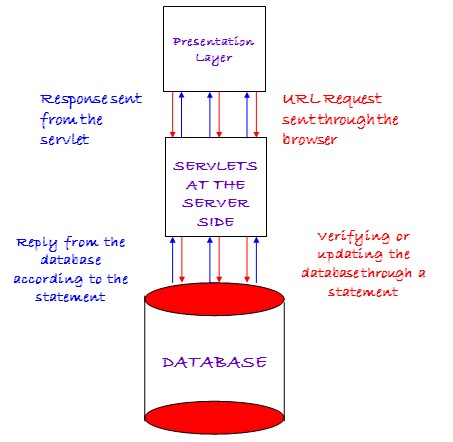
### SYSTEM ARCHITECTURE

**Architecture flow:**

Below architecture diagram represents mainly flow of requests from users to database through servers. In this scenario overall system is designed in three tires separately using three layers called presentation layer, business logic layer and data link layer. This project was developed using 3-tire architecture.

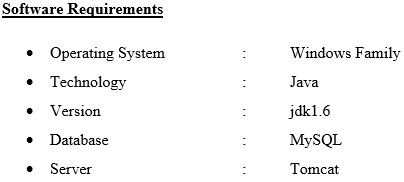


**URL Pattern:**



URL pattern represents how the requests are flowing through one layer to another layer and how the responses are getting by other layers to presentation layer through server in architecture diagram.

**1.SOFTWAREREQUIREMENTS**:



**SOFTWARE REQUIREMENT SPECIFICATION**

# **Overall Description**

A Software Requirements Specification (SRS) – a [requirements specification](http://en.wikipedia.org/wiki/Requirements_specification)for a [software system](http://en.wikipedia.org/wiki/Software_system) is a complete description of the behavior of a system to be developed. It includes a set of [use cases](http://en.wikipedia.org/wiki/Use_case)that describe all the interactions the users will have with the software. In addition to use cases, the SRS also contains non-functional requirements. [Nonfunctional requirements](http://en.wikipedia.org/wiki/Non-functional_requirements)are requirements which impose constraints on the design or implementation (such as [performance engineering](http://en.wikipedia.org/wiki/Performance_engineering)requirements, [quality](http://en.wikipedia.org/wiki/Quality_%28business%29)standards, or design constraints).

**Feasibility Study:**

Preliminary investigation examines project feasibility, the likelihood the system will be useful to the organization. The main objective of the feasibility study is to test the Technical, Operational and Economical feasibility for adding new modules and debugging old running system. All systems are feasible if they are given unlimited resources and infinite time. There are aspects in the feasibility study portion of the preliminary investigation:

* Technical Feasibility
* Operation Feasibility
* economical Feasibility

## 1.TECHNICAL FEASIBILITY

The technical issue usually raised during the feasibility stage of the investigation includes the following:

* Does the necessary technology exist to do what is suggested?
* Do the proposed equipments have the technical capacity to hold the data required to use the new system?
* Will the proposed system provide adequate response to inquiries, regardless of the number or location of users?
* Can the system be upgraded if developed?

Are there technical guarantees of accuracy, reliability, ease of access and data security?

## 2.OPERATIONAL FEASIBILITY

**OPERATIONAL FEASIBILITY**

**User-friendly**

Customer will use the forms for their various transactions i.e. for adding new routes, viewing the routes details. Also the Customer wants the reports to view the various transactions based on the constraints.

Theses forms and reports are generated as user-friendly to the Client.

Security

The web server and database server should be protected from hacking, virus etc **Portability**

The application will be developed using standard open source software (Except Oracle) like Java, tomcat web server, Internet Explorer Browser etc these software will work both on Windows and Linux o/s.

Hence portability problems will not arise.

**Availability**

This software will be available always.

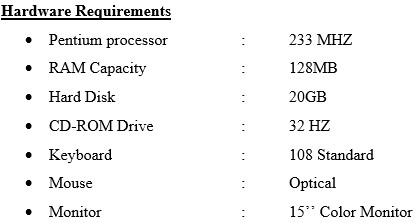
## Maintainability

The 1st tier is the GUI, which is said to be front-end and the 2nd tier is the database, which uses My-Sql, which is the back-end. The front-end can be run on different systems (clients). The database will be running at the server. Users access these forms by using the user-ids and the passwords.

## 3.ECONOMIC FEASILITY :

The computerized system takes care of the present existing system’s data flow and procedures completely and should generate all the reports of the manual system besides a host of other management reports. It should be built as a web based application with separate web server and database server. This is required as the activities are spread throughout the organization customer wants a centralized database. Further some of the linked transactions take place in different locations. Open source software like TOMCAT, JAVA, Mysql and Linux is used to minimize the cost for the customers.

## 2. HARDWARE REQUIREMENTS



**3.2 NON- FUNCTIONAL REQUIREMENTS SPECIFICATION**

1. Users must change the initially assigned login password immediately after the first successful login. Moreover, the initial should never be reused.

2. Employees never allowed to update their salary information. Such attempt should be reported to the security administrator.

3. Every unsuccessful attempt by a user to access an item of data shall be recorded on an audit trail.

4. A website should be capable enough to handle 20 million users with affecting its performance 5. The software should be portable. So moving from one OS to other OS does not create any problem.

6. Privacy of information, the export of restricted technologies, intellectual property rights, etc. should be audited.

Nonfunctional Requirements (NFRs) define system attributes such as security, reliability, performance, maintainability, scalability, and usability. They serve as constraints or restrictions on the design of the system across the different backlogs.

* Throughput.
* Utilization.
* Scalability.
* Availability.
* Recoverability.
* Serviceability.

**4.DESIGN**

Systems design is the process or art of defining the architecture, components, modules, interfaces, and data for a system to satisfy specified requirements. One could see it as the application of systems theory to product development. There is some overlap and synergy with the disciplines of systems analysis, systems architecture and systems engineering.

**4.1 UML DIAGRAMS**

**Unified Modeling Language**:

The Unified Modeling Language allows the software engineer to express an analysis model using the modeling notation that is governed by a set of syntactic semantic and pragmatic rules.

A UML system is represented using five different views that describe the system from distinctly different perspective. Each view is defined by a set of diagram, which is as follows.

•User Model View

* + 1. This view represents the system from the users perspective.
    2. The analysis representation describes a usage scenario from the end-users perspective.

•Structural model view

* + 1. In this model the data and functionality are arrived from inside the system.
    2. This model view models the static structures.
* Behavioral Model View

It represents the dynamic of behavioral as parts of the system, depicting the interactions of collection between various structural elements described in the user model and structural model view.

* Implementation Model View

In this the structural and behavioral as parts of the system are represented as they are to be built.

* Environmental Model View

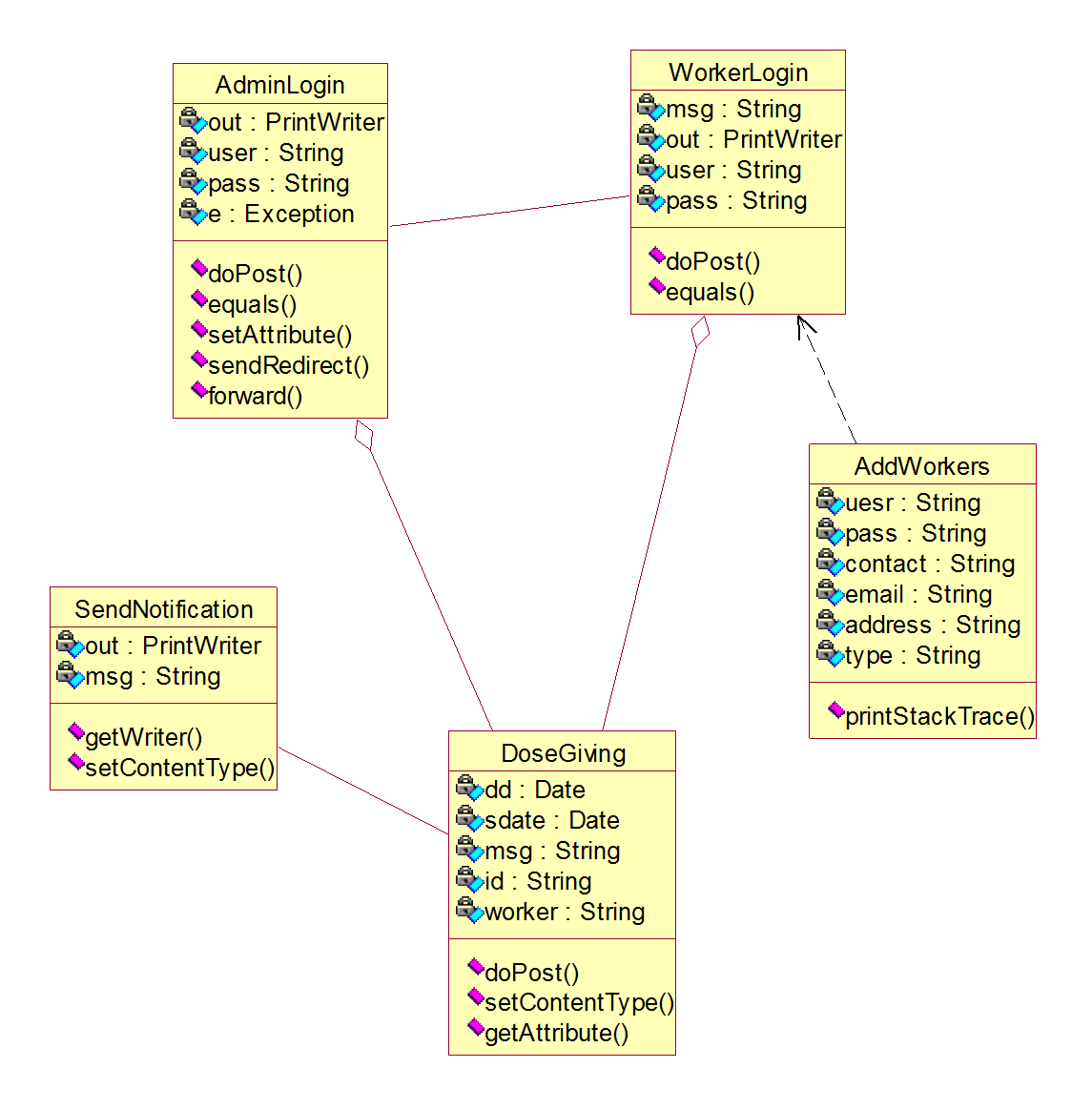
In this the structural and behavioral aspects of the environment in which the system is to be implemented are represented.

**Class Diagram:**

The class diagram is the main building block of object oriented modeling. It is used both for general conceptual modeling of the systematic of the application, and for detailed modeling translating the models into programming code. Class diagrams can also be used for data modeling. The classes in a class diagram represent both the main objects, interactions in the application and the classes to be programmed. In the diagram, classes are represented with boxes which contain three parts:

* The upper part holds the name of the class
* The middle part contains the attributes of the class
* The bottom part gives the methods or operations the class can take or undertake

**Class Diagram:**



**Use case Diagram:**

A **use case diagram** at its simplest is a representation of a user's interaction with the system and depicting the specifications of a use case. A use case diagram can portray the different types of users of a system and the various ways that they interact with the system. This type of diagram is typically used in conjunction with the textual use case and will often be accompanied by other types of diagrams as well.

**Use case Diagram:**

Add workers

View workers

View peoples who took dose

View missed dose peoples

Admin

Add child/women data

Dose took data

Send notifications

View child/women data

Worker

**Sequence Diagram:**

A **sequence diagram** is a kind of interaction diagram that shows how processes operate with one another and in what order. It is a construct of a Message Sequence Chart. A sequence diagram shows object interactions arranged in time sequence. It depicts the objects and classes involved in the scenario and the sequence of messages exchanged between the objects needed to carry out the functionality of the scenario. Sequence diagrams are typically associated with use case realizations in the Logical View of the system under development. Sequence diagrams are sometimes called **event diagrams**, **event scenarios**, and timing diagrams.

**Sequence Diagram:**

|  |  |  |
| --- | --- | --- |
| Admin/Worker |  | System |

Admin login screen

Admin login successfully

Add workers

New workers details

View workers

View the all worker details

Worker login screen

Worker login successfully

Add child/women data link

Adding child/women details we need to upload their photo als

Dose took data

We can see application displaying

Send notification

We got message as notification

View child/women

We get the

Vie peoples who took dose

Get all peoples detail who took dose for current

View missed dose peoples

View all peoples who missing dose for current

**Collaboration Diagram:**

A collaboration diagram describes interactions among objects in terms of sequenced messages. Collaboration diagrams represent a combination of information taken from class, sequence, and use case diagrams describing both the static structure and dynamic behavior of a system.

**Collaboration Diagram:**

Admin/

Worker

System

1:

Admin ligin

Admin login successfully

2:

3:

Add workers

Ne workers added

4:

View workers

5:

6:

View the all workers details

Worker login

7:

8:

Worker login successfully

Add child/women data link

9:

10:

Child/women details added & their photos uploaded

Dose took data

11:

12:

We can see application displaying alert

Send notification

13:

as notification sent

sage

We got mes

14:

15:

View child/women data

W

the details

e get

16:

View peoples who took dose

17:

18:

Get all peoples detail who took dose for current month

View missed dose peoples

19:

20:

View all peoples who missing dose for current month

**Component Diagram:**

In the Unified Modeling Language, a component diagram depicts how components are wired together to form larger components and or software systems. They are used to illustrate the structure of arbitrarily complex systems.

Components are wired together by using an assembly connector to connect the required interface of one component with the provided interface of another component. This illustrates the service consumer - service provider relationship between the two components.

**Component Diagram:**

Admin

Worker

System

**Deployment Diagram:**

A **deployment diagram** in the Unified Modeling Language models the *physical* deployment of artifacts on nodes. To describe a web site, for example, a deployment diagram would show what hardware components ("nodes") exist (e.g., a web server, an application server, and a database server), what software components ("artifacts") run on each node (e.g., web application, database), and how the different pieces are connected (e.g. JDBC, REST, RMI).

The nodes appear as boxes, and the artifacts allocated to each node appear as rectangles within the boxes. Nodes may have sub nodes, which appear as nested boxes. A single node in a deployment diagram may conceptually represent multiple physical nodes, such as a cluster of database servers.

**Deployment Diagram:**

Admin

Worker

* 1. **Algorithm**

**ADMIN LOGIN**

**Function admin login(username,password)**

**{**

**If (username==admin && password == admin)**

**Then**

**Press login button**

**Else**

**It is invalid user.**

**}**

**ADD DOSE ENTRY**

**Function doseEntry(worker\_id,child\_women\_id, dose\_date)**

**{**

**booleanworker\_validated = validateWorker(worker\_id)**

**if(worker\_validated)**

**{**

**booleancheck\_child\_women\_id = isChildWomen\_record\_exists(child\_women\_id)**

**if(check\_child\_women\_id)**

**{**

**save\_dose\_entry\_to\_database(worker\_id,child\_women\_id, dose\_date);**

**}**

**}**

**}**

**SEND NOTIFICATION**

**Function sendNotification(child\_women\_id, dose\_start\_date, dose\_end\_date)**

**{**

**Previous\_took\_date = readDosedate(child\_women\_id)**

**current\_date = today\_date()**

**if (current\_date.after(dose\_start\_date) &&current\_date.before(dose\_end\_date)**

**{**

**thensend\_email\_notification\_to(child\_women\_id)**

**}**

**}**

**5.IMPLEMENTATION**

**5.1 Explanation of Key functions**

Servlets or JSP (Java Server Pages) can be used to design dynamic web applications which means user can send input data to server via HTML pages and then Tomcat server will send that HTML input to Servlets or JSP pages and then servlets or JSP pages will receive HTML input and then process logic and then send response back to web browser and then web browser will display received output as HTML.

Example

In HTML page we will specify name of servlet which process HTML input data by using FORM ACTION Tag. Each text field in the HTML page is associated with unique name and servlet can read input value of that text field by giving its name. All comments are in red colour

<HTML>

<BODY>

<FORM ACTION=”LOGIN” METHOD=”POST”>

//in above line we are saying this HTML form that will be processed by servlet called “LOGIN” and by using that name Tomcat server will invoke or execute LOGIN servlet which can validate user logic logic.

Username <INPUT TYPE=”TEXT” NAME=”t1” SIZE=”25”> //here we design one text field and its name is t1 and servlet can read value by giving this “t1” name

Password <INPUT TYPE=”PASSWORD” NAME=”t2” SIZE=”25”> //here we design one more text field and its name is t2 and servlet can read value by giving this “t2” name

<INPUT TYPE=”SUBMIT” VALUE=”Login”> //here we design one button and upon clicking that button server will invoke and execute servlet called ‘Login’

</FORM></BODY></HTML> //here html page design completed as we design only login page and below you can see servlet code of ‘Login’ program

Login.java servlet program

import javax.servlet.\*;

import java.io.\*;

import javax.servlet.http.\*; //here loading servlet packages

public class Login extends HttpServlet { //defining Login class extending from HttpServlet superclass

public void doPost(HttpServletRequest request, HttpServletResponse response) throws ServletException, IOException { //here we are overriding doPost method which will call by tomcat server and then put all values coming from HTML page to request object. In below line by using request object and HTML text fields names we can read values

String username = request.getParameter ("t1"); //here by giving t1 name we are reading its value from HTML page

String password = request.getParameter ("t2"); //here by giving t2 name we are reading password value from HTML page. Now we got all data from HTML page and then we can process login on that HTML data and send response/output back to browser

//in below lines we are checking if given username and password is admin or not and if admin then browser will display Admin Screen else will display invalid login

if (username.equals("admin") && password.equals("admin")){ //if user and password admin

HttpSession session=request.getSession();

session.setAttribute("user",username);

response.sendRedirect("AdminScreen.jsp?t1=Welcome "+user); //then display admin screen

} else { //else display in valid login

RequestDispatcher rd = request.getRequestDispatcher("AdminLogin.jsp?t1=invalid username or password");

rd.forward(request, response);

}

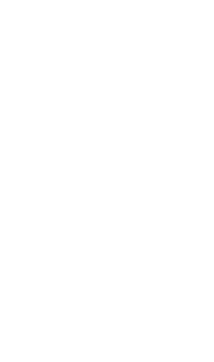
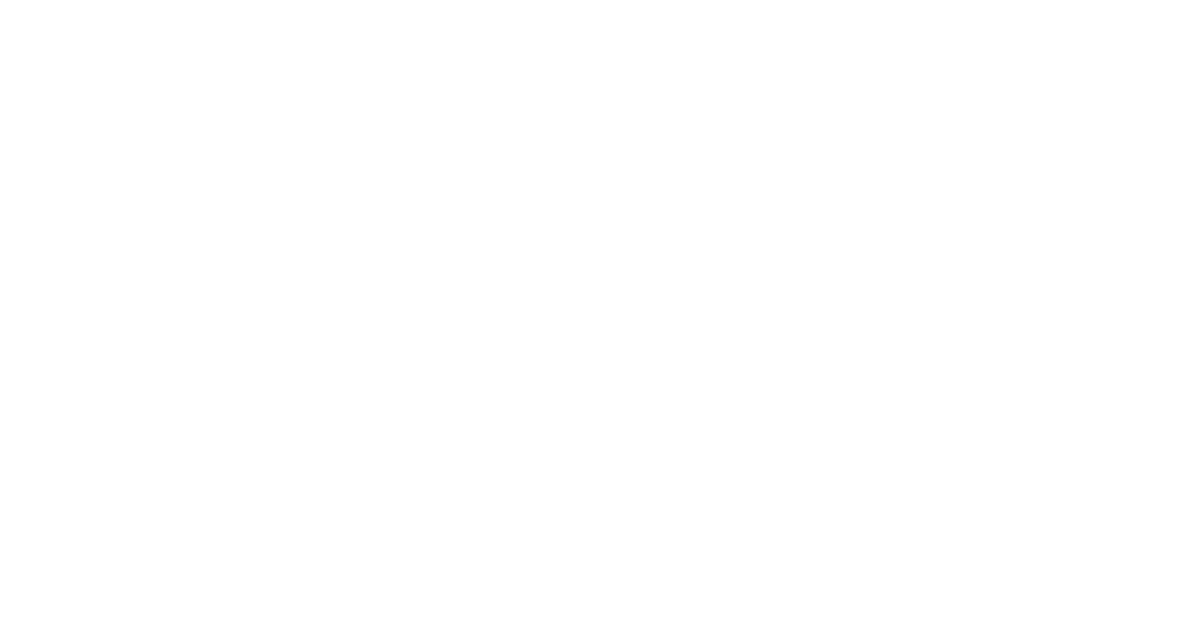
**5.2 Method of Implementation**

**HTML**

In this project to create the front end and to create the user friendly web pages we used a language called as hyper text markup language. For example in this web application we created a admin page, workers page, View workers details, View the people list who took the dose, Send the notification to the people who missed the dose, add children or women,view the people to took dose etc .All these pages are created using html language. Including the page layouts and also for connecting to the servlet pages,To validate the user information we use Hyper text markup language.

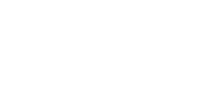
**JAVA**

Java architecture provides a portable, robust, high performing environment for development. Java provides portability by compiling the byte codes for the Java Virtual Machine, which is then interpreted on each platform by the run-time environment. Java is a dynamic system, able to load code when needed from a machine in the same room or across the planet.



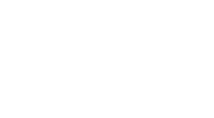
**Source**

**code**



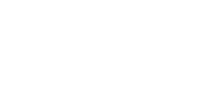
**Pc**

**compiler**



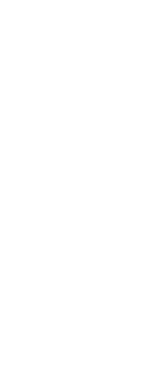
**Macintosh**

**compiler**



**SPARC**

**Compiler**



**Java**

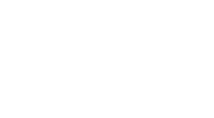
**Byte**

**code**

**Platform**

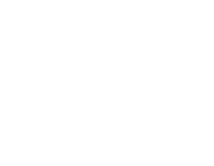
**indepen**

**dent**



**Java**

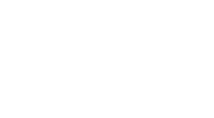
**interpreter**



**Java**

**interpreter**

**macintosh**



**Java**

**interpreter(**

**SPARC)**

During run-time the Java interpreter tricks the byte code file into thinking that it is running on a Java Virtual Machine. In reality this could be an Intel Pentium windows 95 or sun sparcstation running Solaris or Apple Macintosh running system and all could receive code from any computer through internet and run the Applets.

In this project we are using java script to connect the web application to the server and to check whether the given inputs are valid.After writing the html code and connecting the page to the servlet page it checks the values which are given.

## Servlets/JSP

A Servlet is a generic server extension. a Java class that can be loaded Dynamically to expand the functionality of a server.Servlets are commonly used with web servers. Where they can take the place CGI scripts. A servlet is similar to proprietary server extension, except that it runs inside a Java Virtual Machine (JVM) on the server, so it is safe and portable. Servlets operate solely within the domain of the server. Unlike CGI and Fast CGI, which use multiple processes to handle separate program or separate requests, separate threads within web server process handle all servlets. This means that servlets are all efficient and scalable. Servlets are portable; both across operating systems and also across web servers. Java Servlets offer the best possible platform for web application development. Servlets are used as replacement for CGI scripts on a web server, they can extend any sort of server such as a mail server that allows servelts t extend its functionality perhaps by performing a virus scan on all attached documents or handling mail filtering tasks. Servlets provide a Java-based solution used to address the problems currently associated with doing server-side programming including inextensible scripting solutions platformspecific API’s and incomplete interface. Servlets are objects that conform to a specific interface that can be plugged into a Java-based server.Servlets are to the server-side what applets are to the server-side what applets are to the client-side-object byte codes that can be dynamically loaded off the net. They differ form applets in than they are faceless objects(with out graphics or a GUI component).They serve as platform independent, dynamically loadable,plugable helper byte code objects on the server side that can be used to dynamically extend server-side functionality.

## JDBC

Any relational database. One can write a single program using the JDBC API,and the JDBC is a Java Api for executing SQL,Statements(As a point of interest JDBC is trademarked name and is not an acronym; nevertheless,Jdbc is often thought of as standing for Java Database Connectivity. It consists of a set of classes and interfaces written in the Java Programming language.JDBC provides a standard API for tool/database developers and makes it possible to write database applications using a pure Java API Using JDBC, it is easy to send SQL statements to virtually program will be able to send SQL .statements to the appropriate database. The Combination of Java and JDBC lets a programmer writes it once and run it anywhere. JDBC drivers are available for most database platforms, from a number of vendors and in a number of different flavors’.

## JAVA SCRIPT

The JavaScript is a compact , object-based scripting language for developing client and server internet applications. Netscape Navigator 2.0 interprets JavaScript statements embedded directly in an HTML page. and Livewire enables you to create server-based applications similar to common gateway interface(cgi) programs. In a client application for Navigator, JavaScript statements embedded in an HTML Page can recognize and respond to user events such as mouse clicks form Input, and page navigation.

* + 1. **Output Screens**

In this project health workers records women and child details for nutrition dose and using this application they can send notification to all peoples who miss dose for current month.

To run application follow below steps

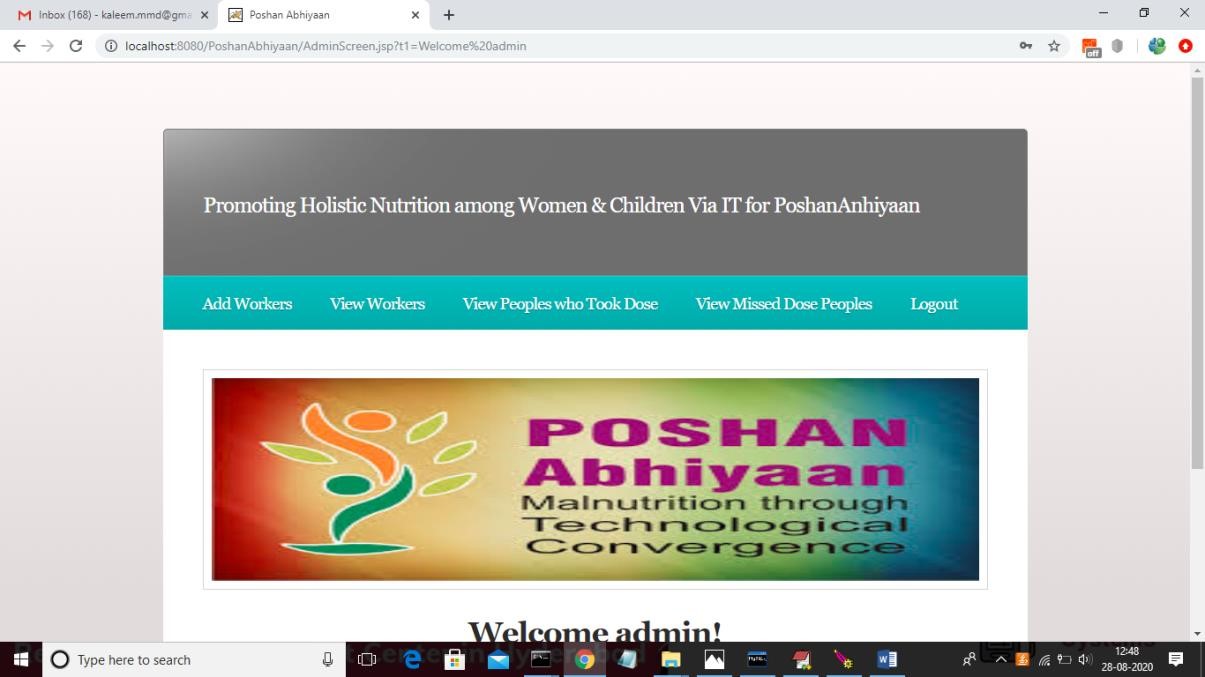
1. Create database in MYSQL by copying content from ‘db.txt’ file and paste in MYSQL
2. Put ‘PoshanAbhiyaan’ folder in tomcat webapps folder and start server and then open browser and enter URL as ‘http://localhost:your-tomcat-portno/PoshanAbhiyaan’ to get below screen



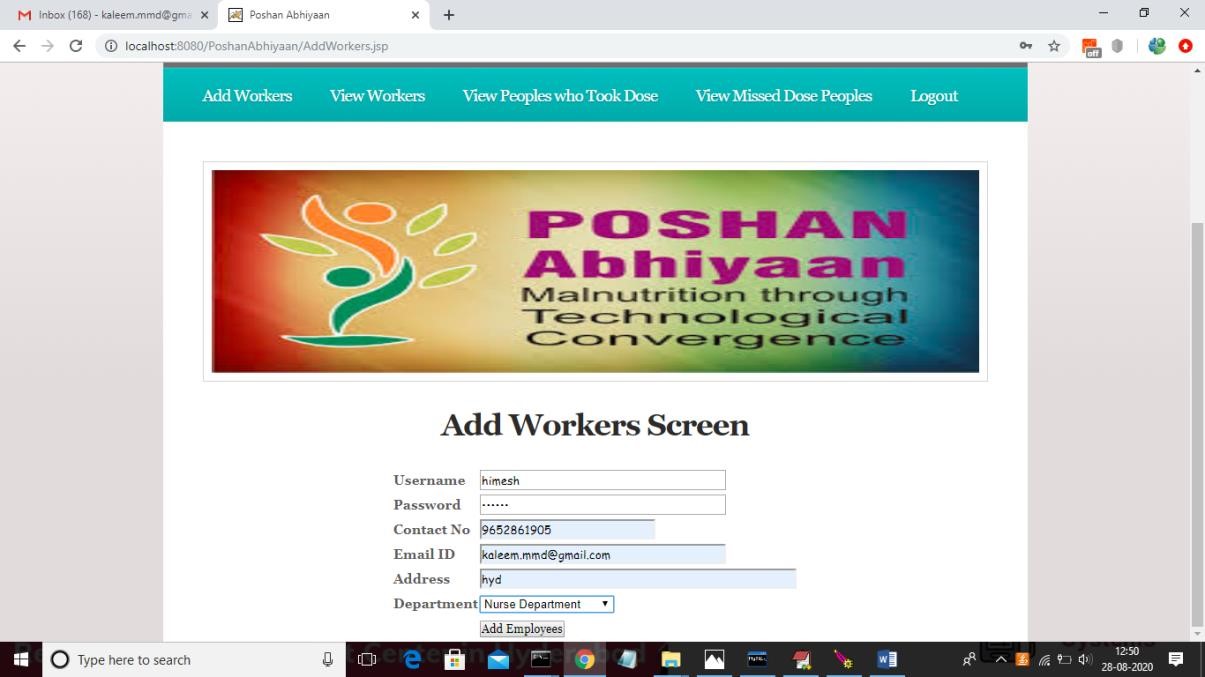
In above screen click on ‘Admin Login’ link to login as admin



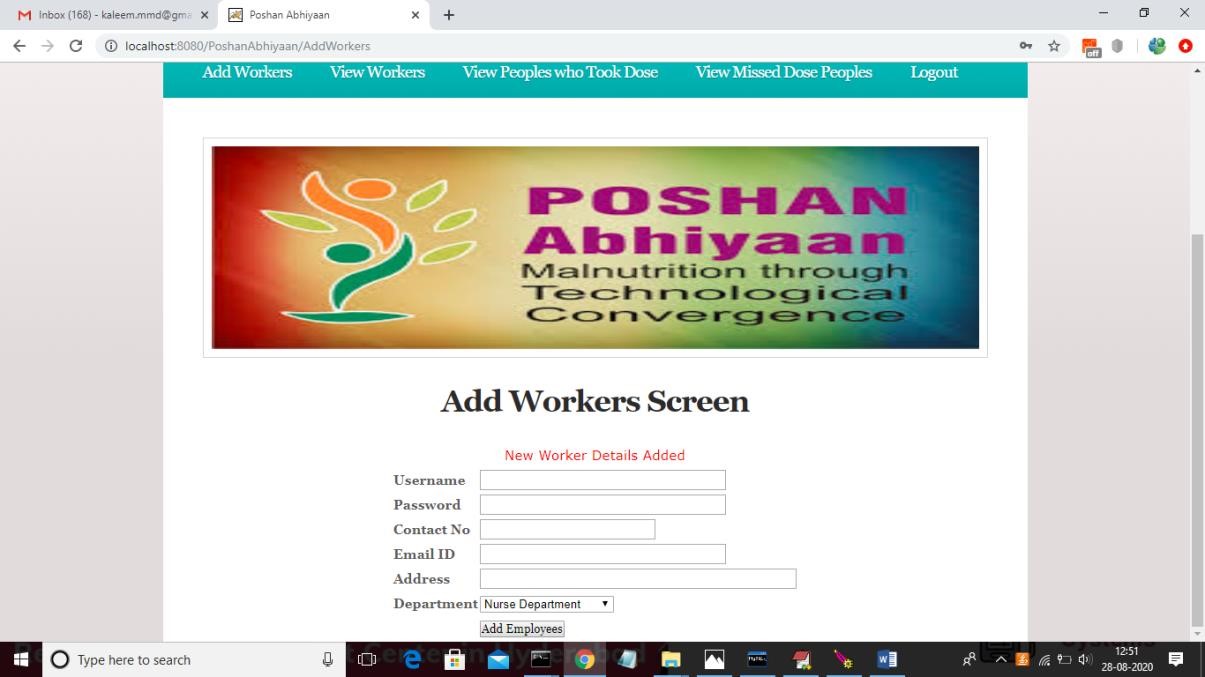
Click on ‘Login’ button to get below screen



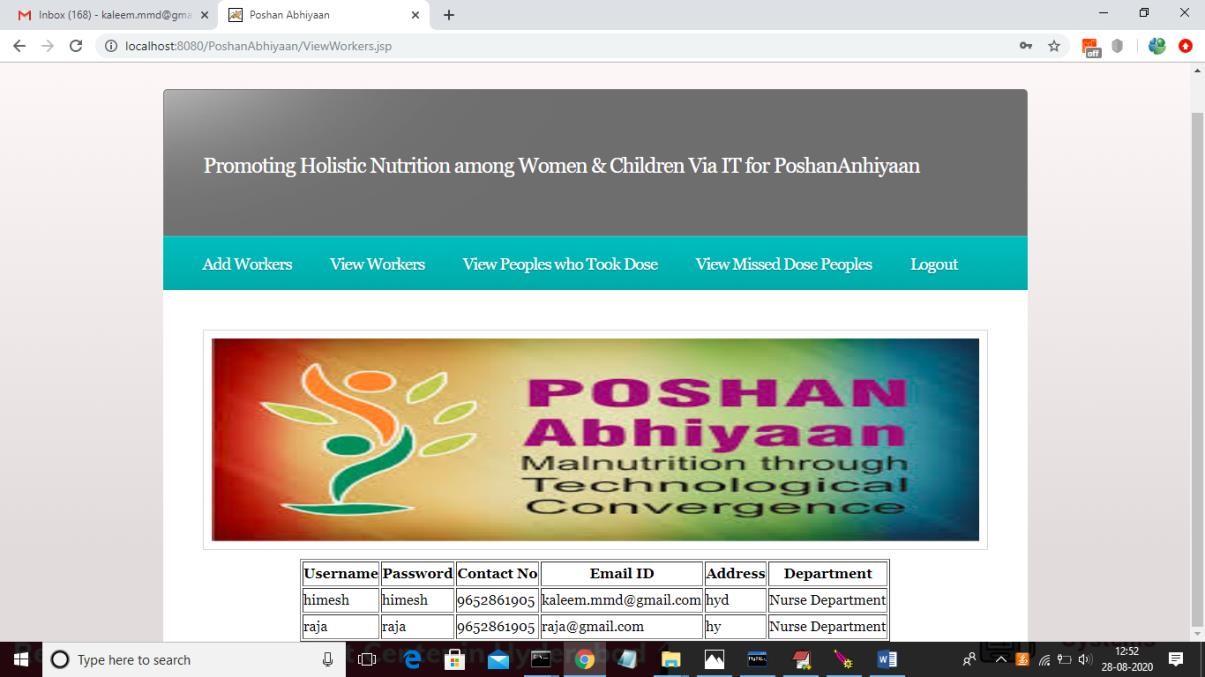
In above screen click on ‘Add Workers’ link to add worker details



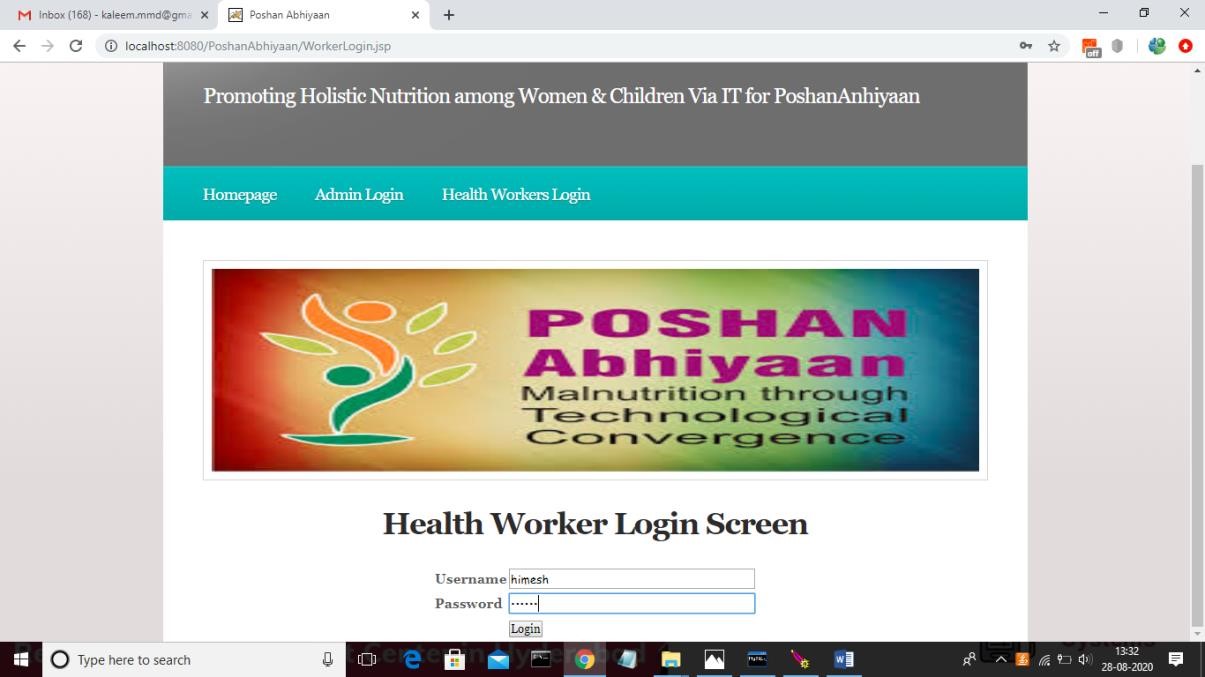
In above screen after entering details click on button to add details



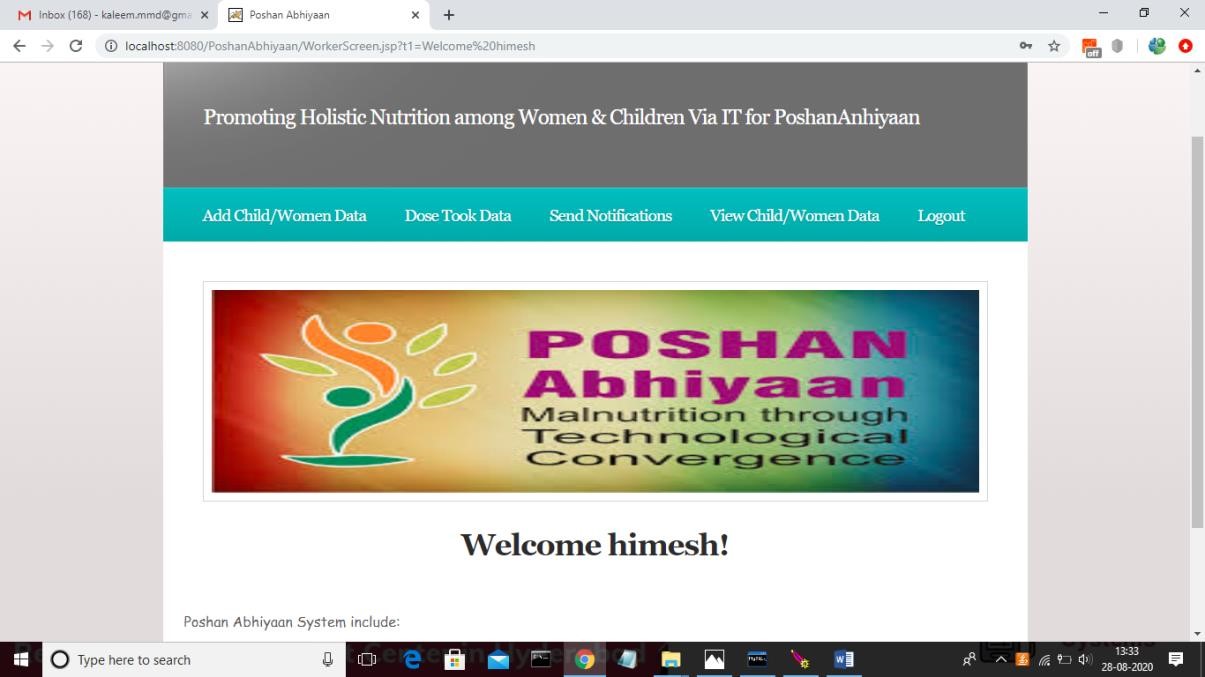
In above screen we can see worker details added. Now click on ‘View Workers’ link to view all worker details



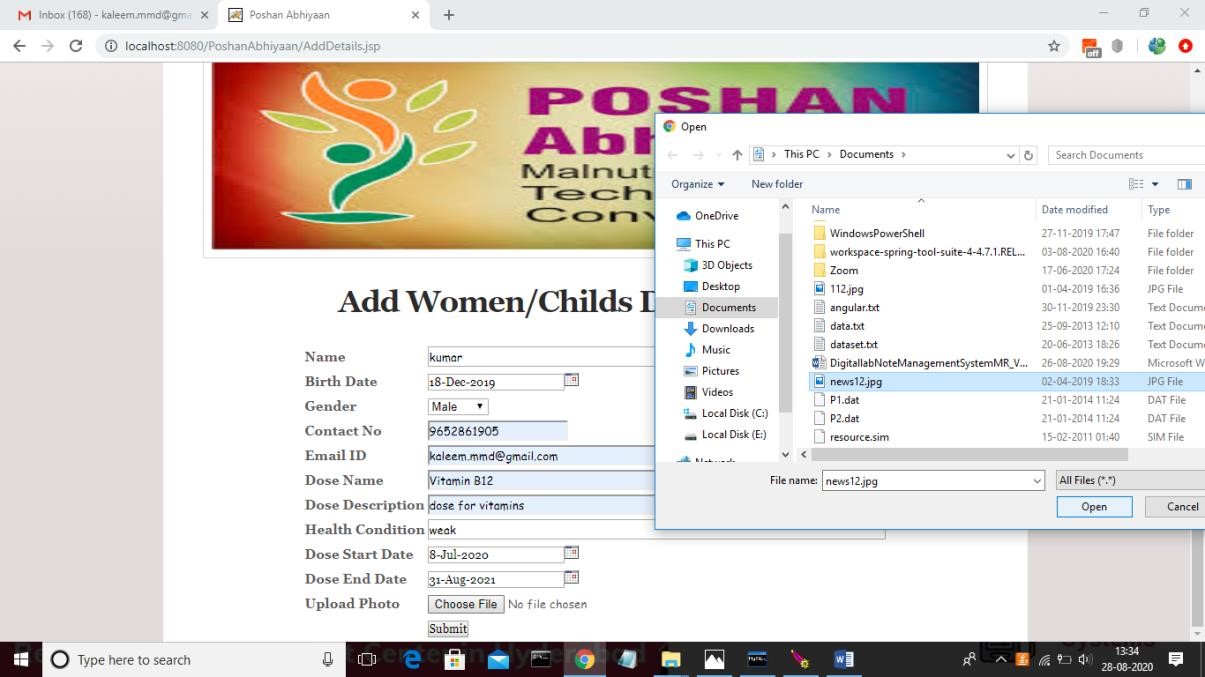
Now logout and login as worker to add women/child details



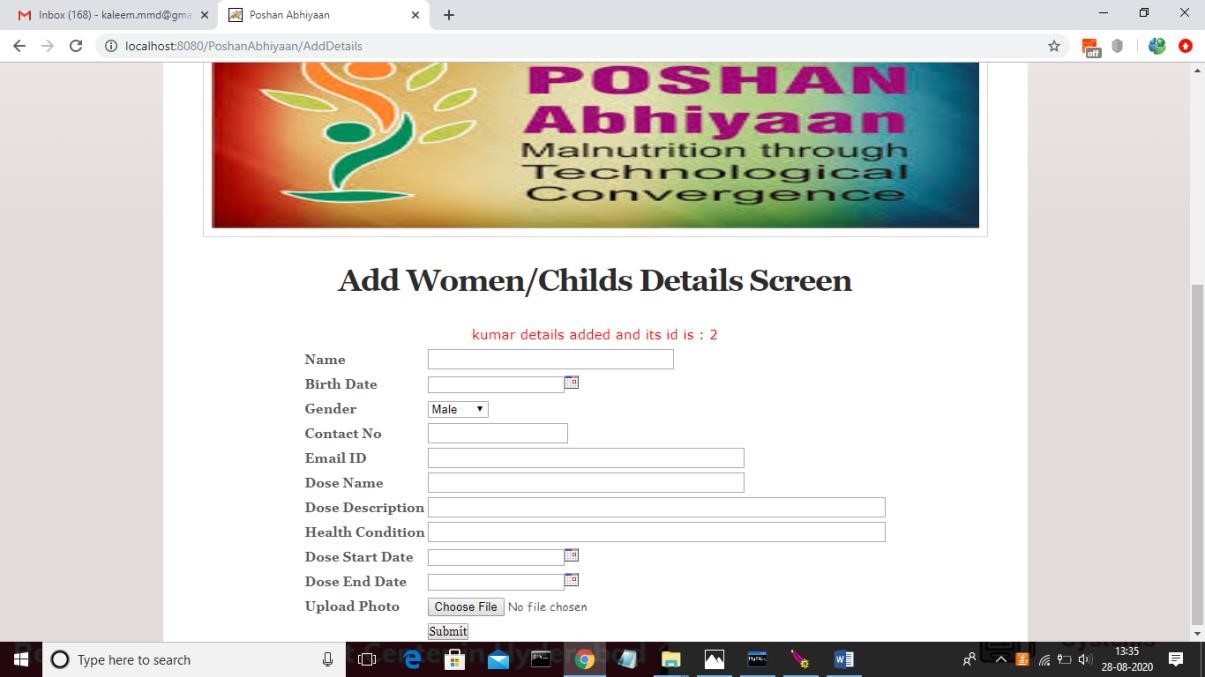
After worker as login will get below screen



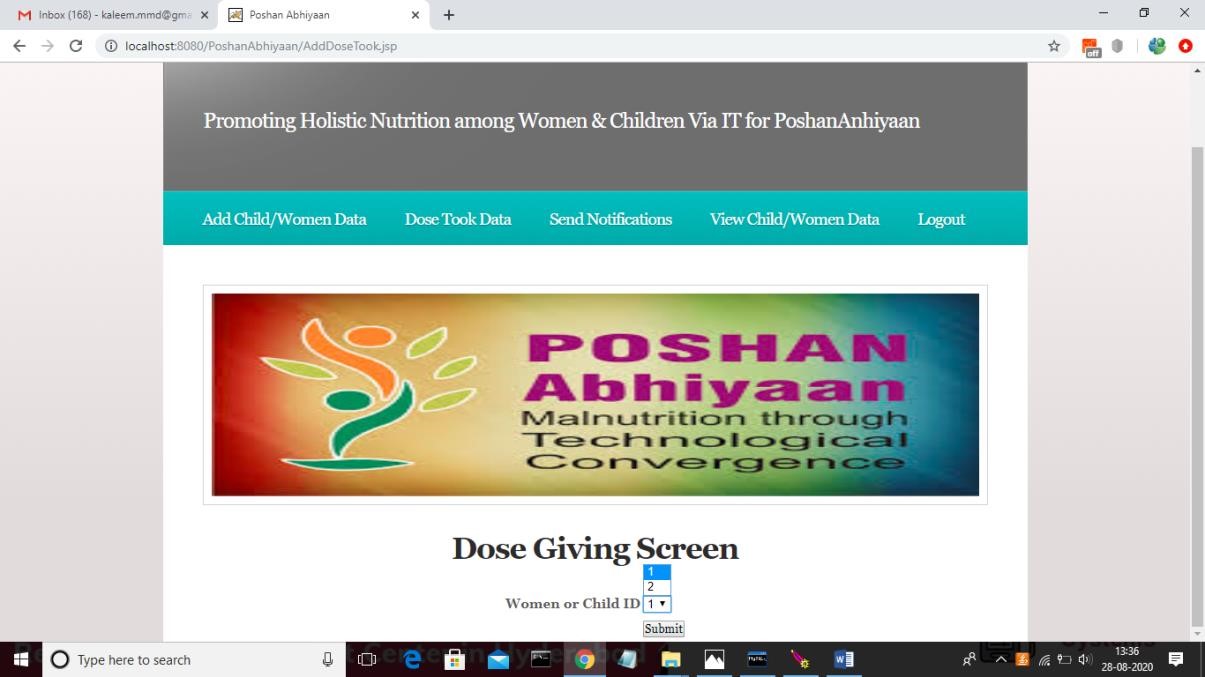
Now click on ‘AddChild/Women Data link to add child details



In above screen while adding child/women details we need to upload their photo also and after uploading photo press on submit button to record details



In above screen details added with id 2 and now click on ‘Dose Took Data’ link to add dose giving details if they came



In above screen select the id of the women/child who came to complete dose process for this month



In above screen after giving dose will get below screen and if same person come second time in same month for dose then application will display alert

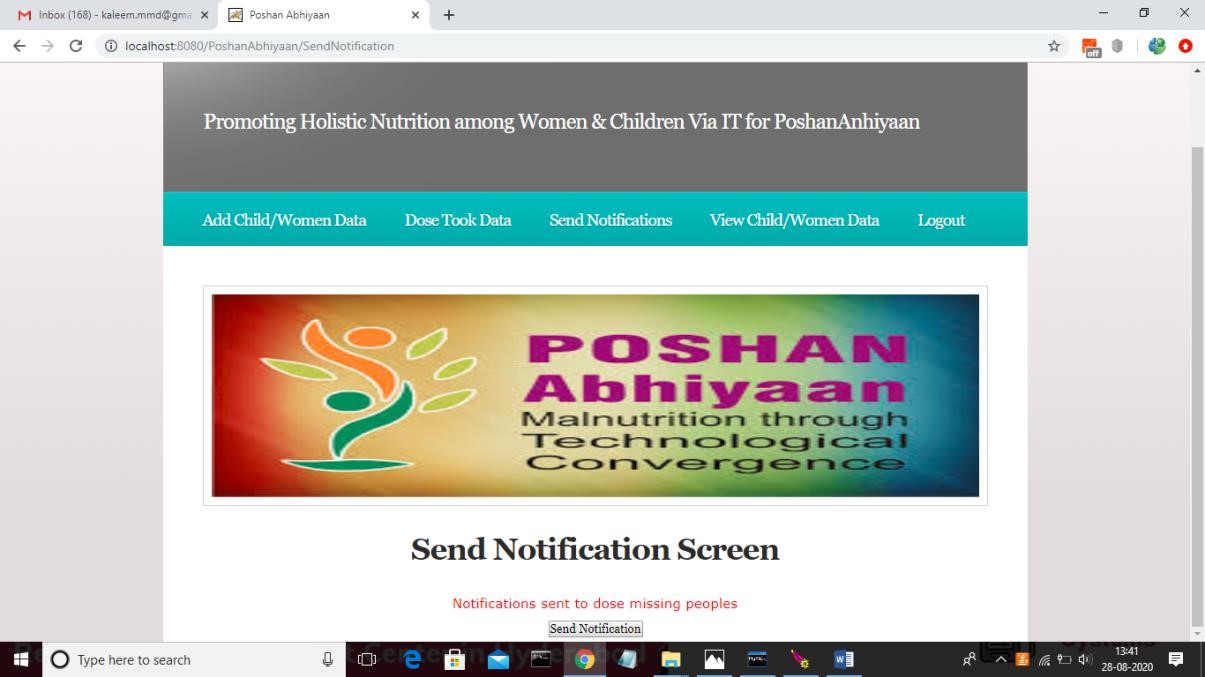


In above screen we can see application displaying alert as dose already took for current month. If you want to check for next month also then change your system date to next month.

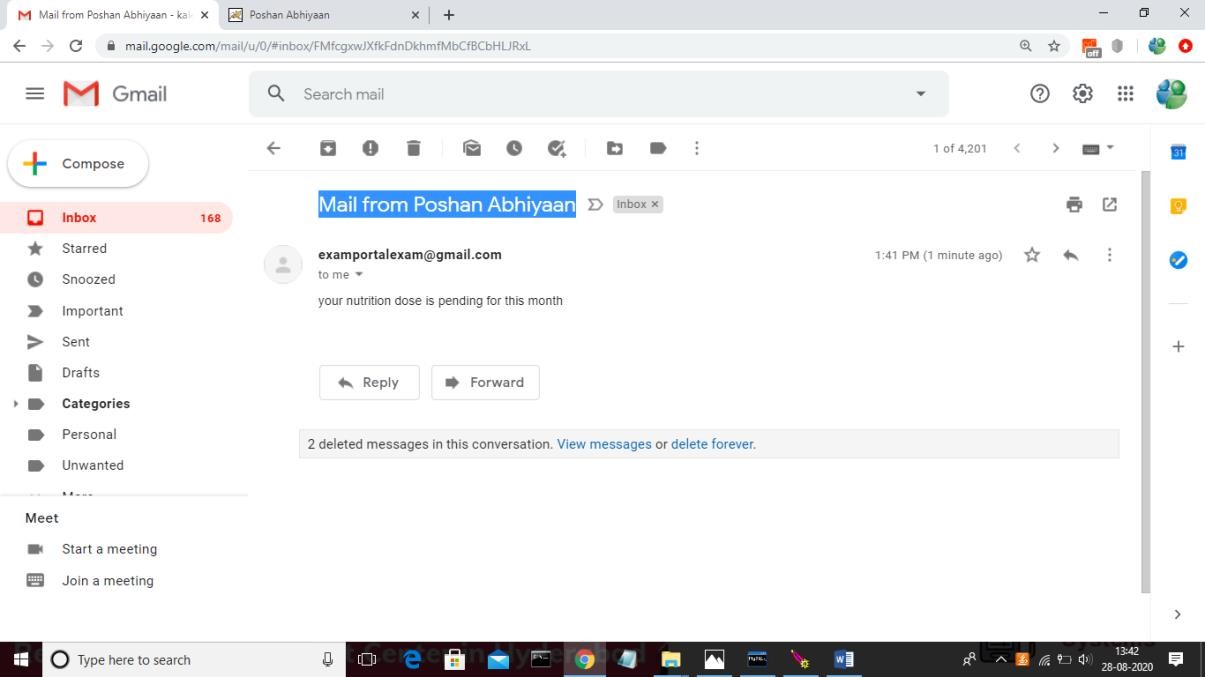
Now click on ‘Send Notification’ link to send notification to all women/child who are missing dose for current month. Here notification send via mail



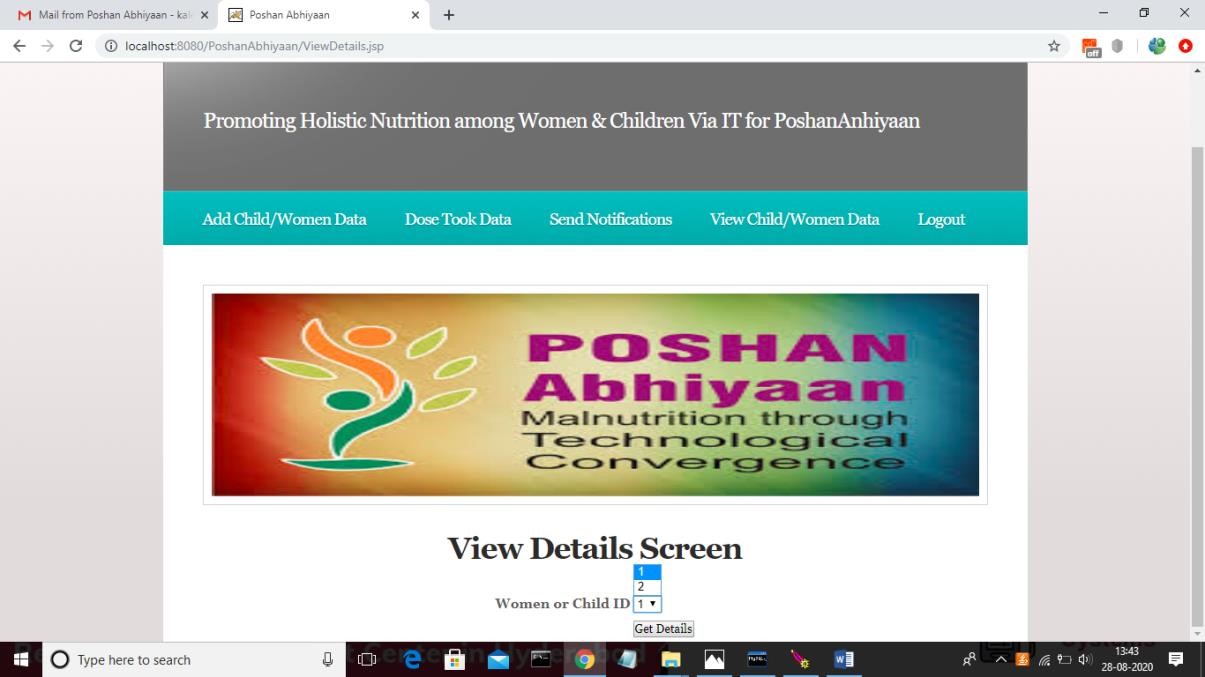
In above screen click on ‘Send Notification’ button to send mail



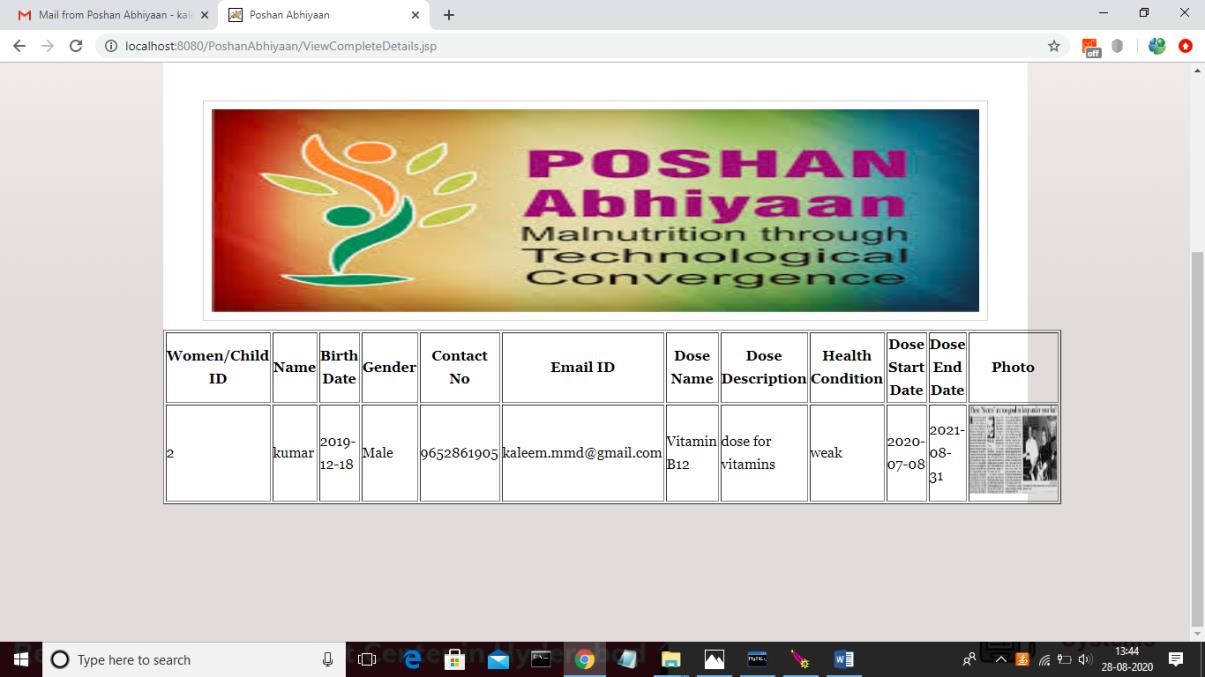
In above screen we got message as notification sent and now see below gmail screen for mail details



In above screen we can see mail from ‘Poshan Abhiyaan’ and showing message as dose is pending. Now in application screen click on ‘View Child/Women Data’ link to view their details



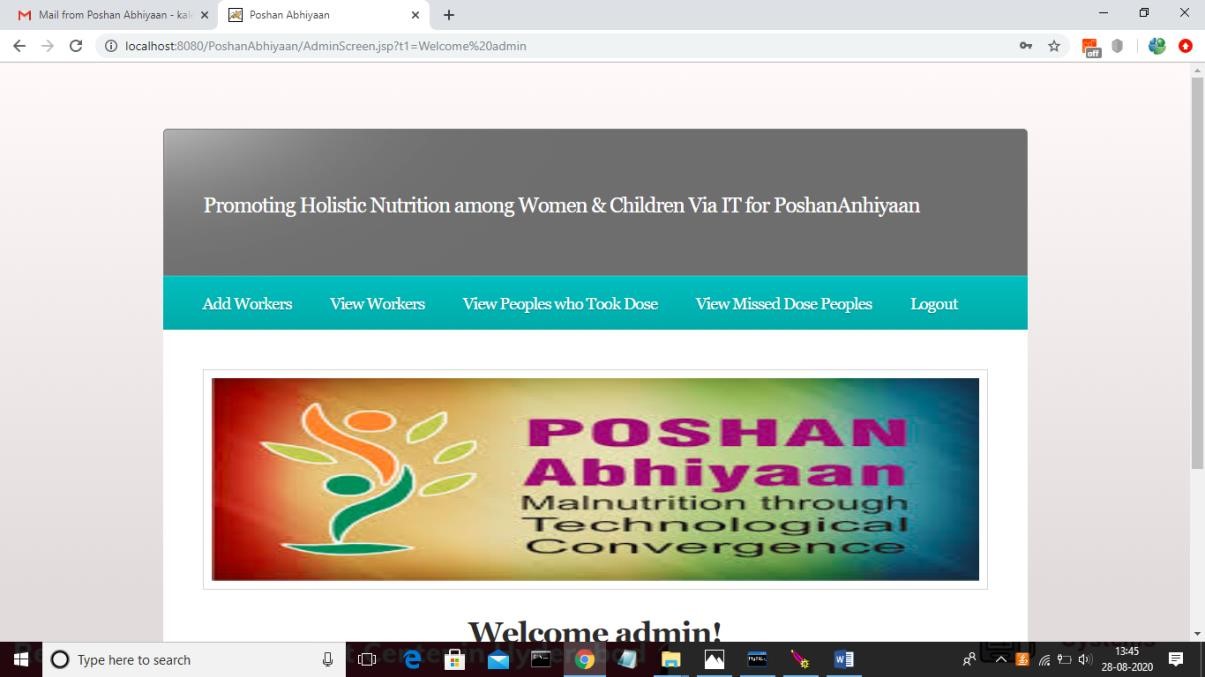
In above screen select ‘women/child id’ and press ‘Get Details’ button to get their details



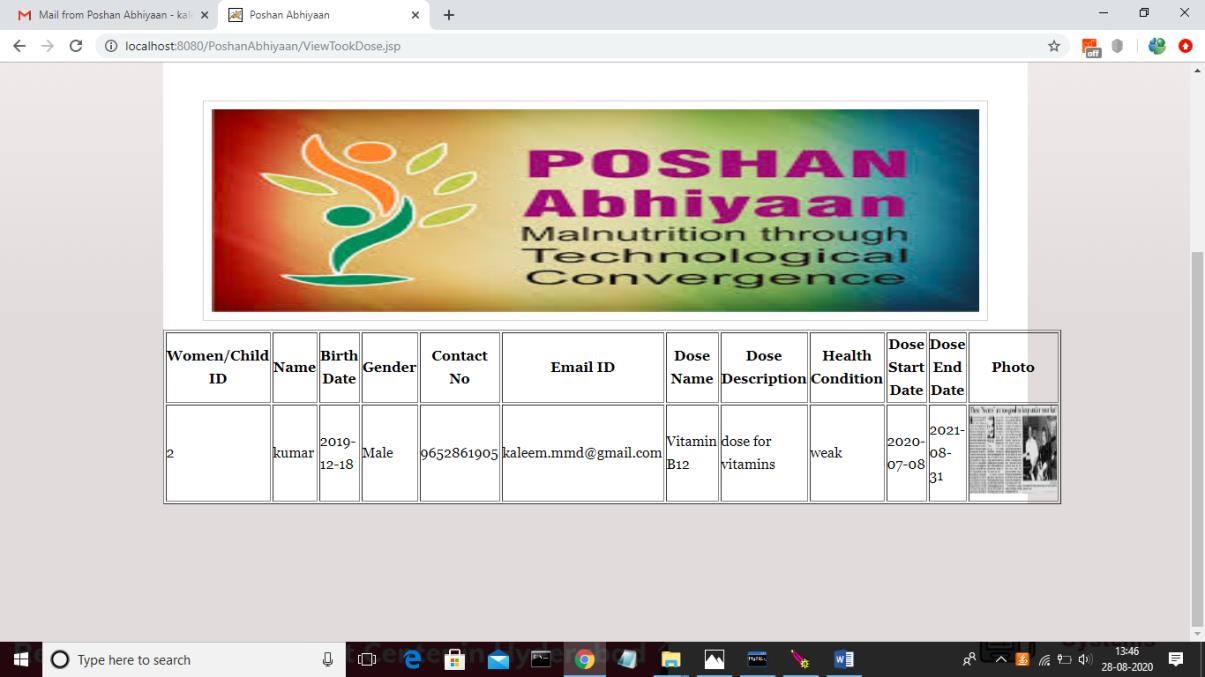
Now log out and login as admin user to view dose took peoples and missed peoples for current month.



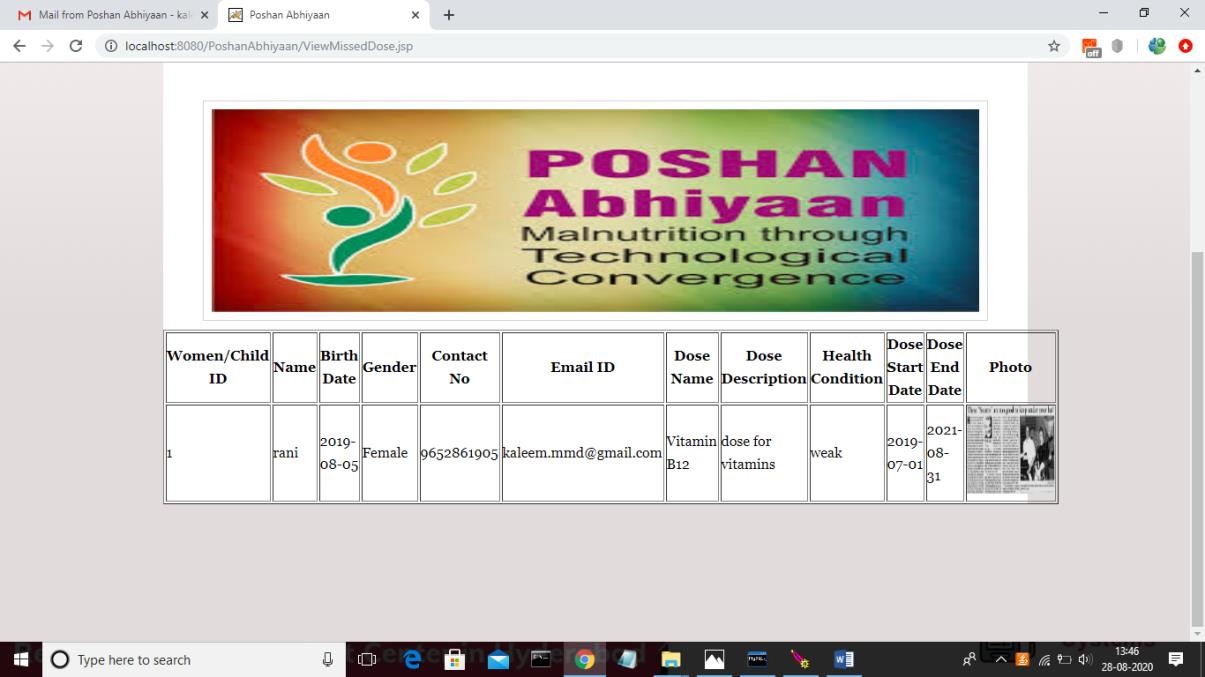
In above screen click on ‘Login’ button to login as admin and get below screen



In above screen click on ‘View Peoples who Took Dose’ link to get all peoples detail who took dose for current month



Now click on ‘View Missed Dose Peoples’ link to view all peoples who missing dose for current month



**6.TESTING & VALIDATION**

**6.1 Design of Test Cases and Scenarios**

**Introduction to Testing:**

Testing is a process, which reveals errors in the program. It is the major quality measure employed during software development. During software development. During testing, the program is executed with a set of test cases and the output of the program for the test cases is evaluated to determine if the program is performing as it is expected to perform.

In order to make sure that the system does not have errors, the different levels of testing strategies that are applied at differing phases of software development are:

**Unit Testing:**

Unit Testing is done on individual modules as they are completed and become executable. It is confined only to the designer's requirements.

**Each module can be tested using the following two Strategies:**

**Black Box Testing:**

In this strategy some test cases are generated as input conditions that fully execute all functional requirements for the program. This testing has been uses to find errors in the following categories:

 Incorrect or missing functions

 Interface errors

 Errors in data structure or external database access

 Performance errors

 Initialization and termination errors.

In this testing only the output is checked for correctness.

The logical flow of the data is not checked.

**White Box testing :**

In this the test cases are generated on the logic of each module by drawing flow graphs of that module and logical decisions are tested on all the cases. It has been uses to generate the test cases in the following cases:

* Guarantee that all independent paths have been Executed.
* Execute all logical decisions on their true and false Sides.
* Execute all loops at their boundaries and within their operational bounds ✓ Execute internal data structures to ensure their validity.

**Integrating Testing :**

Integration testing ensures that software and subsystems work together a whole. It tests the interface of all the modules to make sure that the modules behave properly when integrated together.

**System Testing:**

Involves in-house testing of the entire system before delivery to the user. It's aim is to satisfy the user the system meets all requirements of the client's specifications.

**Acceptance Testing :**

It is a pre-delivery testing in which entire system is tested at client's site on real world data to find errors.

**Test Approach :**

**Testing can be done in two ways:**

 Bottom up approach  Top down approach

**Bottom up Approach:**

Testing can be performed starting from smallest and lowest level modules and proceeding one at a time.

For each module in bottom up testing a short program executes the module and provides the needed data

so that the module is asked to perform the way it will when embedded with in the larger system. When bottom level modules are tested attention turns to those on the next level that use the lower level ones they are tested individually and then linked with the previously examined lower level modules.

**Top down approach:**

This type of testing starts from upper level modules. Since the detailed activities usually performed in the lower level routines are not provided stubs are written. A stub is a module shell called by upper level module and that when reached properly will return a message to the calling module indicating that proper interaction occurred. No attempt is made to verify the correctness of the lower level module.

**6.2 Validation:**

The system has been tested and implemented successfully and thus ensured that all the requirements as listed in the software requirements specification are completely fulfilled. In case of erroneous input corresponding error messages are displayed

### **6.3 TEST CASES**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Test Case Id** | **Test Case Name** | **Test Case Desc** | **Test Steps** | |  | **Test Case Status** | **Test Priority** |
| **Step** | **Expecte d** | **Actual** |
| 01 | Admin login | Verify admin  give valid  details or not | If it’s not | There is no process | Admin home  screen displayed | High | High |
| 02 | Add workers | Verify admin  login or not | If it’s not | We  can’t add workers | New  worker details added | High | High |
| 03 | View workers | Verify worker details  added or not | If it’s not | We  can’t view | All workers details viewed | High | High |
| 04 | Worker login | Verify worker details  valid or not | If it’s not | There is no process | Worker login  successful ly | High | High |
| 05 | Add child/wom en data | Verify worker  login or not | If it’s not | We  can’t add data | Child/wo men  details  added &  uploaded their photo also | High | High |
| 06 | Dose took data | Verify  women/ch  ild details added | If it’s not | We  can’t took data | Dose  details added  successful ly | High | High |
| 07 | Send  notificatio n | Verify  women/ch  ild details added | If it’s not | We  can’t send  notificati ons | Notificatio n sent via mail | High | High |

**7.CONCLUSION:**

[POSHAN Abhiyaan](https://www.icds-wcd.nic.in/nnm/home.htm) was launched by [Prime Minister Shri Narendra Modi](https://www.india.gov.in/my-government/whos-who/prime-minister) in Jhunjhunu, Rajasthan in March 2018.

It targets to reduce level of under-nutrition and other related problems by ensuring convergence of various nutrition related schemes.

It also targets stunting, under-nutrition, anaemia (among young children, women and adolescent girls) and low birth rate.

It will monitor and review implementation of all such schemes and utilize existing structural arrangements of line ministries wherever available.

Its large component involves gradual scaling-up of interventions supported by on-going World Bank assisted Integrated Child Development Services (ICDS) Systems Strengthening and Nutrition Improvement Project (ISSNIP) to all districts in the country by 2022.

While India’s malnutrition rates have dropped dramatically, the country is still home to the largest number of stunted and wasted children in the world. Owing to the cultural and geographical variance across states, combatting malnutrition requires a granular approach. POSHAN Abhiyaan, the government’s national nutrition mission launched in 2017, aims to provide a convergence mechanism for the country’s response to malnutrition. This special report maps India’s nutritional journey, describing past and current nutrition programmes and exploring their successes and weaknesses. It highlights the experiences of India’s northern states in implementing POSHAN Abhiyaan so far, with the aim of finding ways to scale-up innovative techniques adopted by the states. The report concludes with specific recommendations towards reaching the 2030 SDG of eliminating malnutrition.

Month of September 2018 was celebrated as Rashtriya POSHAN Maah. The activities in POSHAN Maah focussed on Social Behavioural Change and Communication (SBCC). The broad themes were: antenatal care, optimal breastfeeding (early and exclusive), complementary feeding, anaemia, growth monitoring, girls’ - education, diet, right age of marriage, hygiene and sanitation, eating healthy - food fortification.

More than 12.2 Crore women, 6.2 Crore men and over 13 Crore children (male and female) were reached through the various activities undertaken during POSHAN Maah. It is worth mentioning that 30.6 Crore people were reached in 30 days. POSHAN Maah has given a major impetus to the Abhiyaan.

So, we as a part of social workers to the nation we created this system for health worker to monitor and trigger alarms if some women/child have not come for upcoming dose. In this case checking the reports and prescriptions of patients regularly to check if they have an appointment is tedious work, instead if we design an automated system and it automatically provide alert to the health workers so that they can communicate the same to the patients. Additionally, if mobile number of the patient is registered then provide notification to them to get the dose. This can help to promote nutrition among women and children with the help of this device for accomplishing PoshanAbhiyaan.

By creating a web application, we can keep a track of dosage and decrease the rate of malnourishment in women/children.

In future we can create more changes to this existing tracking application and enhance it , Like It has to automatically update the data without the manual interaction ,We can change the password as per the need, We can add features in which we can send notifications through messages and mail because both the offline and online mode of communication help all the people.

**8.REFERENCES**

<https://www.india.gov.in/spotlight/poshan-abhiyaan-pms-overarching-scheme-holistic-nourishment>

<https://www.orfonline.org/research/towards-a-malnutrition-free-india-63290/>

<https://niti.gov.in/sites/default/files/2020-10/POSHAN-Abhiyaan-Monitoring-Report22July2020.pdf>

<http://poshanabhiyaan.gov.in/>

<https://www.who.int/nutgrowthdb/database/countries/ind/en/>

<https://globalnutritionreport.org/resources/nutrition-profiles/asia/southern-asia/india/>