

## TECHNO SOLUTIONS

### **ABSTRACT**

This project work entitled 'Techno Solutions' has been designed to perform managerial and employee tasks in an organization in a suitable way. As the modern organizations are automated and computers are working as per the instructions, it becomes essential for the coordination of human beings, commodity and computers in a modern organization.

Techno Solutions is a project which aims to handle all records of registration , salaries , leaves in a computerized manner .This project has many features which are generally not available in organizations.

The project is developed in ASP.Net and C# using MS-SQL server database

Overall this project is being developed to help the Manager as well as Employees of an organization to maintain the workplace environment in the best way possible and also reduce the human effort

## ACKNOWLEDGEMENT

The training opportunity I had with **SIMPLUS INSTITUTE** was a great chance for learning and logical development. Therefore, I consider myself as a very lucky individual to be provided with an opportunity to be a part of it. I am also grateful for having a chance to meet so many wonderful people and professionals who led me through this training period.

I take this opportunity to express a deep sense of gratitude to **Mr. Rahul Khanna** Trainer, **SIMPLUS INSTITUTE**(Amritsar), for his cordial support, valuable information and guidance, which helped me in completing this task through various stages.

Bearing in mind I would also use this opportunity to express my deepest gratitude and special thanks to the **Mr. Suraj** of **SIMPLUS INSTITUTE** for his unfailing cooperation and sparing his valuable time to assist me in various training related issues throughout the training period.

It is my radiant sentiment to place on record my best regards, deepest sense of gratitude to **Mr. B.S Saini**, Electronics and Communication Department (HOD) and all teachers of the department for their careful and precious guidance which was extremely valuable for my study both theoretically and practically.

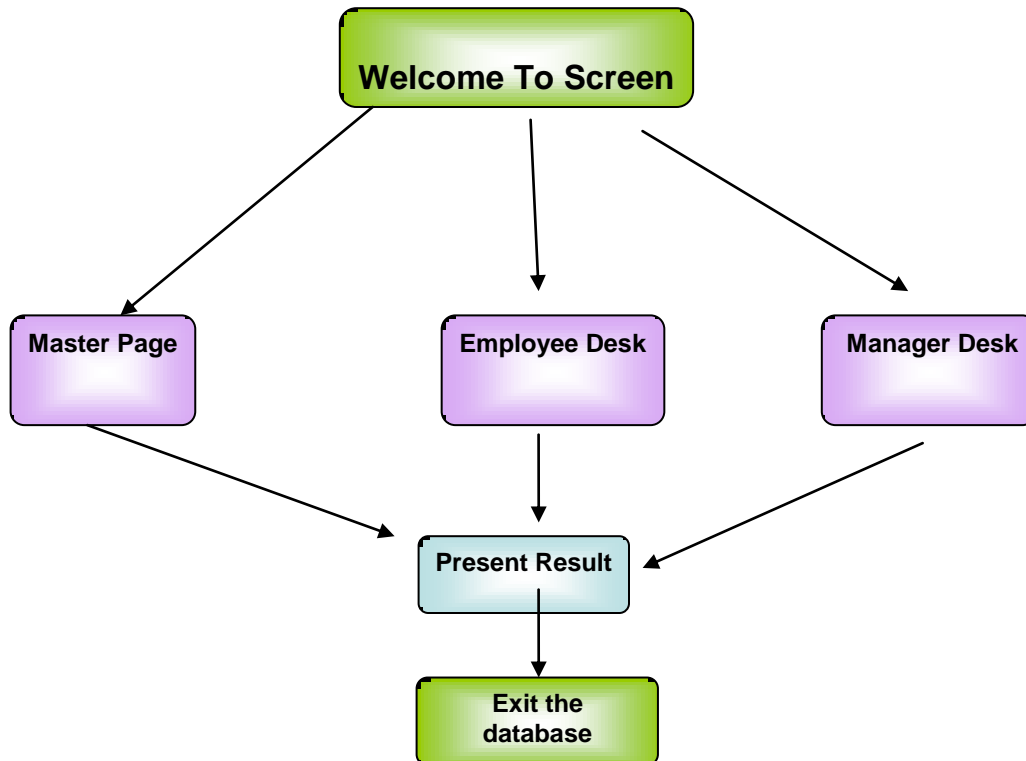
Last but not the least I would like to mention here that I am greatly indebted to each and everybody who was associated with my project at any stage but whose name does not find a place.

# INTRODUCTION

## 1.1) Overview:-

- In “TECHNO SOLUTIONS” system I have prepared Login master for Manager & Employee, Employee master for Employee working in the organization ,Admin master for Manager to perform all managerial and administrative tasks
- First in this website manager logs in to register the employee who has recently joined the organization through employeeadd master table. Manager has to fill-in all crucial details and provide the employee user-id and password to log into the company website
- Employee can log into his account only after he has been authorized by the manager to the company website.
- The manager’s desk include various modules through which he can add employee ,search employee details working in the organization ,update their records ,pay salaries ,manage employee request for leaves, broadcast messages to all working employees and order food from canteen.
- The employer’s desk is enough to keep him motivated to perform his daily tasks in the best possible manner. He can also send and receive mails, request for leave and view leave status, check broadcast message ,view payroll.

**-: ASP.NET Application Development :-**



The software has four main modules-:

- Insertion to Database module- User friendly Input Screen.
- Extracting from Database module- Attractive Output Screen
- Updating the Database module- Attractive Input Screen.
- Displaying the Database module- Granted Salaries, Leave Statuses

## TECHNO SOLUTIONS

### 1.2 OPERATION ENVIRONMENT

PROCESSOR	INTEL CORE PROCESSOR FOR BETTER PERFORMANCE
OPERATING SYSTEM	WINDOWS VISTA ,WINDOWS7, UBUNTU, WINDOWS 8, WINDOWS 10.
MEMORY	1GB RAM OR MORE
HARD DISK SPACE	MINIMUM 3 GB FOR DATABASE USAGE FOR FUTURE
DATABASE	MY SQL

# SYSTEM ANALYSIS

## 2.1 Identification of Need

- The Current System is usually manual.
- Due to manual process, it requires more time for completion of any work.
- Manual System increases the chance of errors and also increases turnaround time.
- Lot of time was consumed for searching required employee on basis of id,department,status.
- More manpower is required & timely updating is complicated.
- Immediate response to the inquiries is difficult and time consuming.
- Salaries can't be granted to all at once

Hence On Analyzing All The Points Above It Was Felt By The Management Of The Organization That There Was Need Of Such A Tool Which Could Fulfill All The Needs Of Feedback.



## 2.2 Preliminary Investigation

---

### **-: Investigation techniques:-**

#### **1. Interviewing**

- The information is collected from project leader by interviewing to them and took suggesting from end user as per their requirement.

#### **2. Visiting**

- For clarification, visited some site like Google.com, yahoosearch.com, 4tests.com, codeforu.Com etc.

#### **3. Questionnaires**

- By asking possible questions to the project leader at the time of interview by making some questionnaires to collect the required information

## **-: REQUIREMENT ANALYSIS:-**

Requirement analysis is a software engineering task that bridges the gap between system engineering and software design. It provides the software designer with a representation of information and function that can be translated to data.

Before developing any computerized system, it is imperative to examine initially. The problem in the existing system and also ascertain the basic needs that should be fulfilled by the proposed system the primary aspect of developing a full fledged automated system would be to learn the current procedure and the information flow to locate the problem in the existing system to identify what resources are used to discuss with user and their authority as to what improvement must in the existing system.

### **-:Definition:-**

- “Analysis of system is the process of gathering facts, solution of problem and to decide overall constitution of the desired system. In system analysis we have to analyze all the processes, related features, required function, available sources and the time which should be specified for the analysis stage.”
- The most important phase of developing any system is system analysis. Because of the analysis phase decides that what type of requirements, materials, strangles and techniques, models are required.
- All these things depend upon our system that what type of output our system is designed to function. Our desire from the system is also responsible for defining the

above factors. So the overall structure of system that we want to implement will be decided in analysis part of a system development by analyst.

## 2.3 Feasibility Study

Feasibility study is the study of the system to check whether the system made is feasible or not. It is very useful to check whether the system work as per the requirement or not. It is undertaken to determine the possibility of the probability of developing completely new system.

### **-: Need of the feasibility study :-**

- Answer the question whether the new system is to be developed or Not?
- Define the problem and objectives involved.
- Is the cost incurred in the development of the system of the Justified?

### **-: Operational feasibility:-**

It covers mainly two aspects. It determines that how the proposed system will fit in the current operation and what if the job retraining and restructuring may be needed at the end of the

## TECHNO SOLUTIONS

implementation of the system. The operational feasibility checks whether user who is going to use the system is able to work with the software with which the system is coded!

In the system Operation feasibility following are the question to be asked!

- Is there sufficient support for the system?
- Is current method acceptable to the user?
- Have the user been involved in the planning and development of the system?
- System is very useful for online system.
- System is user-friendly.
- Level of security and any other access control constrains are high.

### **-: Technical feasibility:-**

It determines that work for the system is done with the present equipments and existing software technology.

Necessary technology, documents, reports are also available. Technical guarantee of accuracy, reliability and security are also provided.

It asks following question?

- Does necessary technology exists to do what is suggested?

## TECHNO SOLUTIONS

- Do the Proposed equipments have the technical capacity to hold the data required to use new system?
- Are there technical guarantees of accuracy, reliability ease of access and data security?

### **-: Economical feasibility:-**

It looks the financial aspects of the system. Economic feasibility concerns with the returns of the investments in the system. It determines whether it is worthwhile to invest money in the proposed system.

It asks for the following question.

- What is the cost to conduct a full system investigation?
- What is the cost of hardware and software required in the development of the proposed system?
- Estimated cost is fitted in budget. (I.e. cost of software and hardware is feasible to common person.)s


## 2.4 Project Planning and Scheduling

---


### 2.4.1) Time line chart:-

- When creating a software project schedule, the planner begins with a set of tasks. If automated tools are used, the work breakdown is input as a task network or task outline. Effort, duration and start date are then input for each task. In addition, tasks may be assigned to specific individuals.
- A timeline chart, also called a Gantt chart, is generated. A timeline chart can be developed for the entire project. Timeline charts can be developed for each project function.
- All project tasks are listed in the left-hand column. The horizontal bars indicate the duration of each task. When multiple bars occur at the same time on the calendar, task concurrency is implied. The diamonds indicate milestones, which indicate the place where our project reach.
- Once the information necessary for the generation of a timeline chart has been input, the majority of software project scheduling tools produce project tables listing of all project tasks, their planned and actual start and end table dates and variety of related information, enable the project manager to track progress.

# TECHNO SOLUTIONS

Work Task	Week 1				
	D1	D2	D3	D4	D5
<b>Analysis</b>					
<ul style="list-style-type: none"> <li>• Get project title</li> <li>• Discuss about project's functionality with project guide.</li> </ul>					
<b>Week 2</b>					
<ul style="list-style-type: none"> <li>• Make the System Flow Diagram.</li> <li>• Make Data Flow Diagram.</li> <li>• Make modifications in System Flow Dia. And DFD.</li> </ul>					
<b>Week 3</b>					
<ul style="list-style-type: none"> <li>• Make the Data Dictionary related to project requirement.</li> <li>• Identify features and functionality to be added.</li> <li>• Visit related sites and do the compartmentalization</li> <li>• <b><u>Milestone</u></b></li> </ul>					
Analysis is Complete					

## TECHNO SOLUTIONS

Work Task	Week 4				
	D1	D2	D3	D4	D5
<b>Design</b>					
<ul style="list-style-type: none"> <li>• Design home, login, and Main page</li> <li>• Designing of the other pages.</li> </ul>					
<b>Week 5</b>					
<ul style="list-style-type: none"> <li>• Inserting validation for the information insertion</li> <li>• Checking of the validation.</li> </ul>					
					



## TECHNO SOLUTIONS

	Week 6				
<ul style="list-style-type: none"> <li>Establishing database connectivity.</li> </ul>					
<ul style="list-style-type: none"> <li>Creating table.</li> </ul>					
<ul style="list-style-type: none"> <li>Testing of the connectivity.</li> </ul>					
<ul style="list-style-type: none"> <li>Check the complete project for Errors.</li> </ul>					

### 2.4.2 Estimation:-

- Software is the most expensive element of virtually all computer-based systems. For complex, custom system, a large cost estimation error can make the difference between profits and lost. Cost overrun can be disastrous for the developer.
- Software cost and effort estimation will never be an exact science. Too many variables human, technical, environment, political can affect the ultimate cost of software and effort applied to develop it. However, software system estimation can be transformed from a black art to a series of systematic steps that provide estimate with acceptable risk.

## 2.5 Software Requirement specification

---

### **-: Hardware specification:-**

1. Pentium series or above processor
2. 20GB or above Hard Disk Drive
3. 128MB RAM
4. CD ROM Drive or DVD Drive
5. Floppy Drive

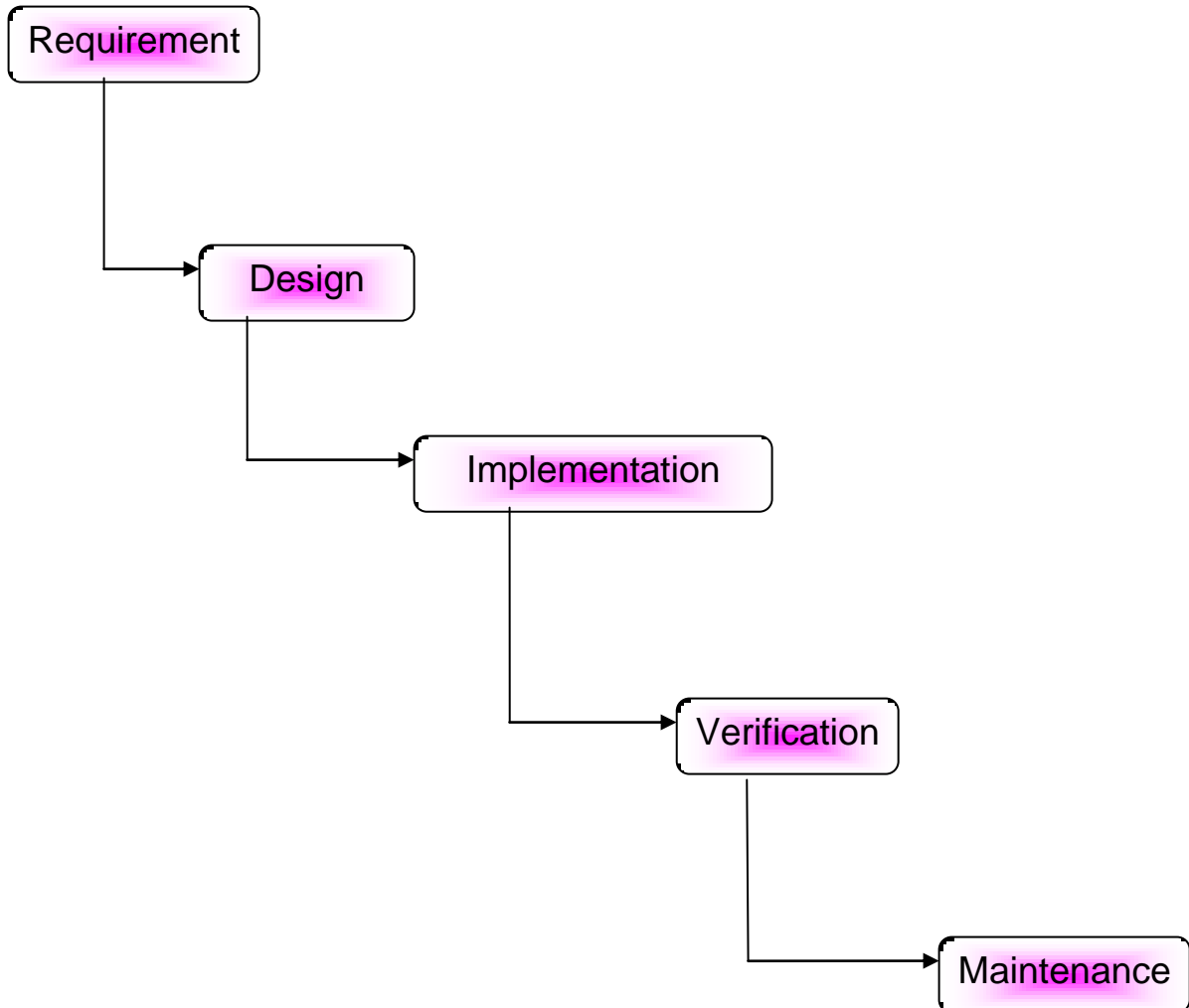
### **-:Software specification:-**

1. Platform support :
  - Windows 10
2. Application Development tool used:
  - Front End - Visual Studio 2013
  - Back End – SQL Database
  - Programming language –C#

## 2.6 Software Engineering Paradigm Applied

---

**-: Water fall Diagram for methodology:-**



## **-: Waterfall Model:-**

- The waterfall model derives its name due to the cascading effect from one phase to the other as is illustrated in above figure. In this model each phase well define starting and ending point, with identifiable deliveries to the next phase. Note that this model is sometime referred to as the linear sequential model or the software life cycle model.
- The water fall diagram is basically divided into following 5 models.

- Requirement
- Design
- Implementation
- Verification
- Maintenance

## **-:Requirement:-**

- In the requirement phase the need to create the application is specified. What is the need of the project is defined. What information to be feeder to create the application will come under the requirement phase?

## **-:Design:-**

- After the requirement phase the next phase is the Design phase where the application is designed

## TECHNO SOLUTIONS

according to the forms and other modules created. This phase is much important phase because it will structure the layout of your application.

### **-:Implementation:-**

- Implementation is the process of having a system personnel phase check out and put new equipment into use, train users, install new application and construct any file of data need to use it.

### **-:Verification:-**

- After the whole application is being the developed the main phase is the verification phase where the whole application tested and verified to check the whole application

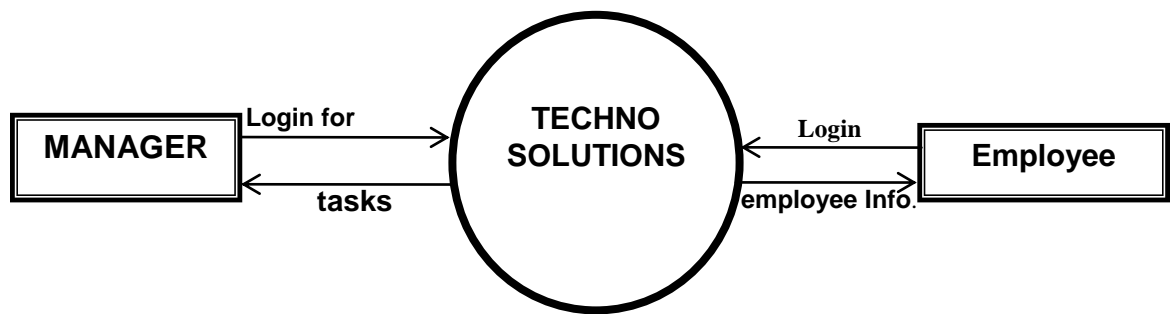
### **-:Maintenance:-**

- After the successful verification of the application the main phase is the maintenance phase where the application needs to be maintained for its successful operation in future.

## 2.7 Data Flow Diagram, E-R Diagram

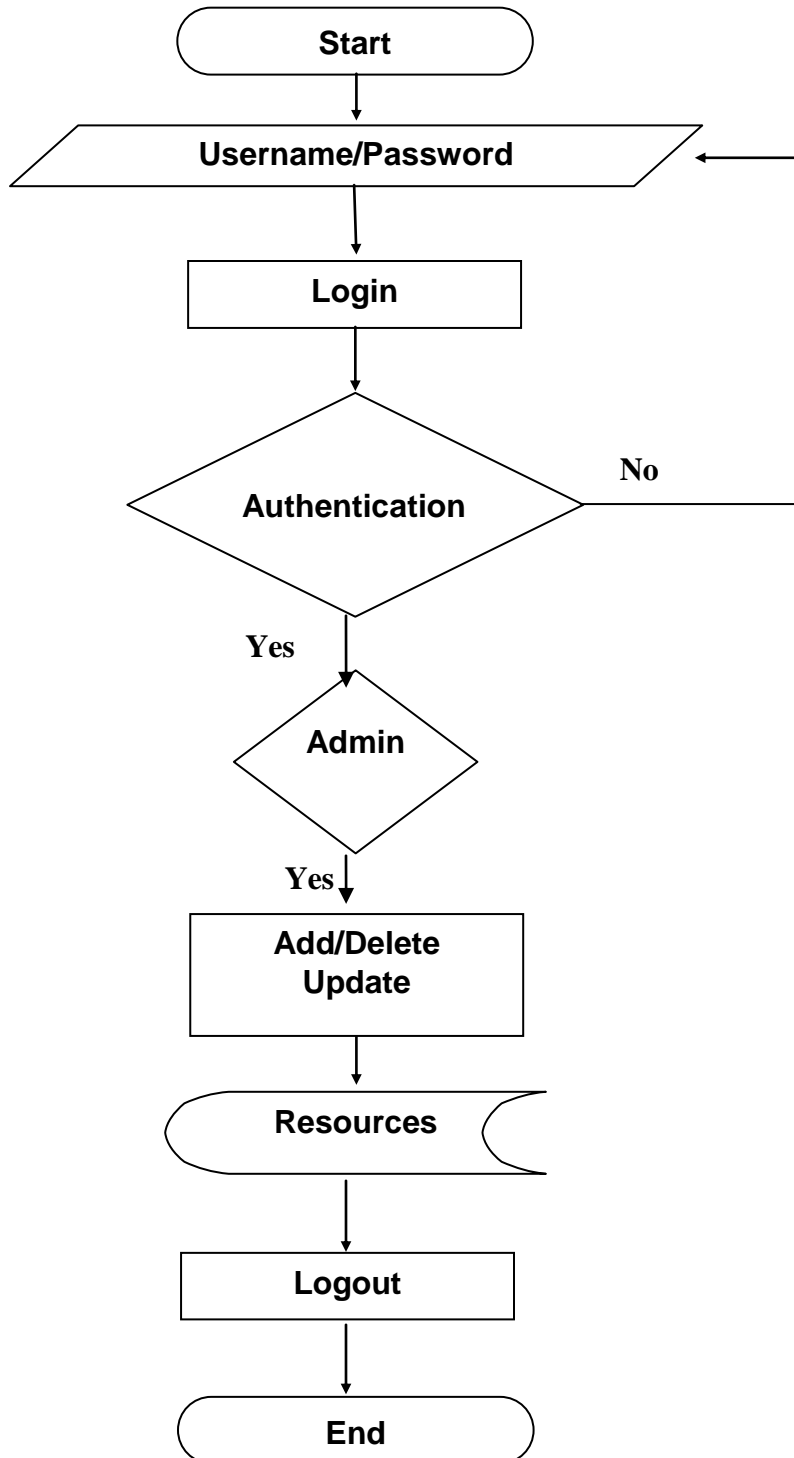
---

### CONTEXT LEVEL DFD



## 2.8 System flow diagram

---



# SYSTEM DESIGN



# 3.1 Modularization Detail

The different modules of this site are as follows:

## **1. MANAGER MASTER PAGE**

- 1.1. Manage Employee**
  - 1.1.1.Add Employee**
  - 1.1.2.Update/Delete Record**
- 1.2. Search Employee**
  - 1.2.1 By Employee ID**
  - 1.2.2 By Employee Department**
  - 1.2.3 By Employee Status**
- 1.3. Manage Employee Leave**
- 1.4. Payroll Management**
  - 1.4.1 Fill Bank Details**
  - 1.4.2 Pay Salary**
  - 1.4.3 Generate Payslip**
  - 1.4.4 Salary Statement**
- 1.5 Broadcast Message**

## **2. EMPLOYEE MASTER PAGE**

- 2.1 Manage Mails**
  - 2.1.1.Compose Mail**
  - 2.1.2.Inbox**
- 2.2 Leave**
  - 2.2.1 Request Leave**
  - 2.2.2 View Leave**
- 2.3 View Salary**
- 2.4 View Broadcast Message**

# MANAGER'S DESK

## 1. MANAGE EMPLOYEE MODULE:-

- It provides the functionality to authorized manager.
- Manager can fill in all the details of registering employee, assign him user-id and password. He can also update the records in case of some errors and delete records of unwanted employees

## 2. SEARCH EMPLOYEE MODULE:-

- The Manager can search various employees working in the organization on the basis of their employee-id. Search can also be executed Department-wise and on the basis of status of employee whether active or passive to determine employees working from home.

## 3. MANAGE EMPLOYEE LEAVE:-

- In This module the manager can check the requests for leave and accept or reject them according to various reasons for leave mentioned

## 4. PAYROLL MANAGEMENT MODULE :-

- In this module first of all the manager fills in the bank details of the employee

## **TECHNO SOLUTIONS**

- Next he can pay salary to the employee including various incentives on the basis of overtime , rewards,etc and deductions on the basis on pf,esi,security,etc.
- The manager can generate a salary slip to be provided to the employee which will include all the details of salary
- A salary statement is kept to keep the record of all the salaries paid by the organization to its various employees

## **5. BROADCAST MESSAGE MODULE**

- The Manager can convey important decisions of the organizations, change in its policies,announce meetings via a broadcast message which will be sent to all employees.

# **EMPLOYEE DESK**

## **1.MANAGE MAILS MODULE**

- The Employee can send mails to his colleagues within the organization in a private manner
- He can also check all the incoming mails.

## 2.LEAVE MODULE

- The Employee can request for leave specifying the time duration and reason for leave.
- He can check the leave status whether it is accepted or rejected by manager.

## 3.SALARY MODULE:-

- The Employee can view the status of his salary and maintain the record of received salaries.

## 4.BROADCAST MESSAGE MODULE:-

- The Employee can keep himself updated and know all the important announcements through the broadcast message

## 3.2 Data Dictionary

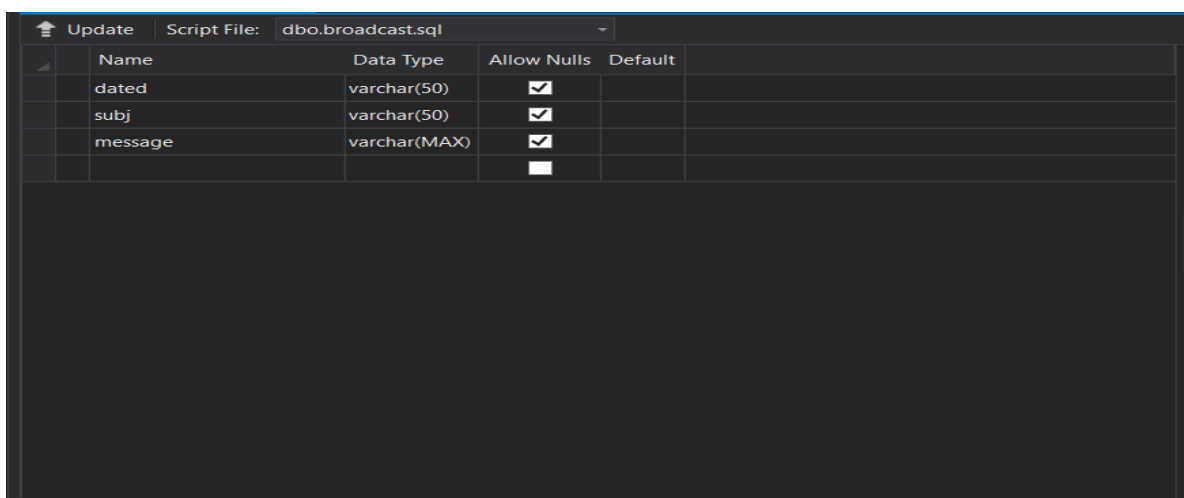
- In database management systems, a file that defines the basic organization of a database. A data dictionary contains a list of all files in the database, the number of records in each file, and the names and types of each field.
- Most database management systems keep the data dictionary hidden from users to prevent them from accidentally destroying its contents.

## TECHNO SOLUTIONS

- Data dictionaries do not contain any actual data from the database, only book keeping information for managing it
- Without a data dictionary, however, a database management system cannot access data from the database.

### 1. Table Name : Broadcast

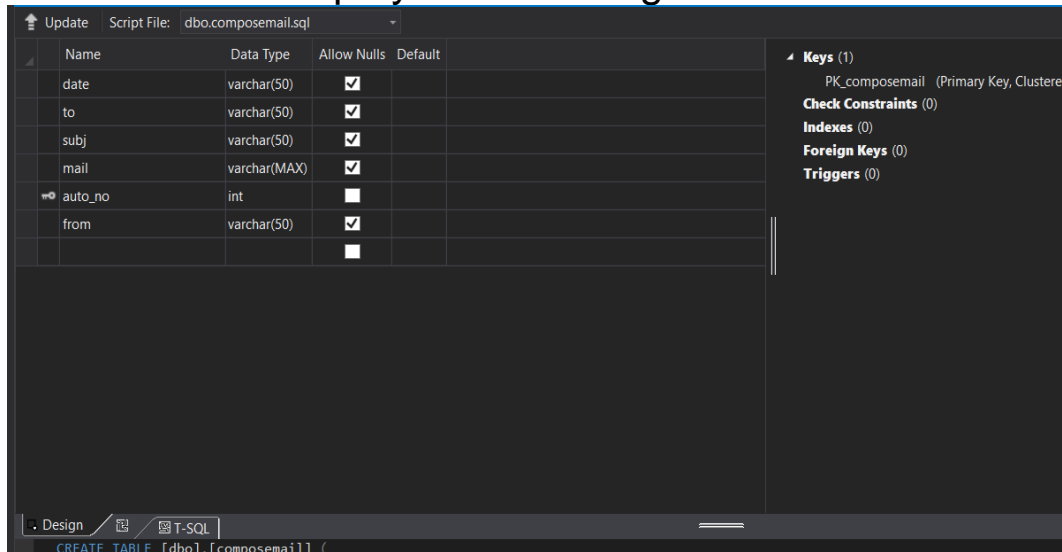
Table Description:- This table provides information about broadcasted message by the manager



	Name	Data Type	Allow Nulls	Default
	dated	varchar(50)	<input checked="" type="checkbox"/>	
	subj	varchar(50)	<input checked="" type="checkbox"/>	
	message	varchar(MAX)	<input checked="" type="checkbox"/>	
			<input type="checkbox"/>	

## 2. Table Name-Compose Mail

Table Description:- This Table Provide Information about mails which one employee is sending to another



The screenshot displays the SQL Server Enterprise Designer interface for a table named 'composemail' in the 'dbo' schema. The table is in 'Design' view. The columns are: 'date' (varchar(50), not null), 'to' (varchar(50), not null), 'subj' (varchar(50), not null), 'mail' (varchar(MAX), not null), 'auto\_no' (int, null), and 'from' (varchar(50), not null). A primary key is defined on the 'date' column. The right-hand pane shows the 'Keys' section with one primary key, 'PK\_composemail', and lists zero check constraints, indexes, foreign keys, and triggers. The bottom status bar shows the T-SQL script: 'CREATE TABLE [dbo].[composemail] ('

Name	Data Type	Allow Nulls	Default
date	varchar(50)	<input checked="" type="checkbox"/>	
to	varchar(50)	<input checked="" type="checkbox"/>	
subj	varchar(50)	<input checked="" type="checkbox"/>	
mail	varchar(MAX)	<input checked="" type="checkbox"/>	
auto_no	int	<input type="checkbox"/>	
from	varchar(50)	<input checked="" type="checkbox"/>	

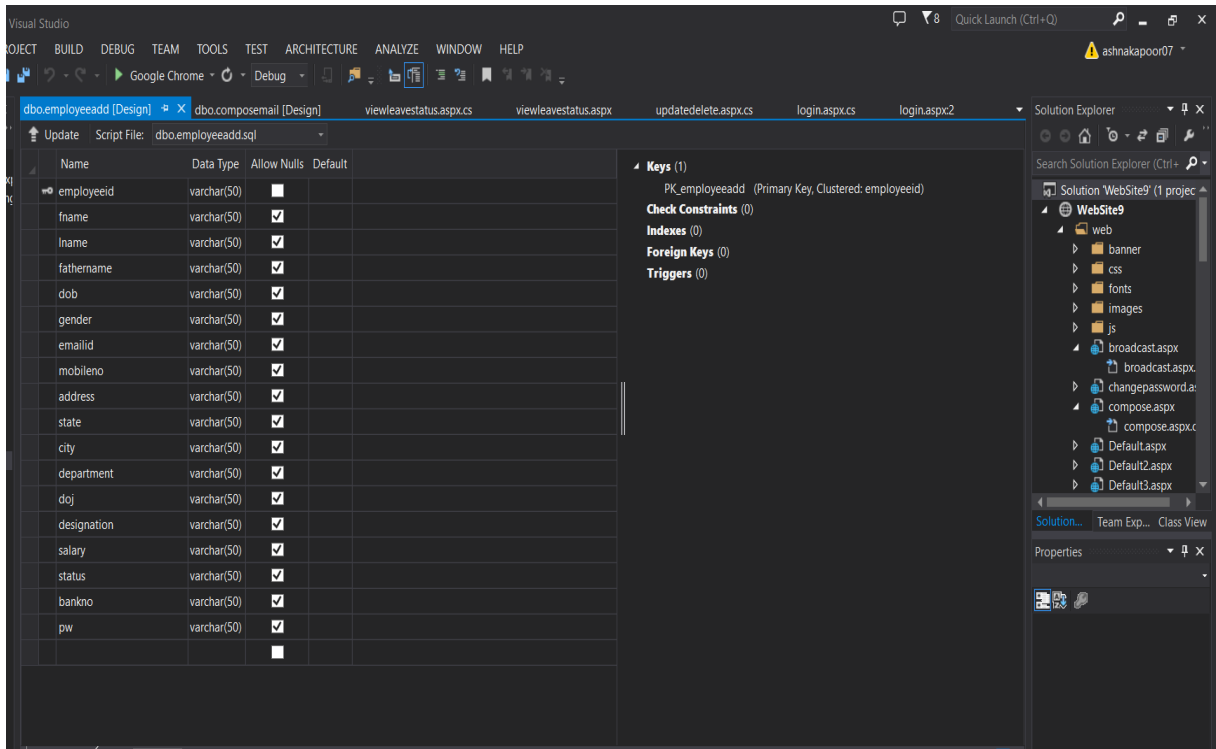
**Keys (1)**  
PK\_composemail (Primary Key, Clustere  
**Check Constraints (0)**  
**Indexes (0)**  
**Foreign Keys (0)**  
**Triggers (0)**

Design T-SQL  
CREATE TABLE [dbo].[composemail] (

## 3. Table Name:- employeeadd

Table Description:- This Table is stores all the information related to employees

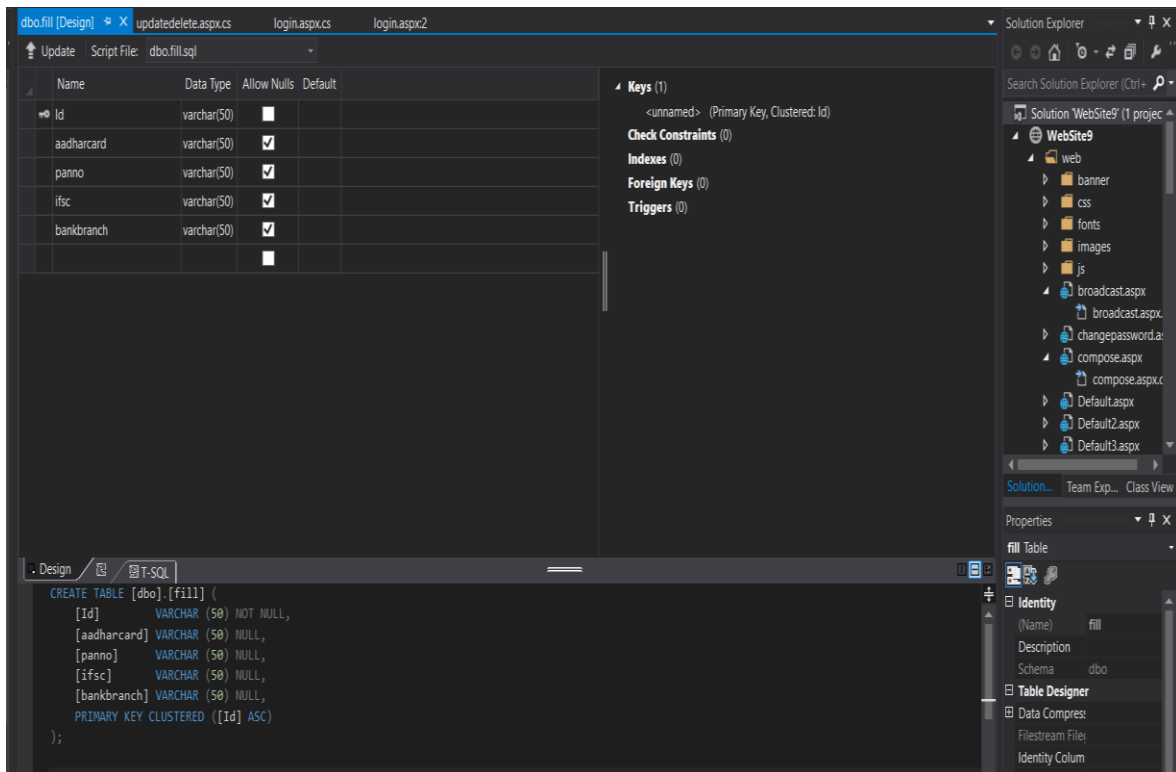
# TECHNO SOLUTIONS



## 4. Table Name:-fill

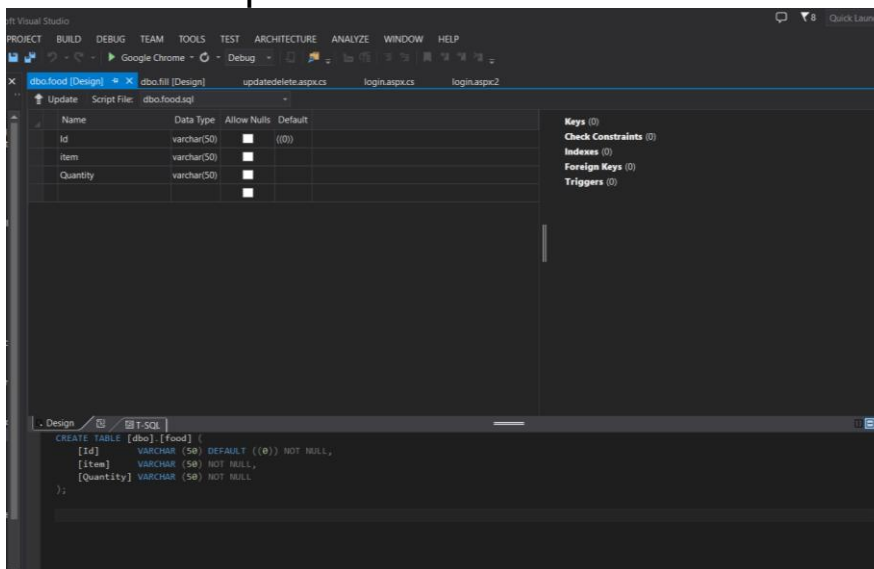
Table Description:- This Table stores bank details of employee

## TECHNO SOLUTIONS



### 4. Table Name:-food

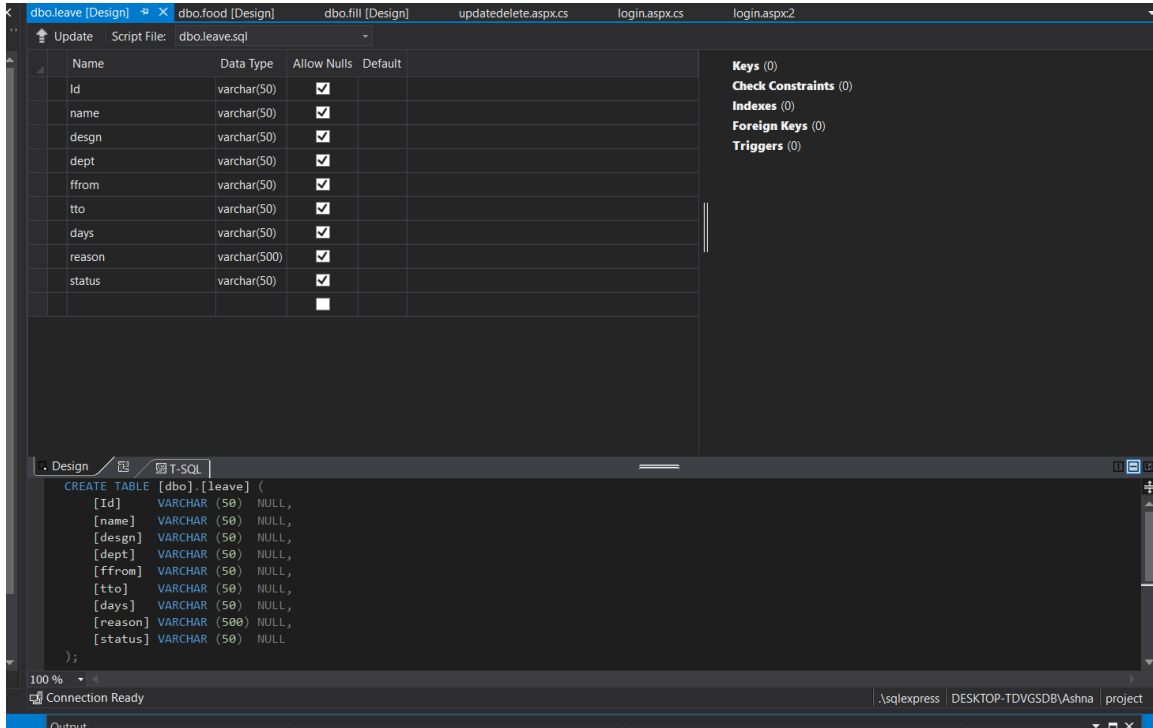
Table Description:- This Table stores orders of canteen





## 5. Table Name:-leave

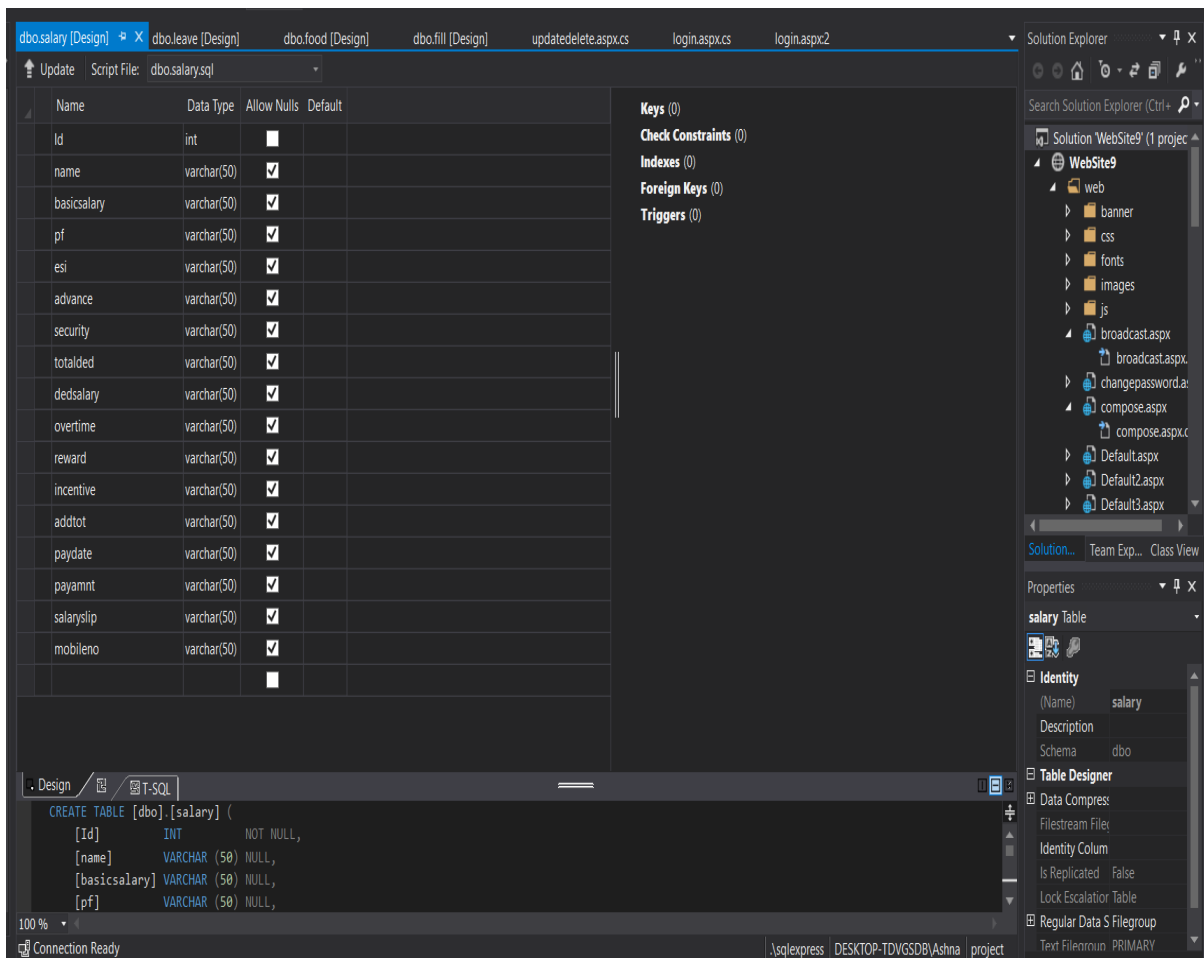
Table Description:- This Table maintains record of accepted and rejected leaves



## 6. Table Name:-salary

Table Description:- This Table maintains record of salaries.

## TECHNO SOLUTIONS



The other tables provide some basic functionalities in the running of code.

## 3.3 User Interface Design

---

### LOGIN Page

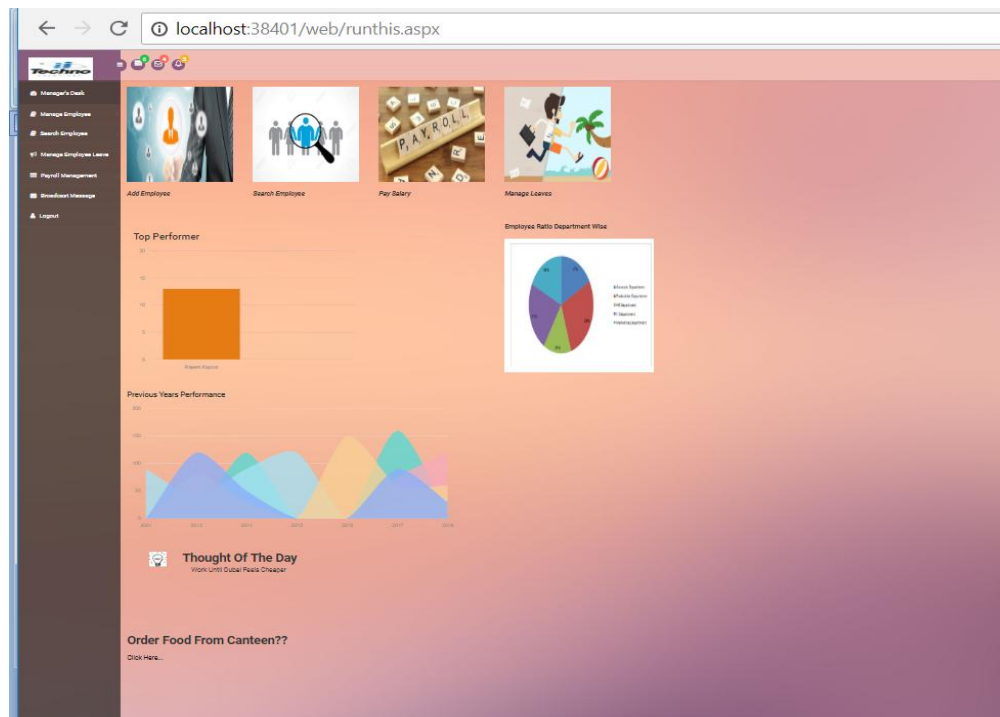
**Login Page Description:** - This is Login page. There is a dropdown to choose between employee and manager. They can log in through respective user-id and password. In case the specifications do not match a pop up appears stating specifications do not match. Please try again.



## TECHNO SOLUTIONS

# MANAGER DESK

**Manager Desk Description:** - This is Login page. There is a dropdown to choose between employee and manager. They can log in through respective user-id and password. In case the specifications do not match a pop up appears stating specifications do not match. Please try again.



## TECHNO SOLUTIONS

# ADD EMPLOYEE

**ADD Employee Description:** - This Module opens up the registration form filled by the manager to register the employee into company website. Each Employee has a distinguished employee-id. Through this the manager provides the employee user-id which is same as mobile number and password for authorization and authentication.

The screenshot displays a web application interface for adding a new employee. The main content area is titled "Registration Form" and contains the following fields:

- Employee-ID
- First Name
- Last Name
- Father's Name
- Date Of Birth
- Gender: ☒ Male ☐ Female
- Email-ID
- Mobile Number
- Address
- State: Andaman Nicobar
- City: Nicobar
- Department
- Date Of Joining
- Designation: Software Engineer
- Salary
- Status: ☒ Active ☐ Dormant
- Bank Account Number
- Set Password

An "Add Employee" button is located at the bottom of the form. The left sidebar menu includes: Manager's Desk, Manage Employee, Search Employee, Manage Employee Leave, Payroll Management, Broadcast Message, and Logout. The top header features the Techno logo and a user profile for Ashna Kapoor.

## UPDATE/DELETE RECORD

**Update/Delete Description:** - This module enables the manager to first search the employee by his employee-id. Any changes in record can be made through modifying and the hitting the update record. Delete Button is used to delete the permanently delete the record of an employee.

The screenshot displays a web application interface for managing employee records. The browser address bar shows the URL: localhost:38401/web/updatedelete.aspx. The interface features a sidebar with the 'Techno' logo and navigation links: Manager's Desk, Manage Employee, Search Employee, Manage Employee Leave, Payroll Management, Broadcast Message, and Logout. The main content area is titled 'Update/Delete Record' and contains a form for updating or deleting an employee record. The form includes the following fields and options:

- Employee-ID: 1
- First Name: Monika
- Last Name: Kapoor
- Father's Name: Dharampal Kapoor
- Date Of Birth: 21/01/1968
- Gender: ☒ Male ☐ Female
- Email-ID: mk@yahoo.in
- Mobile Number: 8566959520
- Address: moon avenue
- State: Delhi
- City: Central Delhi
- Department: Business
- Date Of Joining: 25/7/2018
- Designation: System Analyst
- Salary: 20000
- Status: ☒ Active ☐ Dormant
- Bank Account No.: 123

At the bottom of the form, there are two buttons: 'Update' and 'Delete'. A 'SEARCH' button is located next to the Employee-ID field.

## SEARCH MODULE

**Search Module Description:** - This Module helps to search details of an employee

1. By Employee-ID :- Entering the employee-id and hitting the Search button provides all the details of an employee.
2. By Department :- Entering the Department and hitting the Search Button provides the database view of all the employees in a particular department
3. By Status:- This helps to distinguish between employees having active or dormant status. It provides a database view of all the employees.

The screenshot shows a web application interface for 'Techno Solutions'. The top navigation bar includes a logo, a menu icon, and a user profile for 'Ashna Kapoor'. The left sidebar contains navigation links: Manager's Desk, Manage Employee, Search Employee, Manage Employee Leave, Payroll Management, Broadcast Message, and Logout. The main content area is titled 'SEARCH by Employee-ID' and features a search input field with the value '1' and a 'SEARCH' button. Below the search bar, a form displays the details of an employee named Monika Kapoor. The details include:

First Name	Monika
Last Name	Kapoor
Father's Name	Dharampal Kapoor
Date of Birth	21/01/1968
Gender	<input checked="" type="radio"/> Male <input type="radio"/> Female
Email-Id	mk@yahoo.in
Mobile Number	8566959520
Address	moon avenue
State	Delhi
City	Central Delhi
Department	Business
Date Of Joining	25/7/2018
Designation	System Analyst
Salary	20000
Status	<input checked="" type="radio"/> Active <input type="radio"/> Dormant
Bank Account No.	123

# TECHNO SOLUTIONS

localhost:38401/web/searchdept.aspx

Techno

Manager's Desk

Manage Employee

Search Employee

Manage Employee Leave

Payroll Management

Broadcast Message

Logout

SEARCH by Dept

cse

SEARCH

employeeid	fname	lname	fathernamedob	gender	emailid	mobilen	address	state	city	doj	designations	salary	status	bank	npw
2	vasu	kapoor	rajesh kapoor	Male	v.kapoor@gmail.com	8968439963	chand avenue	Punjab	Amritsar	1/5/2017	System Analyst	100000	Active	9876	vasu
4	rahul	Khanna	Kamal khanna	Male	mr.rahulkhanna@gmail.com	9914201996	3 police line	Punjab	Amritsar	8/03/2016	Software Engineer	20000	Active	123	abc123

localhost:38401/web/searchstatus.aspx

Techno

Manager's Desk

Manage Employee

Search Employee

Manage Employee Leave

Payroll Management

Broadcast Message

Logout

SEARCH by Status

active

SEARCH

employeeid	fname	lname	fathernamedob	emailid	gender	mobilen	address	state	city	department	doj	designations	salary	bank	no
1	Monika	Kapoor	Dharampal Kapoor	21/01/1968	mk@yahoo.in	Female	8566959520	moon avenue	Delhi	North Delhi	Business	25/7/2018	System Analyst	20000	123
2	vasu	kapoor	rajesh kapoor	22/06/1992	v.kapoor@gmail.com	Male	8968439963	chand avenue	Punjab	Amritsar	cse	1/5/2017	System Analyst	100000	9876
3	Rajesh	Kapoor	Dharampal Kapoor	15/08/1964	rk@yahoo.in	Male	9814198756	Chand Avenue	Delhi	New Delhi	Ece	2/4/15	Technical Support	100000	123456
4	rahul	Khanna	Kamal khanna	12/04/1981	mr.rahulkhanna@gmail.com	Male	9914201996	3 police line	Punjab	Amritsar	cse	8/03/2016	Software Engineer	20000	123
5	Ashna	Kapoor	Rajesh kapoor	23/02/1998	ashnakapoor07@gmail.com	Female	9915961223	23B Chand Avenue Fatehgarh Churian Road	Punjab	Amritsar	it	7/18/2018	Business Analyst	100000	11



## MANAGE EMPLOYEE LEAVE

**Manage Employee Leave Description :-** This module enables the manager to accept or reject the leave requested by the employee. Accordingly the status will be updated in the employee module and he will be notified. This provides a database view of employee requesting for leave, no of days of leave, reason, etc.

The screenshot shows a web browser window with the URL `localhost:38401/web/manageleave.aspx`. The interface has a sidebar menu on the left with the following items: Manager's Desk, Manage Employee, Search Employee, Manage Employee Leave, Payroll Management, Broadcast Message, and Logout. The main content area has a header with the 'Techno' logo and a user profile for 'Ashna Kapoor'. Below the header, there is a form with an 'Employee-ID' field containing the value '3' and a 'Button' next to it. A table displays the leave request details:

name	design	dept	ffrom	tto	days	reason
Rajesh	Technical Support	Ece	25/7/2018	30/7/2018	5	rest

At the bottom of the form, there are two buttons: 'Accept' and 'Reject'.

## TECHNO SOLUTIONS

# FILL BANK DETAILS

**Fill Bank Details Description :-** This module makes the manager to first search the employee by his employee-id and then fill in all the details that are necessary to pay the salary.

The screenshot shows a web browser window with the URL `localhost:38401/web/Filldetails.aspx`. The application has a sidebar menu on the left with the following items: Manager's Desk, Manage Employee, Search Employee, Manage Employee Leave, Payroll Management, Broadcast Message, and Logout. The main content area has a header with the 'Techno SOLUTIONS' logo and a user profile for 'Ashna Kapoor'. Below the header, there is a search bar labeled 'Search by Employee-ID' with the value '1' and a 'Search' button. The main content area is divided into two sections: 'Employee Details' and 'Fill Details'. The 'Employee Details' section contains a table with the following information:

Employee Details	
Name	Monika
Designation	System Analyst
Department	Business
Bank Account Number	123

The 'Fill Details' section contains a form with the following fields:

Fill Details	
Aadhar Card Number	<input type="text"/>
PAN No.	<input type="text"/>
IFSC code	<input type="text"/>
Bank Branch	<input type="text"/>
<input type="button" value="Submit"/>	

## PAY SALARY

**Pay Salary Description :-** This module enables the manager to first search the employee by his employee id to get to know about his basic salary. He can fill-in advance and security (if any). Other deductions like pf , esi will be calculated on the basic salary itself by the specified amounts. Similarly additional can be entered and the total will be calculated on a button click.

The screenshot displays a web application interface for 'Techno Solutions' at the URL 'localhost:38401/web/paysalary.aspx'. The interface is divided into a sidebar menu and a main content area. The sidebar menu includes options like 'Manager's Desk', 'Manage Employee', 'Search Employee', 'Manage Employee Leave', 'Payroll Management', 'Broadcast Message', and 'Logout'. The main content area contains several form sections:

- Employee ID Search:** A text input field for 'Employee ID' with a 'Search' button.
- Employee Details:** A table with rows for 'Name', 'Mobile Number', 'Designation', 'Department', 'Bank Account No.', and 'Basic Salary'.
- Deductions:** A section with input fields for 'PF (@12%)', 'ESI', 'Advance', 'Security', 'Total Deduction', and 'Salary'. A 'Calculate' button is present.
- Additional:** A section with input fields for 'Overtime (@800/hr)', 'Rewards', 'Incentives', and 'Total Additional'. A 'Calculate' button is present.
- Payment Summary:** A section with input fields for 'Date of Payment', 'Salary Slip No.', and 'Total Payable Salary'. A 'Calculate' button and a 'Pay' button are present.

## GENERATE PAYSLIP

**Generate Payslip Description :-** Just by entering the salary slip number, the entire details of salary paid can be generated

The screenshot shows a web browser window with the URL `localhost:38401/web/generatepayslip.aspx`. The application has a purple-themed header with the 'Techno' logo on the left and a user profile for 'Ashna Kapoor' on the right. A sidebar on the left contains navigation links: 'Manager's Desk', 'Manage Employee', 'Search Employee', 'Manage Employee Leave', 'Payroll Management', 'Broadcast Message', and 'Logout'. The main content area is titled 'Generate Payslip' and contains a form with the following sections:

- Generate Payslip**: A section with a 'Salary Slip No.' input field and a 'Generate' button.
- Employee Details**: Fields for 'Name of Employee:' and 'Basic Salary:'.
- Deductions**: Fields for 'PF:', 'ESI:', 'Advance:', 'Security:', and 'Total Deduction:'.
- Additional**: Fields for 'Overtime:', 'Incentives:', 'Rewards:', and 'Total Addition:'.
- Total Payment**: Fields for 'Total Payment' and 'Paid Amount:'.

## TECHNO SOLUTIONS

# SALARY STATEMENT

**Salary Statement Description :-** This module makes the manager to maintain a database view of all the salaries paid to a particular employee. It can be viewed by searching through employee-ID.



Salary Statement

Employee ID:

name	basicsalary	pf	esi	advance	security	totaldedd	deddsalary	overtime	reward	incentive	addtotpay	datepay	amnt	salaryslip
Rajesh	100000	12000	1750	1000	2000	16750	83250	400	400	400	1200	2/4/12	84450	1
Rajesh	100000	12000	1750	1	13752	86248	11	11	1	23	1	86271	3	

# BROADCAST MESSAGE

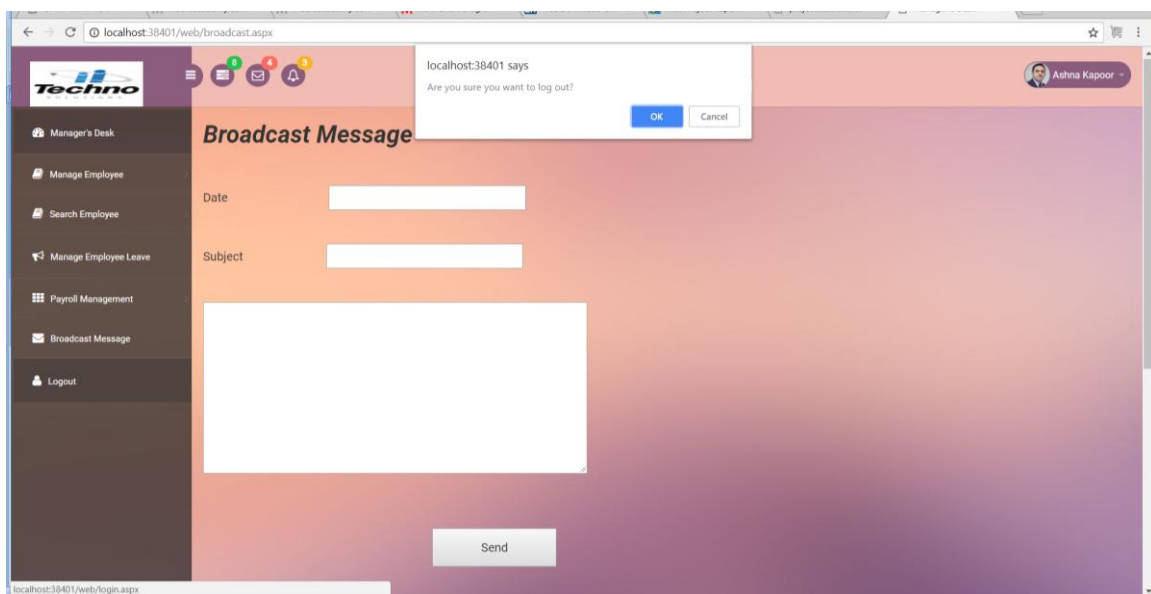
**Broadcast Message Description :-** This module makes the manager to broadcast a message to all the employees in the organization. This helps to announce important information using intranet.

## TECHNO SOLUTIONS

The screenshot shows a web browser window at the URL `localhost:38401/web/broadcast.aspx`. The page has a dark purple sidebar on the left with the 'Techno' logo and a list of menu items: 'Manager's Desk', 'Manage Employee', 'Search Employee', 'Manage Employee Leave', 'Payroll Management', 'Broadcast Message' (highlighted), and 'Logout'. The main content area has a light purple header with the title 'Broadcast Message' and a user profile for 'Ashna Kapoor'. Below the title, there are two input fields labeled 'Date' and 'Subject'. A large white text area for the message body is positioned below these fields. At the bottom center of the main area is a 'Send' button.

## LOGOUT

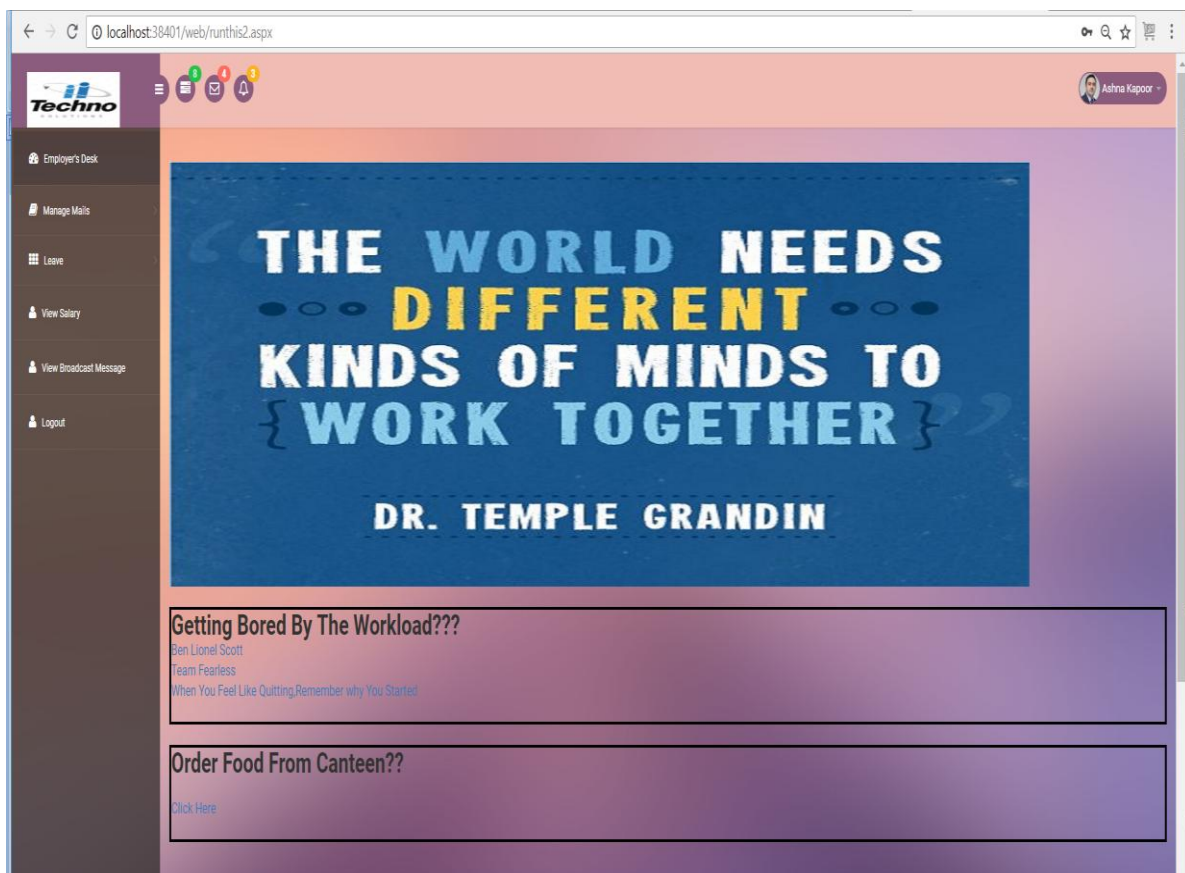
**Logout Description** :-This causes the manager to log out of his account.



## TECHNO SOLUTIONS

# EMPLOYEE DESK

**Employee Desk Description :-** This module is different for each employee and opens according to log-in specifications. Just like Manager Desk Employee can Order Food From Canteen from his Desk. Keeping Employees motivated is an important task of the organization so that they can be retained and can perform better. This is achieved through the desk by providing various motivational quotes and videos.



## COMPOSE

**Compose Description :-** The Employees can send mails to each other within the organization just by entering the user id in “To” textbox which is same as mobile number.

The screenshot shows the 'Compose' page of the Techno application. The page has a sidebar on the left with the following menu items: Employer's Desk, Manage Mails, Leave, View Salary, View Broadcast Message, and Logout. The main content area is titled 'Compose' and contains the following fields: Date, From (pre-filled with 9814198756), To, Subject, and a large text area labeled 'Enter Text Below'. A 'Send' button is located at the bottom left of the text area. The browser address bar shows 'localhost:38401/web/compose.aspx'.

## INBOX

**Inbox Description :-** This is used to view the received messages.

The screenshot shows the 'Inbox' page of the Techno application. The page has the same sidebar as the Compose page. The main content area displays a table of received messages. The table has the following columns: date, to, subj, mail, auto\_no, and from. The first row of data shows a message received on 7/19/2018 from 9814198756 with the subject 'hi' and the body 'hello dad'. The auto\_no is 5 and the from field is 9968439963.

date	to	subj	mail	auto_no	from
7/19/2018	9814198756	hi	hello dad	5	9968439963



## REQUEST LEAVE

**Request Leave Description :-** The Employee can apply for leave through this. Entering his own Employee id and filling in the from, to textboxes , he can request for leave

The screenshot displays a web application interface for requesting leave. The browser address bar shows 'localhost:38401/web/leave.aspx'. The application has a dark sidebar with navigation links: 'Employer's Desk', 'Manage Mails', 'Leave', 'View Salary', 'View Broadcast Message', and 'Logout'. The main content area is titled 'LEAVE FORM' and contains the following fields:

- Employee ID:
- Name:
- Designation:
- Department:
- Leave From:
- To:
- Total Number Of Days:
- Reason:

A 'Search' button is located next to the Employee ID field. A 'Request' button is positioned at the bottom left of the form area. The user's profile, 'Ashna Kapoor', is visible in the top right corner.

## LEAVE STATUS

**Leave Status Description :-** The Employee can view his leave status by entering the Employee-ID and filling in the from and to dates. The status can be seen in textbox with a red line above it signifying rejection, green line above it signifying acceptance and grey line above it signifying pending request.

The screenshot shows a web browser window with the URL `localhost:38401/web/viewleavestatus.aspx`. The page has a sidebar menu on the left with options: Employer's Desk, Manage Mails, Leave, View Salary, View Broadcast Message, and Logout. The main content area is titled "Leave Status" and contains a form with the following fields: "Employee ID", "From", "To", and "Your Status is". A "View" button is located to the right of the "To" field.

## VIEW BROADCAST MESSAGE

**View Broadcast Message Description :-** The Employee can view the broadcasted message by manager through this

The screenshot shows a web browser window with the URL `localhost:38401/web/viewbrmsg.aspx`. The page has a sidebar menu on the left with options: Employer's Desk, Manage Mails, Leave, View Salary, View Broadcast Message, and Logout. The main content area displays a table with broadcast messages.

dated	subj	message
7/24/2018	meeting	meeting is at 5
25/7/2018	holiday	tommorrow is holiday

# TESTING

- Testing presents an interesting anomaly for the software engineering activities, the engineer attempts to build software from an abstract concept to a tangible product. Now comes testing. The engineer creates a series of test case that are initiated to "demolish" the software that has been build. Infact, testing is the one step in the software process that could be viewed (psychologically, at least) as destructive rather than constructive.

## **6.1 Testing Principle:-**

- Testing is a process of executing a program with the intent of finding an error.
  - A good test case is one that has a high probability of finding an as yet undiscovered error.
  - A successful test is one that uncovers a yet undiscovered error.
- 
- **Principle #1:-** All tests should be traceable to EMPLOYEE requirements.
  - **Principle #2:-** Tests should be planned long before testing begins.

## TECHNO SOLUTIONS

- **Principle #3:-** The pare to principle applied to software testing.
- **Principle #4:-** Testing should begin in the small and progress toward testing in large.
- **Principle #5:-** Exhaustive testing is not possible.

### **6.2 Testability:-**

Software Testability is simple how easily can be tested.  
The following characteristics lead to software.

- Operability.
- Observables.
- Controllability.
- Decomposability.
- Simplitycity.
- Stability.
- Understandability.

### **6.3 Model Of Testing:-**

- There are different Models of testing. On the basis of testing methods there are two types of testing:-

1. White-box testing.

2. Black-box testing.

- White-box tests are used to examine the procedural details. It checks the logical paths by test case. It can also check the conditions, loops used in the software coding. It checks that loops are working correctly on defined boundary value.
- Black-box tests are used to demonstrate that software functions are operational, that input is properly accepted and output is correctly produced, and that integrity of external information is maintained.

### **Test Cases:-**

(1) Invalid User:-

#### **Test Case:-**

- If the username and password is not valid, means that the person who is trying to access the website is not

## TECHNO SOLUTIONS

authenticated so system will give the message that unauthenticated user.

### Solution:-

- Solution of this case is that user is not aware about the login criteria so the person needs to create its account to the website and it may be there mistake in the typing so it needs to retype the username and password.

### (2) Invalid Information entered on search page:-

### Test Case:-

- If the any user enters invalid information on the search page a message is generated or on asking user to enter the correct type.

### Solution:-

- Solution of this case is that user is not aware about the Type of data to be search or it may be person's mistake in the searching so it needs to research the information.

### (3)Invalid Information entered on buyer page:-

### Test Case:-

- If the name enters invalid information an error message is generated on asking user to enter the correct type.

### Solution:-

## TECHNO SOLUTIONS

- Solution of this case is that user is not aware about the Type of data to be entered or it may be person's mistake in the typing so it needs to retype the information.

### (4) Error in data base connectivity

#### Test Case:-

- If there is any problem connecting to the database user will be asked to browse and search for the data base and establish the bridge.

#### Solution:-

- Solution of this case is that user has to first establish the connectivity with the database and then run the project.

### (5) Error loading the module

#### Test Case:-

- This problem may arise if the browser does not have the write support.

# Bibliography

- During the Development of our system, we have taken the References Books which I would like to mention in this Section.

## **-.: Books:**

- The Complete Reference vb Programming
  - Asp.net 3.5

## **Links:**

- [www.code4u.com](http://www.code4u.com)
- [www.codeproject.com](http://www.codeproject.com)
- [www.yahoosearch.com](http://www.yahoosearch.com)
- [www.wikipedia.com](http://www.wikipedia.com)



THANK YOU