

# **SEARCHABLE TELEPHONE DIRECTORY OF TEZPUR UNIVERSITY**

*A Dissertation submitted in partial fulfilment of the requirements for the degree*

*Of*

**MASTER OF COMPUTER APPLICATION (MCA)**

**IN**

**COMPUTER SCIENCE AND ENGINEERING**

**2021**



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**December 2021**



**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**

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**CERTIFICATE BY THE EXAMINER**

This dissertation titled “**Searchable Telephone Directory of Tezpur University**” submitted by **Arindam Kashyap** (CSM20015) and **Nitish Kumar Nath** (CSM20048) in partial fulfilment of the requirements for the minor project of Master of Computer Applications has been examined.

**Examiner**

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**CERTIFICATE**

This is to certify that the dissertation entitled “**Searchable Telephone Directory of Tezpur University**” is submitted by **Arindam kashyap** bearing Roll no: **CSM20015** and **Nitish Kumar Nath** bearing Roll no: **CSM20048** is carried out by them under my supervision and guidance for partial fulfilment of the requirements and the regulations for the award of the degree of Master of Computer Applications during the session 2020-2022 at Tezpur University. To the best of my knowledge, the matter embodied in the dissertation has not been submitted to any other university/institute for the award of any Degree or Diploma.

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**CERTIFICATE**

This is to certify that the project report entitled **Searchable Telephone directory of Tezpur University**, submitted to the Department of Computer Science and Engineering, Tezpur University, in partial fulfillment for the award of the degree of Master of Computer Application (MCA), is a record of bona fide work carried out by **Arindam Kashyap**, Roll No. CSM20015, **Nitish Kumar Nath**, Roll No. CSM20048. They have carried out their project under the guidance and supervision of **Dr. Bhabesh Nath**, Associate Professor, Department of Computer Science and Engineering, Tezpur University.

This approval does not necessarily endorse or accept every statement made, opinion expressed or conclusion drawn as recorded in the report. It only signifies the acceptance of this report for the purpose for which it is submitted.

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**DECLARATION**

We hereby declare that the project presented in this report entitled “**Searchable Telephone directory of Tezpur University**” is submitted in partial fulfilment for the award of the degree of Master of Computer Application during the academic session 2020-2021, has been carried out by us and that it has not been submitted in part or whole to any institution for the award of any other degree or diploma.

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## **ABSTRACT**

Searchable telephone directory is a web-based application for searching the contact details of employees of Tezpur university along with their designation, Department etc. We will provide a platform where users can view the contact details of the employees of TU, Departments, and administration in a standard way. Users will be able to use filter to search for specific details. Filters such as First name, middle name, last name, dept, current designation etc. This site will also provide a feature where verified users (TU Employees) can modify their personal information on the site. This site will save time of the users as they will be able to search the details in a time saving way.

The admin of the system should be able to add any new information to the system. Admin can modify the existing information, including the designated people's information. If a person is employee of Tezpur University and his/her information is present in the directory, then he/she should be able to modify his/her personal information - change the phone number, Public/restricted. (Officially allotted things cannot be restricted by no one). Any general user of the system (from anywhere) may get any public information from this system. In the default screen, information of Main entrance will be shown along with the provisions of available filters. Using those filters, contacts of Dept. of a department/section, contact of similar designation should be available. User can filter the results based on first name, middle name, last name, department, current designation, department/section etc. If a search for a special designation is given, and match was found, then the basic information of the person currently on that designation is to be provided. This system is designed by using PHP and Mysql. HTML, CSS and Bootstrap are used in frontend for developing this project. Telnet and MANAS server are used to develop the system.

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## Chapter-1

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### INTRODUCTION

#### 1.1 Brief Introduction

Tezpur University has various departments and administrative section. Some of the employees are assigned telephone extensions and official mail address. Some designated person are allotted some mobile connections also. Searchable telephone directory plays an important role to search the contact details of any employee of the Tezpur university using various searching fields provided.

#### 1.2 Aim and Objective

##### **Aim:**

To develop a web application for Searchable Telephone Directory of Tezpur University that facilitate the users of the system to search for specific contact details of any employees of Tezpur University using specific filter such as first name, Last name, department, designation etc. The admin should be able to add, delete, modify the various details related to employees of Tezpur University. The authorised user should be able to modify their personal details using the system.

##### **Objective:**

The main objective of this project is to learn about HTML, PHP and MySQL and to implement HTML, PHP and MySQL to design a searchable telephone directory that shows the search results in an efficient and organized way and to analyse the issues of IS design (apply database concept, software engineering concept). The three major roles –Admin, authorised user and general user will be able to perform their respective tasks easily. This project will store the contact details of employees of Tezpur University and will show the specific details based on searched field.

The purpose of the project is to build a system to reduce the time required for searching the contact details and allow the admin to manage all the information of employees in an efficient and time saving manner. The authorised user should maintain their personal information .The system should be user-friendly, time-saving, and easy to operate.

### 1.3 PROJECT PROFILE

Project title	: <b>Searchable Telephone Directory of Tezpur University</b>
Project member	: <b>Arindam Kashyap (CSM20015)</b> <b>Nitish Kumar Nath (CSM20048)</b>
Guide	: <b>Dr. Bhabesh Nath</b>
Duration	: <b>Five months</b>
Operating system	: <b>Windows 10</b>
Web server	: <b>Manas (192.168.125.5)</b>
IDE	: <b>Vim editor through Telnet</b>

## Chapter-2

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### INITIAL SYSTEM STUDY

#### 2.1 System Introduction

This system can be used for searching about contact details of employees of Tezpur University using specific fields such as first name, last name, designation, department etc. This system allows the admin to manage the details of all the employees and allows authorised users to maintain their personal information. This system is user friendly and hence easy to use. It is more efficient and will save a lot of time.

#### 2.2 Drawbacks of The Existing System

- In the existing system, if the user wants to find any contact details of the employee of TU, he/she will need to go to the particular department, administrative and designation field section of university website. Due to this it is cumbersome to find any specific contact details and it is very time consuming.
- In the existing system, there is no search field for searching the contact details of the employee.
- The employee of TU does not have the provision to update their own details.

#### 2.3 Problem Statement

To develop an online Searchable Telephone Directory of Tezpur University, Assam, India

#### 2.4 Proposed System

As Tezpur University has various departments and administrative sections at present. Some more may be added in future. Each department and administrative section has many employees at present and the number of the employee's will surely increase in future. If any person want to find contact information about any of the employees of Tezpur University, there should be a system where person can search for specific details using various filter such as first name, Last name, designation, department/section etc. and get the specific details in a organised manner. So there should be a time-efficient and friendly user interface.

The system should also allow registered employee of the Tezpur University to add their personal details such as personal phone number, personal email by login to the system with authorised verification. The system should prohibit the authorised user of the system to not delete or modify the details provided by the university.

Any general user of the system should view public information from anywhere, anytime. They can use filter to search for specific details. Filters such as First name, Last name, department, current designation.

Any authorized user of the system should be allowed to use the system from one window of one computer at a time only and should not be allowed to use again after a longer period of inactivity. Public user should be restricted to open only one window in one computer.

## **2.5 Scope of the Proposed System**

- The project Searchable Telephone Directory will be a handy tool for the general users and also will be helpful to the respective employee of the Tezpur University to keep track and search the contact details of all the employees of Tezpur university in a time efficient and user-friendly manner.
- Facility of user authentication for the authorized users.
- User friendly interface to know each usable feature of the system.
- Less time-consuming system and hence it has high level of efficiency.

## **2.6 SCOPE OF THIS PROJECT**

This project has been done in the third semester of the Master of Computer Application (MCA) course of Tezpur University. The period of work is roughly five months. Within this project we accomplish the following part of the system proposed above -

- Carry out a detailed System Analysis of the Searchable Telephone Directory
- Designing/Creation of relational tables in Manas Server using MySQL.
- Authorized user can access their personal portal and modify details.
- Any user of the system can search for contact details of employee of Tezpur university using various fields.
- Admin can add, modify and delete the details of employee.

## **FEASIBILITY STUDY**

It is necessary and prudent to evaluate the feasibility of a project at the earliest possible time. There may be different ways of checking whether a system is feasible or not. The following Feasibility studies were performed to gauge the feasibility of the system.

### **3.1 Technical Feasibility**

The working project is technically feasible because it can be completed easily with available equipment and existing software accept that the user of the system requires the campus connect Wi-Fi for accessing the system and perform the operations.

### **3.2 Economic Feasibility**

The development cost of the system is evaluated weighing it against the ultimate benefit derived from the new system. It is found that the benefit from the new system would be more than the cost and time involved in its development.

### **3.3 Behavioural Feasibility**

It is observed that the proposed system is very user friendly and since the system is built with enough help, even persons with little knowledge of technology can find the system very easy. User requires no special training for operating the system. The system is quite easy to use and learn due to its simple but attractive interface.

### **3.4 Conclusion**

From the observation made above it was concluded that the proposed "Searchable Telephone Directory of TU" is feasible and justifiable that the feasibility study could be followed by system analysis and design phase.

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## SOFTWARE REQUIREMENT SPECIFICATION

### 4.1 Overall Description

#### 4.1.1 Product Functions

“Searchable Telephone Directory of TU” is a web-based system and is an independent one. The system is a client server system, so it can be made to exist in the network of computers; this helps different users to access simultaneously helping to search the contact details and provide an interface for the employee to update their own details without any hindrance.

The following are the main features that are included in System-

**1. Account Login:**

- The account login function shall allow TU employees to enter their official email.
- Email should be the official one and the system will sent the one time password to employees official mail.

**2. Update information:**

- After successful login, authorized users will be able see their details and able to modify his/her personal information.
- Officially allotted things cannot be modified by users.

**3. Account Logout:**

- The account logout function shall allow authorized users to exit their account for security purposes.
- If the authorised user remains inactive for a longer period, he/she will be automatically logout from the system.

**4. Admin:**

The admin will be provided with special functionalities like

- view the Dashboard
- Add or delete an employee's information
- Admin can modify the existing information

#### 4.1.2 User Characteristics

- The user can be anyone who can understand English, and Users of the website must know how to navigate in a website.
- Users should know how to use the filters such as First name, last name etc for searching efficiently.
- Authorized user should know their email.
- Authorized user should know how to modify their personal information.

There will be three types of users of the website:

1. Admin

2. Employee of TU (Authorized user)
3. General user

**Admin:**

1. View the Dashboard.
2. Can add any new information to the system.
3. Modify the existing information's.

**Employee of TU (Authorized user)**

1. He/she can modify his/her personal information (if and only if his/her information is present in the database)
2. Such as change the phone number, can be made Public/restricted. (Officially allotted things cannot be restricted by no one).

**General User**

1. Can view the public information from anywhere, Anytime
2. Can use filter to search for specific details. Filters such as First name, middle name, last name, dept, current designation.

### **4.1.3 General constraints**

1. Users must have a full internet connection for surfing the site.
2. The site will be available in English language only.
3. The authorized user can login only by using official email of Tezpur university (tezu.ernet.in)
4. Any authorized user of the system should be allowed to use the system from one window of one computer at a time only and should not be allowed to use again after a longer period of inactivity.
5. Public user should be restricted to open only one window in one computer.

### **4.1.4 Assumptions and dependencies**

- Since the Telephone Directory is only accessible through the Internet, it is assumed that the end user has a connection to the Internet.
- It is also assumed that the user has a web browser able to display the website. (Google chrome or any compatible browser)



## 4.2 Specific Requirements

### 4.2.1 Functional Requirements

#### A. Maintaining an account by the Authorized user.

##### 1. The system should provide a Login page for Authorized users

**Input-**If the user wants to get access to all their personal information in the Telephone Directory, he/she should login using his official email and followed by the OTP sent to mail.

**Output-**

- If it is a successful login the user will be directed to the information page, where they can see their personal details.
- Else if the user enters invalid information, he will be asked to check the entered information.

##### 2. The system should provide the feature for modify Information

**Input-** The authorized user will update his/her personal information. (But can't modify officially allotted things)

**output-**The system will update the entered information in the database using an update query.

##### 3. The system should allow users to Logout from the site

**Input-** The user will click the logout button.

**Output-** The user's account session comes to an end, and he should login again if he wants to enter the website.

#### B. Search for the Specific Details

##### 1. The system should provide the feature of efficient search by using filters

**Input:** User can filter the results based on first name, last name, department, current designation, department/section etc.

**Output:**

- Depending on the search filter, result will be shown.
- If no information is found depending on the search filter, “No result found” will be displayed.
- If a search for a special designation is given, and match was found, then the basic information of the person currently on that designation is to be provided.

**C. ADMIN****1. login**

**Input-** If the admin wants to get access to all the functionalities of Telephone Directory, he should login using his username and followed by OTP.

**Output-** If it is a successful login the admin will be directed to the admin dashboard. Else if the admin entered invalid information, he will be asked to check the entered information.

**2. Admin can add or Modify information**

**Input-** Admin can add all the information's related to Departments, Administrations such as name/email, Department section, Designations etc.

**Output-** The information's will be updated on database and it will reflect on the telephone directory site.

**3. Admin can remove authorized user**

**Input:** If the admin wants to delete some users, can click the remove button corresponding to the user.

**Output:** User data will be deleted from the database after admin clicked the remove button.

**4. The system should allow admin to Logout from the site**

**Input-** The admin will click the logout button.

**Output-** The admin will be log out of the site and he should login again if he wants to enter the website.

#### **4.2.2 Non Functional Requirement:**

- The system requires the authorised user to have an official email (tezu.ernet.in)
- The system interface should be easy to understand by all users
- The systems interface should be easy to maintain by the admin.
- Secure access to Authorized user's confidential data.
- 24X7 availability.

#### **4.3 Hardware and Software Requirement**

**User Interface:** Users of the system will be provided with the Graphical user interface, there is no command line interface for any functions of the product.

##### **4.3.1 Hardware Requirements**

- Any device that has Operating systems capable of running a Web Browser and able to show the webpages as an output.

##### **4.3.2 Software Requirements**

The system will run on any computer or mobile device with the help of anyone of the browser installed in the system. (Google Chrome or Microsoft Edge is preferable).

##### **4.3.2.1 Software Development Platform:**

HTML, Bootstrap and CSS are used in frontend and PHP and MySQL are used in Backend for developing this project.

**HTML** provides the basic structure of sites, which is enhanced and modified by other technologies like CSS and Bootstrap.

**CSS and Bootstrap** is used to control presentation, formatting, and layout.

**MySQL** is a relational database management system based on SQL – Structured Query Language. The application is used for a wide range of purposes, including data warehousing, e-commerce, and logging applications. The most common use for MySQL, however, is for the purpose of a web database.

**PHP** (Hypertext Pre-processor) is known as a general-purpose scripting language that can be used to develop dynamic and interactive websites.

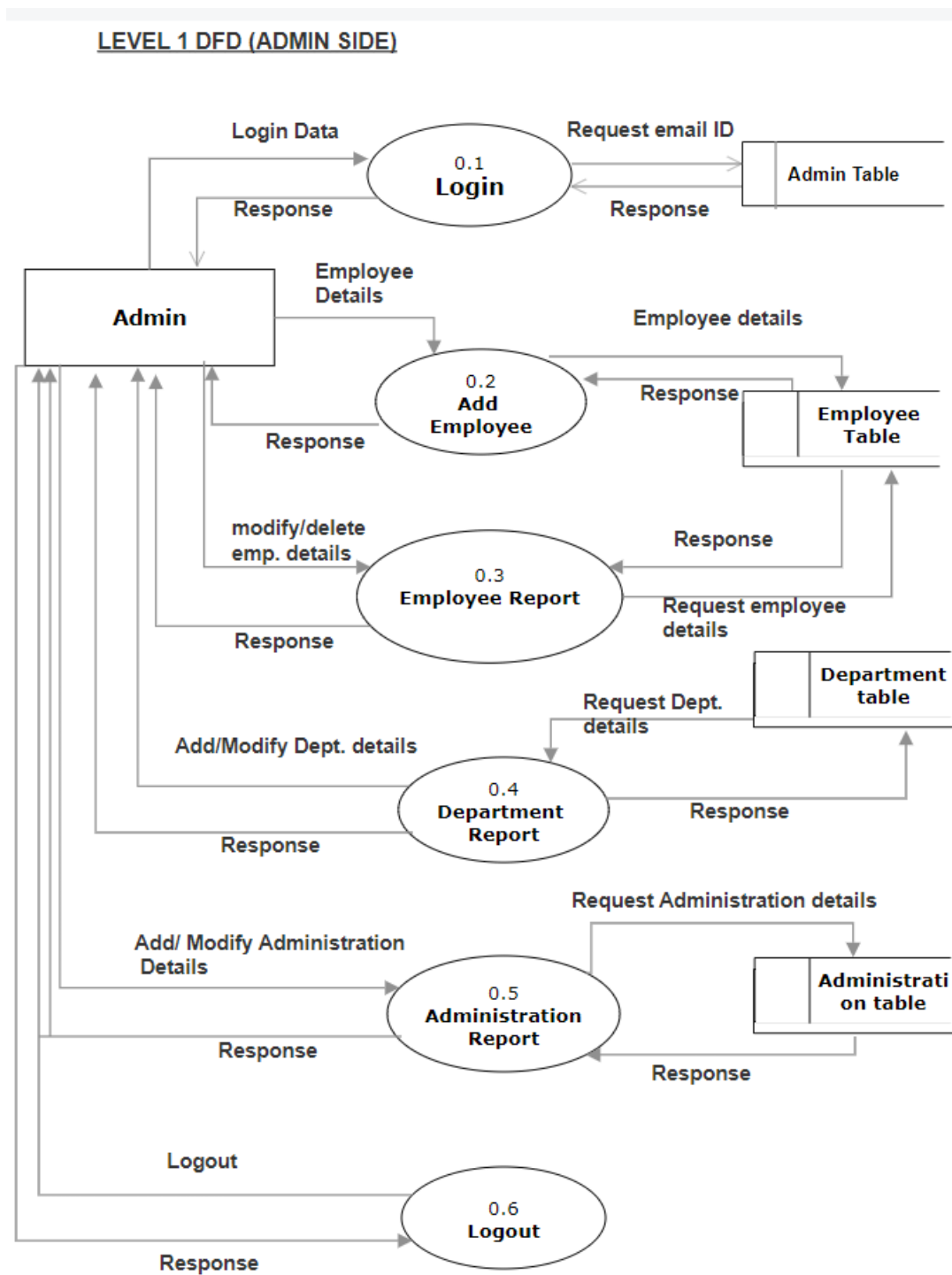
## SYSTEM DESIGN

### 5.1 DATA FLOW DIAGRAM (DFD)

CONTEXT DIAGRAM or LEVEL 0 DFD



**Fig 1. Context Diagram or Level 0 DFD**



**Fig 2. Level 1 DFD (Admin Side)**

### LEVEL 2 DFD (ADMIN SIDE)

#### EMPLOYEE REPORT

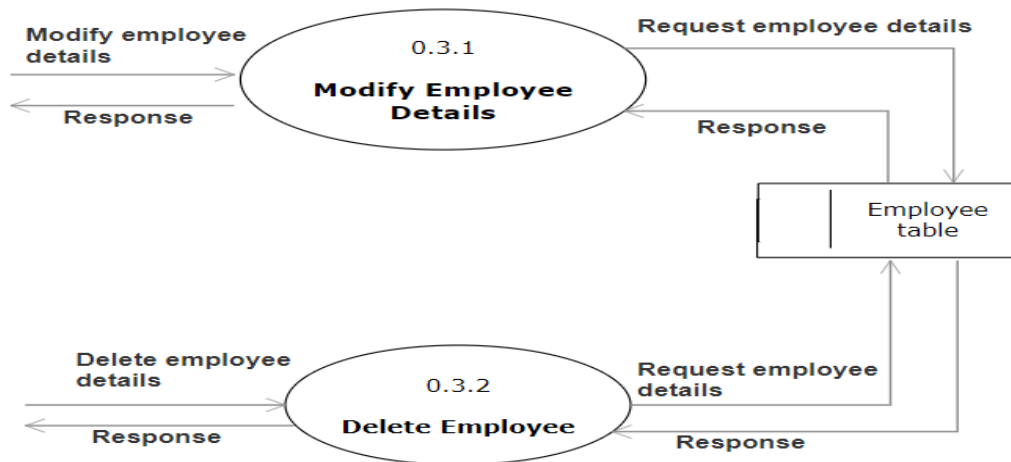


Fig. 3 Level 2 DFD (Admin Side) Employee Report

### LEVEL 2 DFD (ADMIN SIDE)

#### DEPARTMENT REPORT

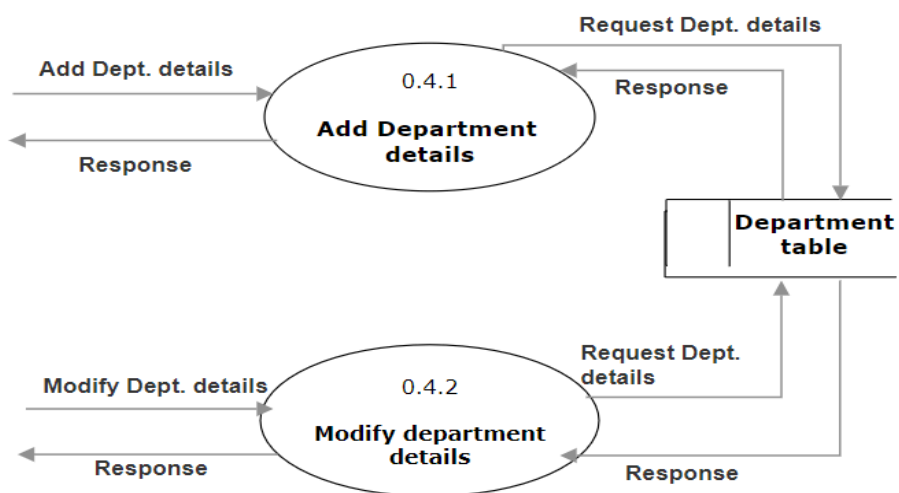
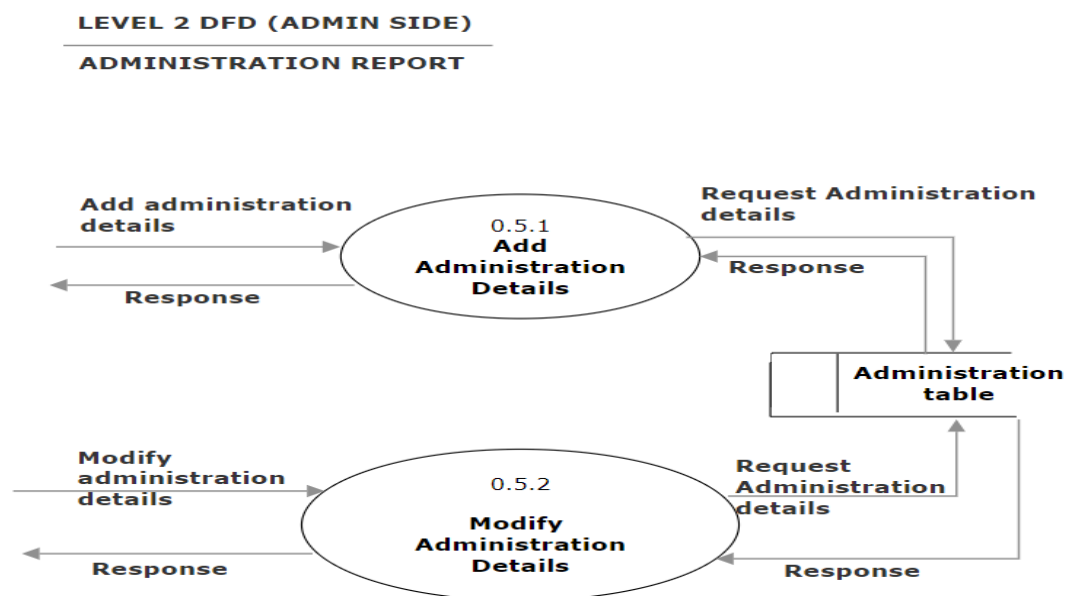
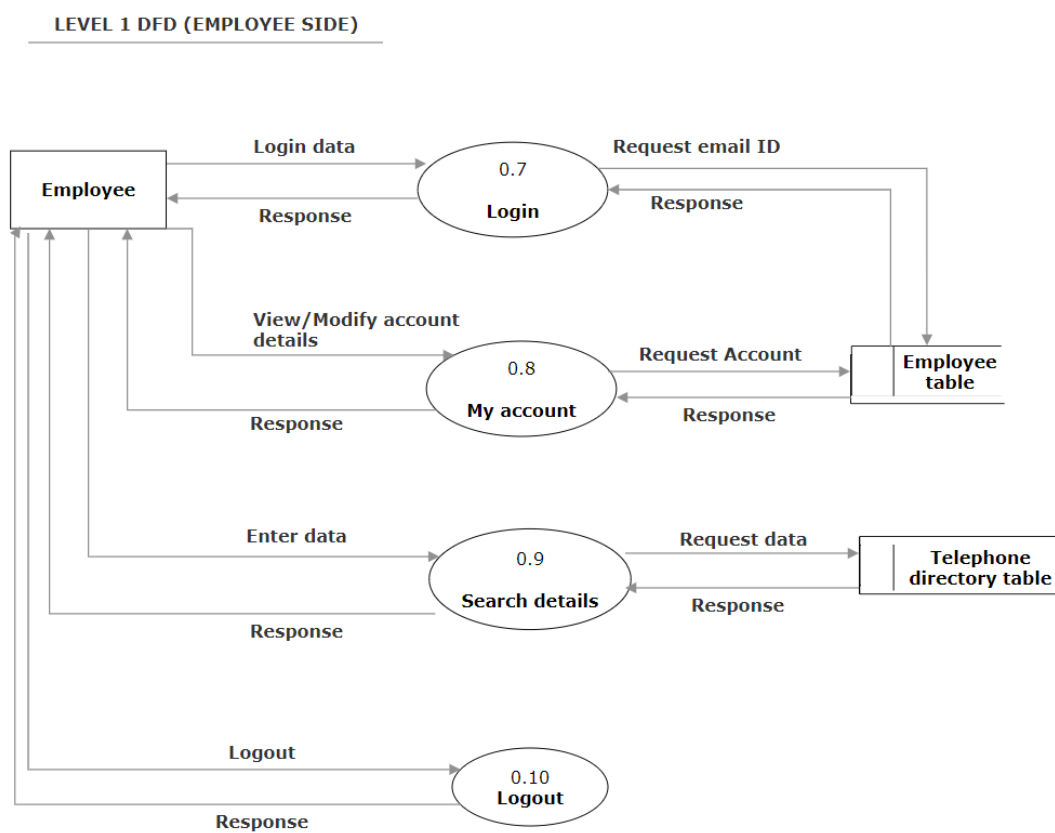


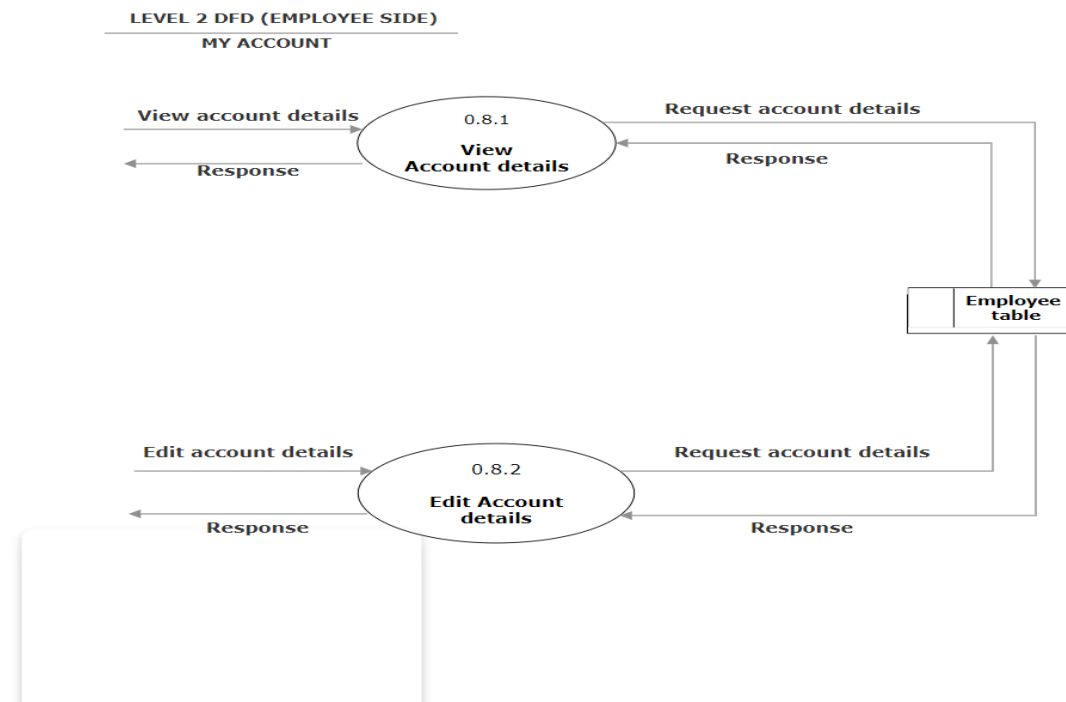
Fig. 4 Level 2 DFD (Admin side) Department Report



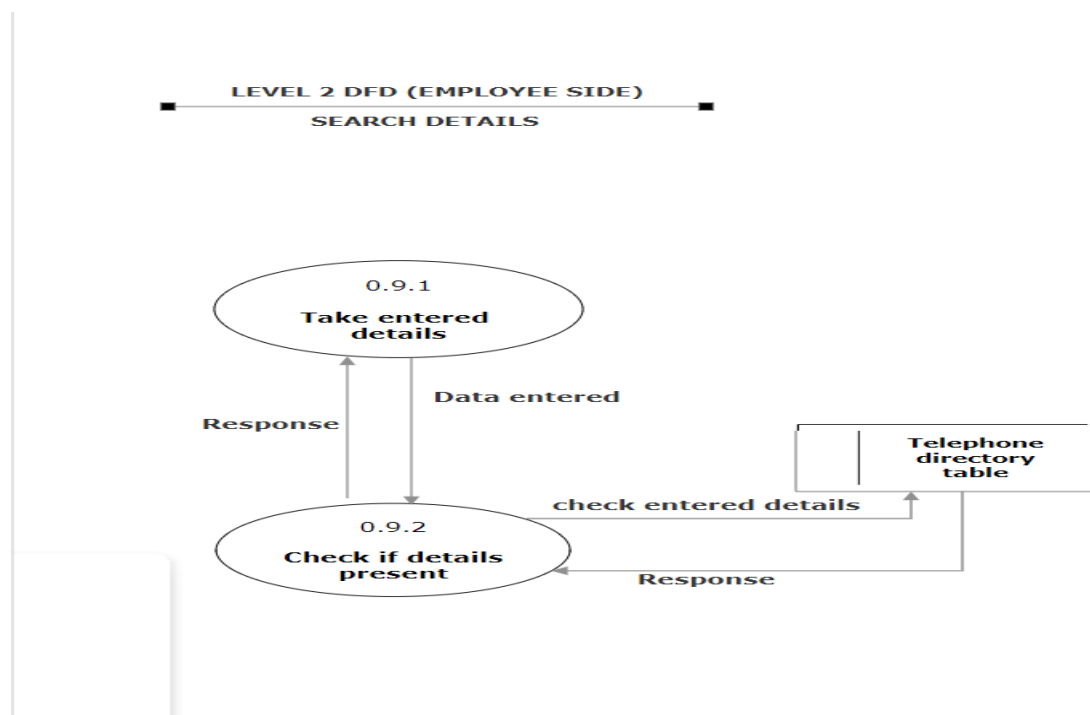
**Fig. 5 Level 2 DFD (Admin side) Administration Report**



**Fig. 6 Level 1 DFD (Employee Side)**



**Fig. 7 Level 2 DFD (Employee Side) My account**

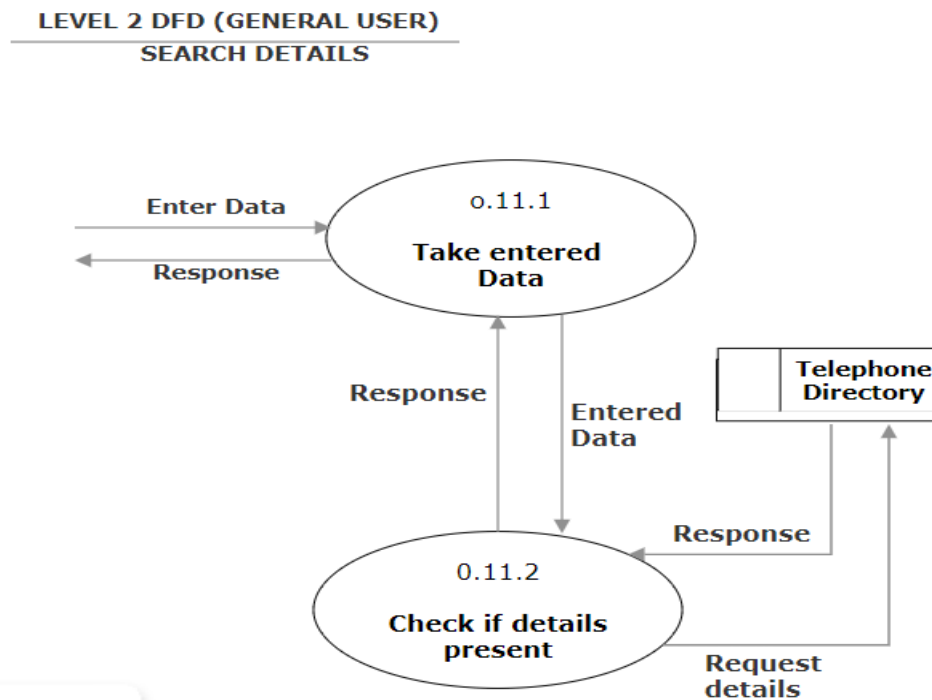


**Fig. 8 Level 2 DFD (Employee Side) Search Details**





**Fig. 9 Level 1 DFD (General user)**



**Fig.10 Level 2 DFD (General user) Search Details**

## 5.2 ENTITY RELATIONSHIP DIAGRAM

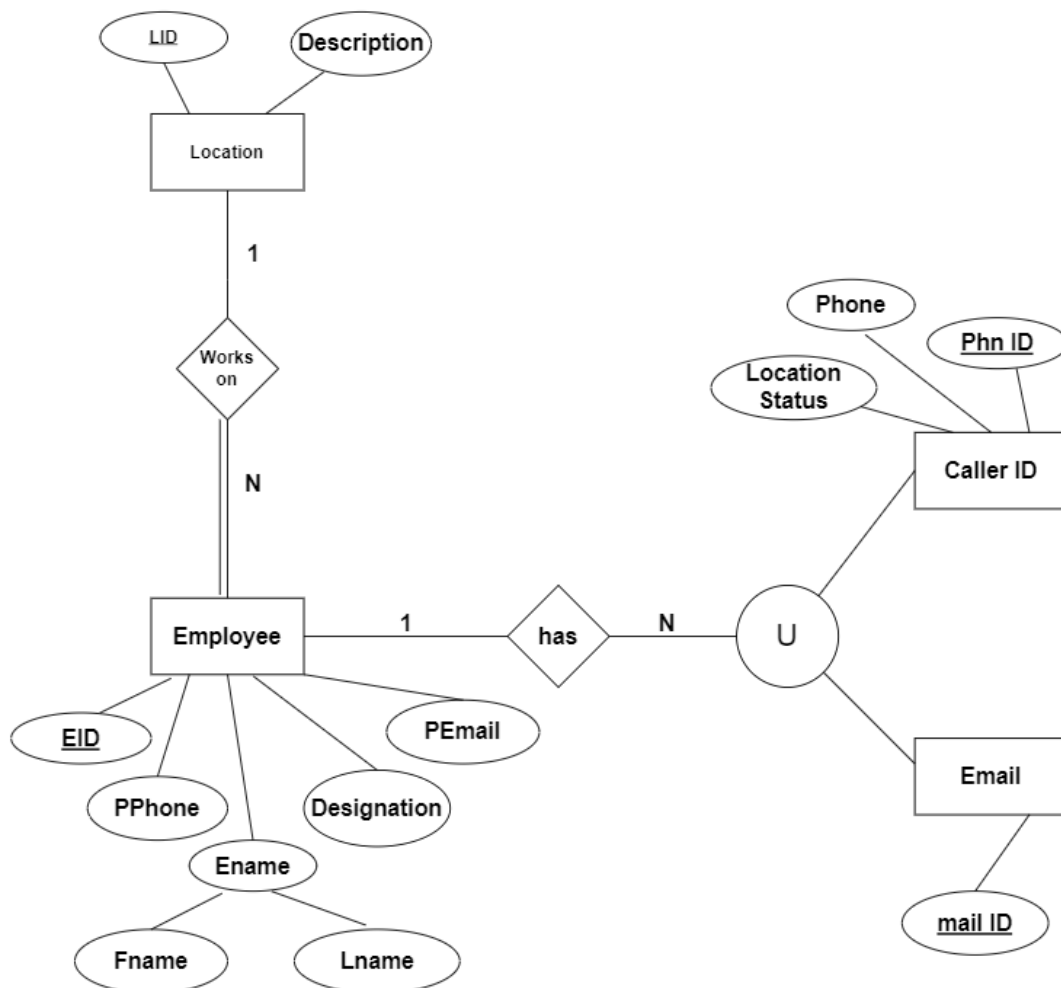


Fig. 11 Entity Relationship Diagram of Searchable Telephone Directory

## **5.3 DATA DICTIONARY**

### **AdminTable**

FIELD NAME	DATA TYPE	SIZE	DESCRIPTION	CONSTRAINT
<u>EID</u>	Small Int	1	Employee's unique Id	Foreign key
<u>AdminMail</u>	varchar	45	Admin Email	Primary key

### **LOCATION TABLE:-**

FIELD NAME	DATA TYPE	SIZE	DESCRIPTION	CONSTRAINT
<u>LID</u>	char	5	Department's unique ID	Primary key
Description	varchar	50	Descriptions	Not null, unique

### **EMPLOYEE TABLE:-**

FIELD NAME	DATA TYPE	SIZE	DESCRIPTION	CONSTRAINT
<u>EID</u>	Small Int	1	Employee's unique Id	Primary key
Fname	Varchar	12	First name of the employee	Not null
Lname	varchar	20	Last name of the employee	Not null
Designation	varchar	30	Designation of the employee	Not Null
PEmail	varchar	30	Personal email of the employee	
PPhone	char	11	Personal Phone of the employee	
LID	char	5	Employee's working place	Foreign key

**CallerID TABLE:-**

<b><u>FIELD NAME</u></b>	<b><u>DATA TYPE</u></b>	<b><u>SIZE</u></b>	<b><u>DESCRIPTION</u></b>	<b><u>CONSTRAINT</u></b>
PhnID	smallint	1	Personal Phone of the employee	Primary key
LocationStatus	char	4	Official phone number of the employee	Not null
Phone	char	4	Intercom number	
EID	small int	1	Employee's unique Id	Foreign key, not null

**Email\_ID\_table:-**

<b><u>FIELD NAME</u></b>	<b><u>DATA TYPE</u></b>	<b><u>SIZE</u></b>	<b><u>DESCRIPTION</u></b>	<b><u>CONSTRAINT</u></b>
Mail_ID	varchar	45	Official mail of Employee	Primary key
eid	Small int	1	Employee ID	Foreign key

**Employee\_session TABLE:-**

<b>FIELD NAME</b>	<b>DATA TYPE</b>	<b>SIZE</b>	<b>DESCRIPTION</b>	<b>CONSTRAINT</b>
EEmail	varchar	30	Official Email of the employee	Foreign key, Not null
Firstname	varchar	20	Firstname of the employee	Foreign key, Not null
sessionID	varchar	40	Session ID	Not null
lastAccessTime	Int	1	Last Access time in term of seconds	Not null
sessionName	varchar	20	Session Name	Not null

**EmpRole TABLE:-**

FIELD NAME	DATA TYPE	SIZE	DESCRIPTION	CONSTRAINT
EID	Small Int	1	Employee's unique Id	Foreign key
LID	char	5	Department's unique ID	Foreign Key
Role	varchar	20	Role of the employee	Not null

## SYSTEM IMPLEMENTATION

### 6.1 Introduction

In order to implement the proposed system “**Searchable Telephone directory of Tezpur University**”, **HTML** and **BOOTSTRAP**, **CSS** are used as front-end tools and **PHP** and **MySQL** (as a database in Manas server) are chosen as the back-end tool.

### 6.2 Software Development Platform

#### 6.2.1 Front-End Tools

##### • HTML

HTML tells browsers which part of a webpage is a header, which is a footer, where paragraphs belong, where images, graphics, and videos are placed, etc. Browsers take that HTML content and translate it into what you see on your device’s screen. HTML is an industry standard language that’s guaranteed to be understood by all web browsers (applications like Safari, Firefox, and Google Chrome).

##### • BOOTSTRAP

Bootstrap is a framework to help you design websites faster and easier. It includes HTML and CSS based design templates for typography, forms, buttons, tables, navigation, modals, image carousels, etc. The main advantage of using bootstrap is it increase the productivity and efficiency of developer by include some ready-made block, themes as well as templates.

<p>This is my paragraph! </p>

If we wanted to make this paragraph appear bold to people viewing your web page through a web browser, we would use BOOTSTRAP code that looks like this:

<p class=" font-weight-bold">This is my paragraph! </p>

#### 6.2.2 Back-End Tools

- PHP is the most widely used open-source scripting language. Its main ability is to generate the dynamic page content. PHP as all backend languages is **responsible for business logic**. Moreover, it has the capability to collect data, set, and receive cookies.
- MYSQL is a relational database management system based on SQL – Structured Query Language. The application is used for a wide range of purpose, including data Warehousing, Searching , e-commerce and logging applications. The most common use for MYSQL however, is for the **purpose of a web database**.

## 6.3 SNAPSHOTS

### 1. Index Page

HOME | ONLINE TELEPHONE DIRECTORY

Not secure | 192.168.125.5/~csm20015/index.php

Apps Classes Vocabulary for And... Shared with me - G... National Scholarshi... Thank you for dow... Online Learning - U... Tezpur University, Te... Adjacency List (Wit... Internshala Trainings

Reading list

TU ONLINE TELEPHONE DIRECTORY

Login

First name Last name Designation Departments Search

PLEASE USE THE ABOVE SEARCH FIELD FOR CONTACT DETAILS!

ENG IN 11:52 AM 26-12-2021

### 2. SearchResult Page (With search field Department= Computer Science and Engineering)

HOME | ONLINE TELEPHONE DIRECTORY

Not secure | 192.168.125.5/~csm20015/searchResults.php

Apps Classes Vocabulary for And... Shared with me - G... National Scholarshi... Thank you for dow... Online Learning - U... Tezpur University, Te... Adjacency List (Wit... Internshala Trainings

Reading list

TU ONLINE TELEPHONE DIRECTORY

Login

First name Last name Designation Departments Search

Searched fields are Department = computer science and engineering.

To dial an Intercom number from outside please dial +91-3712-27-xxxx (where xxxx is any 4-digit-extension number of the University)

SL.NO	FIRST NAME	LAST NAME	DESIGNATION	DEPARTMENTS	OFFICIAL EMAIL	Office Intercom	Home Intercom
#1	Dr. Bhogeshwar	Borah	HOD	computer science and engineering	bgb@tezu.ernet.in	5101	
#2	Dr. Bhabesh	Nath	associate professor	computer science and engineering	bnath@tezu.ernet.in	5109	
#3	Dr. Nityananda	Sarma	professor	computer science and engineering	nitya@tezu.ernet.in	5356	3681
#4	Dr. Arindam	Karmakar	assistant professor	computer science and engineering	arindam@tezu.ernet.in	5120	
#5	Smriti	Kumar Sinha	professor	computer science and engineering	smriti@tezu.ernet.in	3501	9587
#6	L. Basantakuma	Singh	assistant professor	computer science and engineering	lbsingh@tezu.ernet.in	5116	3652
#7	Dhruba	Kumar Bhattacharyya	professor	computer science and engineering	pvc@tezu.ac.in	3006	
#8	Dillip	Kumar Saikia	professor	computer science and engineering	dks@tezu.ernet.in	5102	
#9	Dr. Sarat	Saharia	professor	computer science and engineering	sarat@tezu.ernet.in	5105	3645
#10	Dr. Sanjib	Kumar Deka	associate professor	computer science and engineering	sdeka@tezu.ernet.in	5114	
#11	Dr. Debojit	Boro	associate professor	computer science and engineering	deb0001@tezu.ernet.in	5118	3654
#12	Dr. Rosy	Sarmah	assistant professor	computer science and engineering	rosy8@tezu.ernet.in	5113	

ENG IN 11:53 AM 26-12-2021

### 3. SearchResult Page (With search field First name= Dr. Bhogeswar, Last name= Borah and Designation= HOD)

HOMEJ ONLINE TELEPHONE DIR

Not secure | 192.168.125.5/~csm20015/searchResults.php

TU ONLINE TELEPHONE DIRECTORY

First name Last name Designation Departments Search

Searched fields are First name = Dr. Bhogeswar, Last name = Borah, Designation = hod,

To dial an Intercom number from outside please dial +91-3712-27-xxxx (where xxxx is any 4-digit-extension number of the University)

SL.NO	FIRST NAME	LAST NAME	DESIGNATION	DEPARTMENTS	OFFICIAL EMAIL	Office Intercom	Home Intercom
#1	Dr. Bhogeswar	Borah	HOD	computer science and engineering	bgb@tezu.ernet.in	5101	

0

ENG IN 11:58 AM 26-12-2021

### 4. SearchResult Page (With search field Designation= HOD)

HOMEJ ONLINE TELEPHONE DIR

Not secure | 192.168.125.5/~csm20015/searchResults.php

TU ONLINE TELEPHONE DIRECTORY

First name Last name Designation Departments Search

Searched fields are Designation = hod,

To dial an Intercom number from outside please dial +91-3712-27-xxxx (where xxxx is any 4-digit-extension number of the University)

SL.NO	FIRST NAME	LAST NAME	DESIGNATION	DEPARTMENTS	OFFICIAL EMAIL	Office Intercom	Home Intercom
#1	Dr. Bhogeswar	Borah	HOD	computer science and engineering	bgb@tezu.ernet.in	5101	
#2	Subrat	Jotiya Neog	HOD	Department of Assamese	subrat@tezu.ernet.in	3241	
#3	A.	M. Ramteke	HOD	Department of Molecular Biology and Technology	anand@tezu.ernet.in	5407	
#4	Charu Lata	Mahanta	HOD	Department of Applied Science	charu@tezu.ernet.in	5710	
#5	Dr. Kamal	Uddin Ahamad	HOD	Department of Civil Engineering	kahamad@tezu.ernet.in	5956	
#6	Soumik	Roy	HOD	Department of Electrical Engineering	hod_ee@tezu.ernet.in	5258	
#7	Bijay	K. Danta	HOD	Department of English	bkdanta@tezu.ernet.in	5210	
#8	Dr. Anju	Lata	HOD	Department of Hindi	anju@tezu.ernet.in	5754	
#9	Milan	Nath	HOD	Department of Mathematical Sciences	milan@tezu.ernet.in	5515	
#10	Mrinal	Kr Das	HOD	Department of Physics	hod_phy@tezu.ernet.in	5563	
#11	Dr. Ruli	Borah	HOD	Department of Chemistry	ruli@tezu.ernet.in	5057	

0

ENG IN 11:58 AM 26-12-2021



## 5. SearchResult Page (With search field First name= Dr. Bhabesh, Last name= Nath, Designation= Associate Professor and Department= Computer Science and Engineering )

HOME| ONLINE TELEPHONE DIR | x +

Not secure | 192.168.125.5/~csm20015/searchResults.php

Apps Classes Vocabulary for And... Shared with me - G... National Scholarshi... Thank you for dow... Online Learning - U... Tezpur University, Te... Adjacency List (Wit... Internshala Trainings Reading list

**TU ONLINE TELEPHONE DIRECTORY** Login

First name Last name Designation Departments Search

Searched fields are First name = Dr. Bhabesh, Last name = Nath, Designation = associate professor, Department = computer science and engineering.

To dial an Intercom number from outside please dial +91-3712-27-xxxx (where xxxx is any 4-digit-extension number of the University)

SL.NO	FIRST NAME	LAST NAME	DESIGNATION	DEPARTMENTS	OFFICIAL EMAIL	Office Intercom	Home Intercom
#1	Dr. Bhabesh	Nath	associate professor	computer science and engineering	bnath@tezu.ernet.in	5109	

0

ENG IN 12:00 PM 26-12-2021

## 6. SearchResult Page (With search field Last name= arma)

HOME| ONLINE TELEPHONE DIR | x +

Not secure | 192.168.125.5/~csm20015/searchResults.php

Apps Classes Vocabulary for And... Shared with me - G... National Scholarshi... Thank you for dow... Online Learning - U... Tezpur University, Te... Adjacency List (Wit... Internshala Trainings Reading list

**TU ONLINE TELEPHONE DIRECTORY** Login

First name Last name Designation Departments Search

Searched fields are Last name = arma,

To dial an Intercom number from outside please dial +91-3712-27-xxxx (where xxxx is any 4-digit-extension number of the University)

SL.NO	FIRST NAME	LAST NAME	DESIGNATION	DEPARTMENTS	OFFICIAL EMAIL	Office Intercom	Home Intercom
#1	Dr. Bhim	Sarmah	professor	Department of Mathematical Sciences	bhim@tezu.ernet.in	5504	
#2	Dr. Bipul	Kr. Sarmah	assistant professor	Department of Mathematical Sciences	bipul@tezu.ernet.in	5516	
#3	Jayanta	Kumar Sarma	professor	Department of Physics	jks@tezu.ernet.in	5554	
#4	Dr. Ritupan	Sarmah	assistant professor	Department of Physics	ritupan@tezu.ernet.in	5591	
#5	Dr. Nityananda	Sarma	professor	computer science and engineering	nitya@tezu.ernet.in	5356	3681
#6	Dr. Arindam	Karmakar	assistant professor	computer science and engineering	arindam@tezu.ernet.in	5120	
#7	Dr. Rosy	Sarmah	assistant professor	computer science and engineering	rosy8@tezu.ernet.in	5113	

0

ENG IN 12:01 PM 26-12-2021

## 7. SearchResult Page (With search field First name= xyz, Last name= uvw and Designation= HOD)

The screenshot shows a web browser window with the URL `192.168.125.5/~csm20015/searchResults.php`. The page title is "TU ONLINE TELEPHONE DIRECTORY". Below the header, there is a search form with four input fields: "First name", "Last name", "Designation" (with a dropdown arrow), and "Departments" (with a dropdown arrow). A blue "Search" button is to the right of these fields. Below the search form, the text "Searched fields are First name = xyz, Last name = uvw, Designation = hod," is displayed. Below this text, the message "NO DETAILS FOUND!" is shown. The browser's address bar shows several tabs, including "Apps", "Classes", "Vocabulary for And...", "Shared with me - G...", "National Scholarshi...", "Thank you for dow...", "Online Learning - U...", "Tepur University, Te...", "Adjacency List (Wit...", "Internshala Trainings", and "Reading list". The Windows taskbar at the bottom shows the time as 12:02 PM on 26-12-2021.

## 8. Login Page

The screenshot shows a web browser window with the URL `192.168.125.5/~csm20015/login.php?error=`. The page title is "TU ONLINE TELEPHONE DIRECTORY". Below the header, there is a login form. The form has a blue header with the word "LOGIN". Below the header, there are two radio buttons: "ADMIN" and "USER". The "USER" radio button is selected. Below the radio buttons, there is an "Email" input field. Below the input field, there is a blue "Login" button. The browser's address bar shows several tabs, including "Apps", "Classes", "Vocabulary for And...", "Shared with me - G...", "National Scholarshi...", "Thank you for dow...", "Online Learning - U...", "Tepur University, Te...", "Adjacency List (Wit...", "Internshala Trainings", and "Reading list". The Windows taskbar at the bottom shows the time as 12:05 PM on 26-12-2021.

## 9. OTP verification Page

ENTER OTP  
OTP is sent to bnath@tezu.ernet.in

Check your email for the OTP

ENTER THE OTP

Resend OTP VERIFY OTP

OTP has been sent successfully

## 10. Admin\_Manage\_User Page

Admin Manage Users

Manage users Add User Add Department Admin Profile Logout

First name Last name Designation Departments Search

To dial an Intercom number from outside please dial +91-3712-27-xxxx (where xxxx is any 4-digit-extension number of the University)

SL.NO	FIRST NAME	LAST NAME	DESIGNATION	DEPARTMENTS	OFFICIAL EMAIL	Office Intercom	Home Intercom	ACTION
#1	Dr. Bhogeswar	Borah	HOD	computer science and engineering	bgb@tezu.ernet.in	5101		Edit Delete
#2	Dr. Bhabesh	Nath	associate professor	computer science and engineering	bnath@tezu.ernet.in	5109		Edit Delete
#3	Subrat	Jotiya Neog	HOD	Department of Assamese	subrat@tezu.ernet.in	3241		Edit Delete
#4	Juri	Dutta	assistant professor	Department of Assamese	juri@tezu.ernet.in	3242		Edit Delete
#5	Sanjib	Deka	assistant professor	Department of Assamese	sanjibd@tezu.ernet.in	3243		Edit Delete
#6	A	M. Ramteke	HOD	Department of Molecular	anand@tezu.ernet.in	5407		Edit Delete

## 11. Admin\_manage\_user page (with search field=HOD)

The screenshot shows the 'Admin Manage Users' page of the TU Online Telephone Directory. The search criteria is 'Designation = hod'. The results table lists five HODs with their details and actions.

SL.NO	FIRST NAME	LAST NAME	DESIGNATION	DEPARTMENTS	OFFICIAL EMAIL	Office Intercom	Home Intercom	ACTION
#1	Dr. Bhogeswar	Borah	HOD	computer science and engineering	bgb@tezu.ernet.in	5101		<a href="#">Edit</a> <a href="#">Delete</a>
#2	Subrat	Jotiya Neog	HOD	Department of Assamese	subrat@tezu.ernet.in	3241		<a href="#">Edit</a> <a href="#">Delete</a>
#3	A.	M. Ramteke	HOD	Department of Molecular Biology and Technology	anand@tezu.ernet.in	5407		<a href="#">Edit</a> <a href="#">Delete</a>
#4	Charu Lata	Mahanta	HOD	Department of Applied Science	charu@tezu.ernet.in	5710		<a href="#">Edit</a> <a href="#">Delete</a>
#5	Dr. Kamal	Uddin Ahamad	HOD	Department of Civil Engineering	kahamad@tezu.ernet.in	5956		<a href="#">Edit</a> <a href="#">Delete</a>

## 12. Admin\_Edit\_User Page

The screenshot shows the 'Admin Edit User' page for Dr. Bhogeswar's profile. The form contains the following details:

- First Name:** Dr. Bhogeswar
- Last Name:** Borah
- Department:** computer science and engineering
- Designation:** HOD
- Role:** (empty dropdown)
- Phone Number(Office):** 5101
- Phone Number(Home):** Enter Phone No
- Official Email:** bgb@tezu.ernet.in

An 'Edit Details' button is located at the bottom of the form.

### 13. Admin\_Add\_User page

The screenshot shows a web browser window with the URL `192.168.125.5/~csm20015/admin/add-users.php`. The page title is "Admin Add Users". The header includes the TU logo and the text "TU ONLINE TELEPHONE DIRECTORY". The navigation menu contains "Manage users", "Add User", "Add Department", "Admin Profile", and "Logout". The main form has the following fields:

- First Name:
- Last Name:
- Department:
- Designation:
- Role:
- Phone Number(Office):
- Phone Number(Home):
- Official Email:

A green "Submit" button is located at the bottom left of the form. A purple notification bubble with the number "0" is in the bottom right corner. The Windows taskbar at the bottom shows the date and time as 12:07 PM on 26-12-2021.

### 14. Admin\_Add\_Department Page

The screenshot shows a web browser window with the URL `192.168.125.5/~csm20015/admin/addDepartment.php`. The page title is "Admin Add Department". The header includes the TU logo and the text "TU ONLINE TELEPHONE DIRECTORY". The navigation menu contains "Manage users", "Add User", "Add Department", "Admin Profile", and "Logout". The main form has the following fields:

- Department Code:
- Department name:

A green "Submit" button is located at the bottom left of the form. A purple notification bubble with the number "0" is in the bottom right corner. The Windows taskbar at the bottom shows the date and time as 12:07 PM on 26-12-2021.

## 15. AdminProfile Page

Profile

Not secure | 192.168.125.5/~csm20015/admin/admin-profile.php

TU ONLINE TELEPHONE DIRECTORY

Manage users Add User Add Department Admin Profile Logout

Profile Info

Dr. Bhabesh's Profile

First Name Dr. Bhabesh

Last Name Nath

Department computer science and engineering

Designation associate professor

Role

Phone Number(Office) 5109

Phone Number(Home) Enter Phone No

Official Email bnath@tezu.ernet.in

Edit Details

0

ENG IN 12:07 PM 26-12-2021

## 16. UserProfile Page

Profile

Not secure | 192.168.125.5/~csm20015/user/userProfile.php

TU ONLINE TELEPHONE DIRECTORY

Logout

Profile Info

Dr. Bhabesh's Profile

First Name Dr. Bhabesh

Last Name Nath

Department computer science and engineering

Designation associate professor

Phone Number(Office) 5109

Phone Number(Home) Enter Phone No

Personal Phone Number Enter Phone No

Official Email bnath@tezu.ernet.in

Personal Email

Edit Details

ENG IN 12:09 PM 26-12-2021

## Chapter 7

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### Security Measures

In the “Searchable Telephone Directory of Tezpur University” some of the major security measures that implemented till now are:

- Any page that can be only be accessed with proper login details will not be accessible directly from the URL. If someone tries to open any page with the URL, it will redirect to the index page.
- User must enter the proper login details for login to the system and modify their personal information.

## Chapter 8

### SYSTEM TESTING

#### 8.1 Unit Testing

We have tested each module individually and corrected them as requirement raised. For the purpose of unit testing, we created some random test data on our own and tested the system by using those test data. We have inserted erroneous as well as correct data and checked the behaviour of the system. Some of the test cases used in unit test are listed below. We executed the system and tested each test case and compared the expected result with actual result and did the rectification wherever required.

- Module: Login

Test Case	Expected Result
Login with no credentials	Access denied. Error message
Login with invalid credentials	Access denied. Error message
Login with valid credentials	Access granted.

- Module: Search contact details

Test Case	Expected Result
Empty Field	No result
Mismatch content(Data is not as per criteria)	Search failed, No data
Matched content as per the criteria	Search Successful

- Module: Add employee details

Test Case	Expected Result
Empty Field	No result
Entry with incomplete data as required	Entry failed, Error message
Entry with complete data as required	Entry Successful

- Module: Modify employee details

Test Case	Expected Result
Empty Field	No result
Entry with incomplete data as requires	Entry failed, Error message
Entry with complete data as requires	Entry Successful

- Module: Add Personal details

Test Case	Expected Result
Empty Field	No result
Entry with incomplete data	Entry failed, Error message
Entry with complete data as requires	Entry Successful



## **8.2 Integration Testing**

After testing each modules individually, we tested complete system as a whole , and we found the system is working in sync with no error.

## **8.3 System Testing**

Some of the user requirements mentioned in the SRS document could not be achieved due to the time constraint and due to lack of technical know-how.

## **CONCLUSION AND FUTURE SCOPE**

Searchable Telephone Directory of Tezpur University is a web-based application for providing an interface to the users for searching the contact details of employees of Tezpur University using various specific fields such as first name, last name, designation, department etc. This will reduce the time of searching compared to the existing system and user of the system can search in an efficient way. There are mainly three roles of the system-Admin, Authorised user (Employee of Tezpur University), general user. Any user of the system can search for the contact details in the system using any smartphones, laptops which support internet and have connected with the campus connect. Authorised user (Employee of Tezpur University) of the system can see and edit their personal details. Admin of the system can manage the details of the employees of Tezpur university. Admin can add, delete, and modify the existing data using the Searchable Telephone Directory.

Throughout this project we got to learn a lot about the issues of HTML, CSS and Bootstrap. We got to learn about the PHP and about its various function which we have use in the application. We also got to learn about how to access the Manas & Monk server using Telnet and various commands such as ls, cd etc and also got to learn how to use vi editor in a proper manner.

This application currently only accessed by using the campus connect of Tezpur University. So, in future it can be made available through the global internet. This will also solve the problem of One-time password generation of Manas server. The constraint- any general user of the system could open only window in one computer can be implemented in future. The feature of uploading a file containing details of employees of Tezpur university, which will automatically insert all the details in a bulk manner with the help of PHP function can also be implemented in future, which will surely reduce a lot of time for the admin.

## Chapter 10

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[2] Navathe, S.B. and Elmasri, R.A., 2001. *Fundamentals of Database Systems with Cdrom and Book*. (ppAddison-Wesley Longman Publishing Co., Inc..pp 123-212

[3] Gerken, T. and Ratschiller, T., 2000. *Web Application Development with PHP*. New Riders Publishing.

[4] Duckett, J., 2011. *HTML & CSS: design and build websites* (Vol. 15). Indianapolis, IN:Wiley.

[5] Mall, R., 2018. *Fundamentals of software engineering*. PHI Learning Pvt. Ltd. Pp 65-111

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[1] <https://www.w3schools.com/html/>

[2] <https://www.w3schools.com/css/>

[3] <https://www.getbootstrap.com/docs/4.0/components/navbar/>

[4] <https://www.w3schools.com/php/>

[5] <https://www.javatpoint.com/php-tutorial>

[6] <https://stackoverflow.com/questions/1070244/how-to-determine-the-first-and-last-iteration-in-a-foreach-loop>

[7] [https://www.w3schools.com/sql/sql\\_like.asp](https://www.w3schools.com/sql/sql_like.asp)

[8] [https://www.w3schools.com/php/php\\_operators.asp](https://www.w3schools.com/php/php_operators.asp)

[9] <https://www.tutorialrepublic.com/twitter-bootstrap-tutorial/bootstrap-navbar.php>

[10] <https://stackoverflow.com/questions/8664436/php-call-stack-errors-unknown-cause>

[11] [https://stackoverflow.com/questions/14114411/remove-all-special-characters-from-a-string#:~:text=This%20should%20do%20what%20you,\)%3B%20%2F%2F%20Removes%20special%20chars.%20%7D](https://stackoverflow.com/questions/14114411/remove-all-special-characters-from-a-string#:~:text=This%20should%20do%20what%20you,)%3B%20%2F%2F%20Removes%20special%20chars.%20%7D)

[12] <https://www.php.net/manual/en/language.operators.logical.php>