8/18/2020

CAIRO UNIVERSITY

SOFTWARE ENGINEERING MASTER FINAL PROJECT

The Final Project | **Project Deliverables 06**

Customer Satisfaction Indicator

Project

TEAM MEMBERS

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GLOSSARY

- CSI: Customer satisfaction indicator
- NPS: Net Promoter Score
- Promoter
- Passive
- Detractor
- TTB
- BB
- Overall satisfaction
- Agent satisfaction
- Quota
- Very unsatisfied
- Unsatisfied
- Natural
- Satisfied
- Very satisfied
- IVR

Used Symbols

- Unified Modeling Language (UML)
- The Hypertext Transfer Protocol (HTTP)
- World Wide Web (WWW)
- Hypertext Mark-up Language (HTML)
- Cascading Style Sheets (CSS)
- Personal Home Page (PHP)
- Structured query language (SQL)

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1 CHAPTER ONE:

PROBLEM DEFINITION AND ANALYSIS

1.1 INTRODUCTION

A call center is a centralized office used for receiving or transmitting a large volume of requests by telephone.

A call center has an open workspace for call center agents, with work stations that include a computer for each agent, a telephone set/headset connected to a telecom switch, and one or more supervisor stations.

A call center agent is a person who handles incoming or outgoing customer calls for a business. A call center agent might handle account inquiries, customer complaints or support issues. A call center agent who manages both incoming and outgoing customer calls is also referred to as a blended agent. Other names for a call center agent include customer service representative (CSR), contact center agent, telephone sales or service representative (TSR), attendant, associate, operator, account executive or team member.

In call center there's survey presented to customer called CSI affect the salary of agents by 40% and numbers of leaders, supervisor, section head and unit manager.

This document is an introduction to Our Project proposal to initiate a software Project to replace a manual reporting system which is using today at call Center Companies like (TEDATA, Vodafone, Etisalat, and Orange Etc…)

To help all of employees to get their evaluation at CSI (which done by receiving record call to customer will be explain later in the blew) by opening web application by his username and password instead of manual way which is Emails

Reporting Team this team responsible for using equation to calculate agent's result from CSI record and send emails

What is CSI…?

The Customer Satisfaction Indicator provides functionality that allows you to quickly evaluate a Customer's satisfaction with their service. After a Customer completes the Survey, their score is stored on their Customer record.

The CSI Survey Question is:

- **Q1. NPS,** How Likely Are You To Recommend company To A Friend Or Colleague
- **Q2. Overall Satisfaction**, How would You Evaluate your overall satisfaction based on your Last call with company Contact Center?
- **Q3. Agent Satisfaction:** How Satisfied Are You With The Representative You Spoke To?

Above Rating Score from 0 to 10 by which (0) means (not at all satisfied) and (10) means (extremely satisfied)

- **Q4. FCR,** Did We Resolve Your Issue Or Answer Your Inquiry?

Above Rating Score from 1 to 4 by which

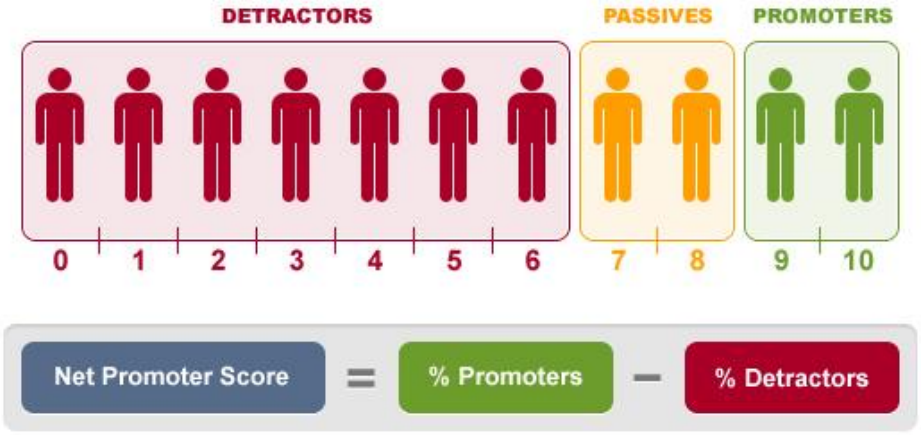
1. Yes, in the first time I contacted company
2. Yes but I had to contact company more than once
3. Still waiting for a follow-up call
4. Not solved

What is NPS…?

Net Promoter Score is a customer loyalty metric that gauges how willing a customer is to recommend a product or service

The concept of NPS is based on the customer's rating of their willingness to recommend your organization, on a scale of 0 to 10:

- Any respondent giving you a 9 or a 10 is considered a Promoter,
- While anyone giving you a 7 or an 8 is considered "Passive".
- On the other hand, any score 6 or below is considered a Detractor.



1.2 PROBLEM STATEMENT:

1.2.1 Existing situation

The reporting team which responsible for making a huge number of report when CSI machine (IVR) record call survey to any agent,

This team will do the blew points

1- Calculate the CSI rates according the equation that done according to system Process (This equation is true and from companies)

Solve Order	Field	Formula
1	TTB	= (Satisfied+'Very Satisfied')/'Grand Total'
2	BB	='Very Unsatisfied'/'Grand Total'
3	% of Promoters	=Promoter/'Grand Total2'
4	% of Passives	=Passive/'Grand Total2'
5	% of Detractors	=Detractor/'Grand Total2'
6	Net Promoter Score	='% of Promoters'-'% of Detractors'
Calculated Item		
Solve Order	Item	Formula

2- Send daily report for every Agent record survey call to the agent as the blew image

Dear Mohamed,
Please Take The Points That Mentioned Below Into Your Consideration To Keep Your Performance .

Team :	Kareem Fawzy
Agent Name :	Mohamed Maged Essam
Agent ID:	X08034
Caller ID :	0225285343

One call result

Report for one record spsific

Type	TTB	BB
Attitude	0.00%	0.00%
Knowledge	0.00%	0.00%
Overall Satisfaction	0.00%	100.00%
Waiting Time	100.00%	0.00%

3- Send anther mail for count of calls survey for every specific agent that has recorded as the blew

Dear Asmaa,
Kindly check the blew weekly records for CSI to Keep Your Performance

Supervisor name

Total CSi proformance

Team Leader name

Agent Name

Row Labels	Agent Satisfaction TTB	Agent Satisfaction BB	Net Promoter Score	Overall Satisfaction TTB	Overall Satisfaction BB	Count of Phone
Gamal	50.00%	50.00%	-100.00%	50.00%	50.00%	2
Hany	50.00%	50.00%	-100.00%	50.00%	50.00%	2
Asmaa Abd Elfattah Esmaiel Elsayed	50.00%	50.00%	-100.00%	50.00%	50.00%	2
Grand Total	50.00%	50.00%	-100.00%	50.00%	50.00%	2

4- 4- Send anther mail for count of calls survey for every specific agent and team leaders that has recorded as the blew to their Supervisor

Dears,

Find Below CSI Report For **[28-Feb-2018]** as below noting that CSI Evaluation of **NPS, Overall Satisfaction and Agent Satisfaction:**

Supervisor

Row Labels	Agent Satisfaction TTB	Agent Satisfaction BB	Net Promoter Score	Overall Satisfaction TTB	Overall Satisfaction BB	Count of Phone
Gamal	85.71%	0.00%	0.00%	57.14%	0.00%	7
Ahmed AbdElSalam	100.00%	0.00%	-100.00%	100.00%	0.00%	1
Hesham Mohamed Marouf Nasef	100.00%	0.00%	-100.00%	100.00%	0.00%	1
Fady Nader	66.67%	0.00%	33.33%	33.33%	0.00%	3
hoda sayed ahmed mohamed	0.00%	0.00%	-100.00%	0.00%	0.00%	1
Hasnaa Saied Abdelaziz Farag	100.00%	0.00%	100.00%	50.00%	0.00%	2
Mostafa Ameen	100.00%	0.00%	0.00%	100.00%	0.00%	1
Ahmed Mohamed Ismeail Abd El Wahed	100.00%	0.00%	0.00%	100.00%	0.00%	1
Nashwa	100.00%	0.00%	0.00%	50.00%	0.00%	2
Marwa Fouad Sayed Mehanna	100.00%	0.00%	-100.00%	0.00%	0.00%	1
Olaa mohamed sayed mohamed	100.00%	0.00%	100.00%	100.00%	0.00%	1
Grand Total	85.71%	0.00%	0.00%	57.14%	0.00%	7

There is a lot of many mails should be reported to different departments and different employees we didn't discussed saving to your time.

This consider manual system process and our project function to replace this manual steps by automatic process to avoid failure by allow agents, leaders, supervisor, section head and unit

manager to access to our web application by his username and password to check the records of CSI

There are a lot of issues at this manual process for example

1. Consuming large Human resources

Reporting team is a group of employees who should report for every agent, Team leader, Supervisor and section heads around the call center unit which has more than two thousands of employees every survey call daily and weekly report and also monthly report for the call which has survey ..... Imagine how much will be the benefits of this web application tool if we created

There will be

1-No need any more for reporting team to report the CSI

2-No more stress on the reporting team as the CSI will be out of their scope

The company can abandon on this team and keep only at least 2 persons that will make company save costs

2. Variance result of equation

Reporting team calculate the equation for all agents and get results then send this result to leaders so leaders made his own calculation and find variance between result which sent by reporting team ..this result affect the salary of agents by 40% so it also affect at leaders numbers that's why we need to calculate this equation very carefully but we are all human that mean by natural we made mistake in calculation

3. Failure result

The equation calculate manual from reporting team and leaders so the error Percentage was very high then it has a bad effect in business and this error may Eliminates the entire team

Solve Order	Field	Formula
1	TTB	= (Satisfied+'Very Satisfied')/'Grand Total'
2	BB	='Very Unsatisfied'/'Grand Total'
3	% of Promoters	=Promoter/'Grand Total2'
4	% of Passives	=Passive/'Grand Total2'
5	% of Detractors	=Detractor/'Grand Total2'
6	Net Promoter Score	='% of Promoters'-'% of Detractors'
Calculated Item		
Solve Order	Item	Formula

4. Missing report email

As we talk before we all human so we do mistakes by natural, when the reporting team missing send email to agents it affect to agents because he will found variance at his salary and he don't know why and it also has effect at Leaders, supervisor, section head, unit manager 's number

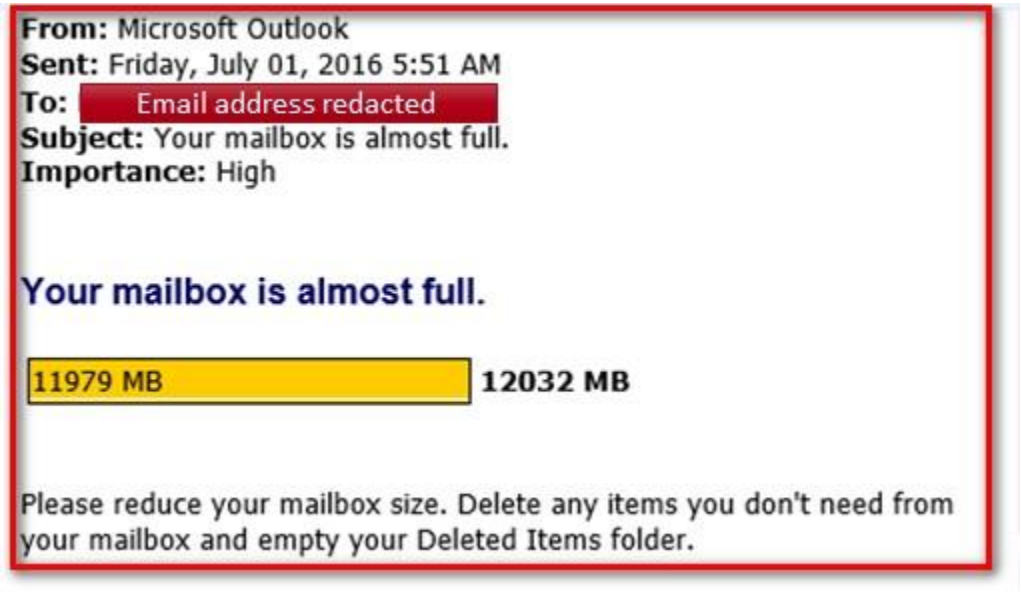
And he will go through escalation process

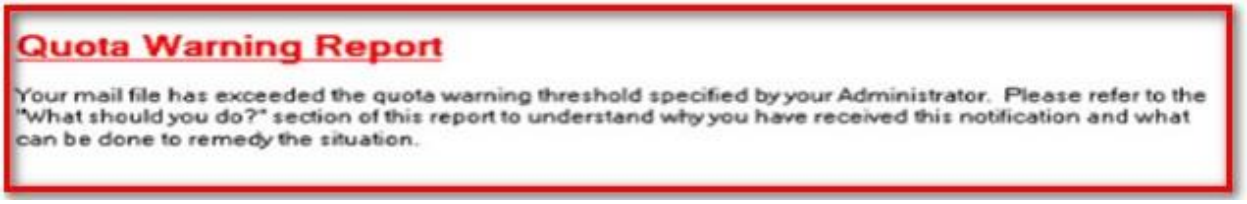
5. Duplicated report email

Reporting team may send the email many times to same person so it makes overload in emails quota

6. The burden of increasing on email

Many emails send by reporting teams so it makes overload on email quota. And agents forced to keep all this mail to make his own calculation of equation if he need or doubt his numbers to know how it affects in his salary at the end of month





7. Variance between the same record

Reporting team sometimes sending the same email by two result without notify that one of them was wrong and the another one was right,, that mean the agent was confuse with his result

8. costs

As we talk in step 7 w can save costs by replacing a lot reporting team members by our web application

9. Delay in time of calculate the equation

Reporting team must check CSI machine to show if the machine record new calls or not but in reality that so difficult to check continuously because it consider as manual steps so it made delay in checking the machine and it has bad effect in business

10. There isn't have Metaphor

Agent may don't know how the way of calculate this equation he receive the email from reporting team

11. Intolerance against one

Because the calculation done by normal person he may intolerance someone by making wrong calculation

Our project protect help to solve all the above problem

1.3 PURPOSE, SCOPE, AND OBJECTIVES

The purpose is to create web application tool to avoid any error done by manual system that effect business and to solve all the above issues

Business objectives:

- Reduce costs
- Accurate result of CSI
- More usability of this site to done a specific job.

1.4 PROJECT OVERVIEW

Our project about web application can be accessed by username and password with different privilege of views.

When the Employee who is our customer hear (end user) access this Application will find full report which has his name ,ID , his manager , the number of CSI recorded calls since he worked at this company , and the detail of calls weekly and monthly even daily

This web application automatically receives the calls from CSI machine immediately and calculates the equation then upload the result at our CSI Web application

1.4.1 Assumptions and Constraints

The project will be planned with the following assumptions:

1. Establish methods of communication with all parties using team Speak App
2. This project is a main project
3. No projects will related with this project
4. Only the software components will be supported in this project

1.4.2 PROJECT ORGNIZATION

Infrastructure and technology

HARDWARE REQUIREMENT:

- Domain name.
- Hosting server.
- Domain name server.

HUMAN RESOURCES:

- Front-End Developer
- Back-End Developer

1.4.3 Team Organizational Structure throughout the project

ORGANIZATION STRUCTURE

Stakeholder analysis:

Name	Department	Represents
Reporting team	Reporting	Project customer
agents	Any Department	Project customer
Leaders	Any Department	Project customer
supervisor	Any Department	Project customer

Section head	Any Department	Project customer
Unit manager	Any Department	Project customer
Mohammed Abdullah	Software development	Project Manager
Marwa Awad	Software development department	Software developer

2 CHAPTER TWO

DOMAIN ANALYSIS

2.1 General knowledge about the domain

The reporting team which responsible for making a huge number of report when CSI machine (IVR) record call survey to any agent,

This team will do the blew points

1- Calculate the CSI rates according the equation that done according to system Process
2- Send daily report for every Agent record survey call to the agent
3- Send anther mail for count of calls survey for every specific agent that has recorded
4- Send anther mail for count of calls survey for every specific agent and team leaders that has recorded their Supervisor

There is a lot of many mails should be reported to different departments and different employees we didn't discussed saving to your time.

This consider manual system process and our project function to replace this manual steps by automatic process to avoid failure by allow agents, leaders, supervisor, section head and unit manager to access to our web application by his username and password to check the records of CSI

2.2 Customers and users

-Customers
-Agents
-Leaders
-Supervisors
-Section head
-Unit manager
-Reporting team

2.3 Tasks and procedures currently performed

Making web application to allow users to access to review their CSI record

2.4 Similarities to other domains

There is no another domain is similar

2.5REQUIREMENTS

2.5.1 Functional Requirements

What the system should do?

Our system help agent to know his evaluation from customer who called him to solve his problem

The agent, leader, supervisor, section head, and unit manager open our web application by username and password they will view the CSI records (Date of call, Date of survey, his manager, caller ID,)

What input the system should accept?

Recorded call from CSI machine, username and password

What output the system should produce?

NPS, Agent satisfaction, overall satisfaction values

What data the system should store that the other systems might use?

The value of CSI effected the salary so HR department which responsible to calculate and represent salary to agents might use our web application

What computations the system should perform?

Solve Order	Field	Formula
1	TTB	= (Satisfied+'Very Satisfied')/'Grand Total'
2	BB	='Very Unsatisfied'/'Grand Total'
3	% of Promoters	=Promoter/'Grand Total2'
4	% of Passives	=Passive/'Grand Total2'
5	% of Detractors	=Detractor/'Grand Total2'
6	Net Promoter Score	='% of Promoters'-'% of Detractors'
Calculated Item		
Solve Order	Item	Formula

Must timing and synchronization all the above

2.5.2 Quality Requirements

Constraints on the design to meet specified levels of quality

We can add more features like monthly record, weekly record, and daily record

Constraints on:

-Response time

The time since write the username and password to load the page

-Throughput

Every step taken time to arrive to the output

-Resource usage

Extract data from database

-Time out

Stay online at web application long time

2.5.3 Platform Requirements

Constraints on the environment and technology of the system

A computing platform describes some sort of framework, either in hardware or software, which allows software to run. Typical platforms include a computer's architecture, operating system, or programming languages

Operating system is one of the requirements mentioned when defining system requirements (software). Software may not be compatible with different versions of same line of operating systems, although some measure of backward compatibility is often maintained. For example, most software designed for Microsoft Windows XP does not run on Microsoft Windows 98

We will try to make web application install in most operating system

System requirements

	Requirements
Windows	
Operating system	
CPU	
Memory	
Hard drive	
Graphics hardware	

Sound hardware	

2.5.4 Process Requirements

Constraints on the project plan and development methods

We tried to add new features and development the web application like may be will add diagrams to section head and unit manager interfaces to assist them to know their numbers easily

3 CHAPTER THREE

AGILE SOFTWARE DEVELOPMENT

3.1 DEFINITION OF AGILE:

Agile software development describes an approach to software development under which requirements and solutions evolve through the collaborative effort of self-organizing cross-functional teams and their customer(s)/end users(s) It advocates adaptive planning, evolutionary development, early delivery, and continuous improvement, and it encourages rapid and flexible response to change.
In software application development, Agile is a methodology that anticipates the need for flexibility and applies a level of pragmatism into the delivery of the finished product. Agile requires a cultural shift in many companies because it focuses on the clean delivery of individual pieces or parts of the software and not on the entire application.

3.1.1 Types of Agile methodologies

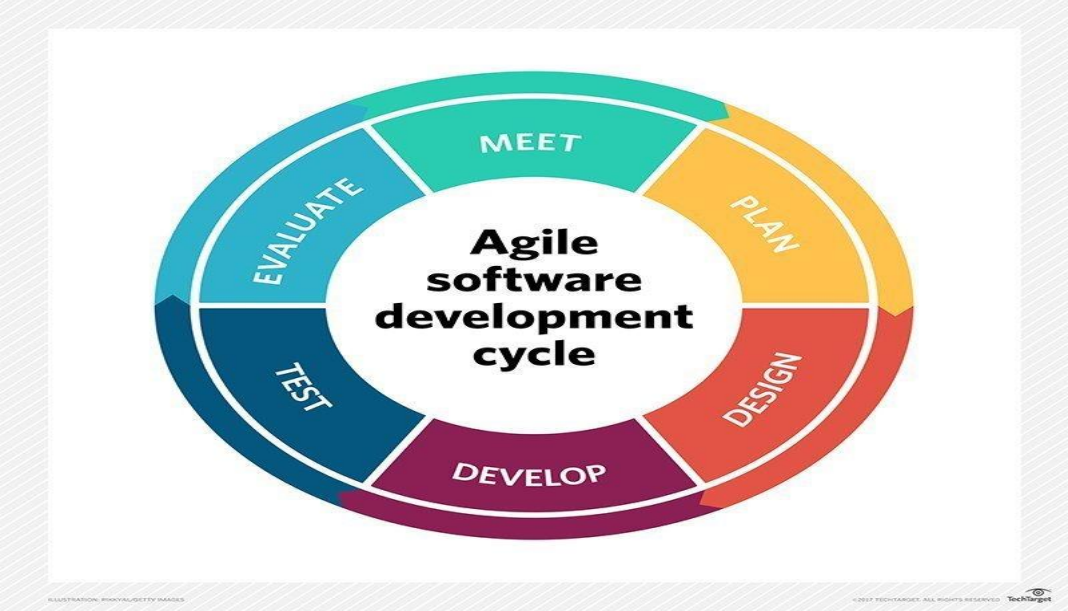
In any Agile environment, it is likely there are several Agile methodologies being used. One of the oldest of these is extreme programming, which is based on the idea that for successful development to happen quickly, testing must be done regularly. In many cases, the tests must be written even before the code

Another Agile methodology that is widely used is Scrum. Scrum brings everyone on the team, including the business stakeholders, together to agree on features. Then, specific goals are set for a 30-day sprint, at which point the agreed-upon software is delivered.

Some Agile proponents emphasize Lean development, or Lean programming, which strips software development down to the basics. Feature-driven, test-driven or behavior-driven development can also be used in an Agile environment, depending on the needs of the organization.

1. Scrum
2. Extreme Programming (XP).
3. Crystal
4. Feature Driven Development (FDD).
5. Dynamic System Development Methodology (DSDM).
6. Adaptive Software Development (ASD).
7. Kanban.

3.1.2 Agile Software Development Cycle:



3.1.3 Advantages of Agile:

Much has been compared over the years with Agile versus Waterfall approaches.

In the Waterfall era of software development, coders worked alone, with little to no input before handing the software to testers and then on to production. Bugs, complications and feature changes either weren't handled well, or were dealt with so late in the process that projects were seriously delayed or even scrapped.

The idea the behind Agile model, in which everyone -- including the business side -- stayed involved and informed in the development process, represented a profound change in both the culture and a company's ability to get better software to market more quickly.

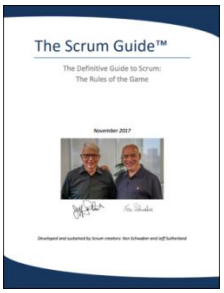
Collaboration and communication became as important as technology, , Agile has been adapted and modified to fit organizations of all sizes and types. The Agile cultural shift also paved the way for the latest software development evolution

3.1.4 Agile software development principles:

1. Customer satisfaction by early and continuous delivery of valuable software
2. Welcome changing requirements, even in late development
3. Working software is delivered frequently (weeks rather than months)
4. Projects are built around motivated individuals, who should be trusted
5. Face-to-face conversation is the best form of communication (co-location)
6. Working software is the primary measure of progress
7. Sustainable development, able to maintain a constant pace

3.2 DEFINITION OF SCRUM:

Scrum is an agile framework for managing work with an emphasis on software development. It is designed for teams of three to nine developers who break their work into actions that can be completed within time boxed iterations, called sprints (typically two-weeks) and track progress and re-plan in 15-minute stand-up meetings, called daily scrums. Agile originated as a software development approach but has been applied to other forms of product development, project management, and even education. Small groups self-organize and work on manageable chunks of agreed-upon, priority work. It includes a feedback loop component where teams can say "what's working, what's not working and what have we learned?" This iterative component thus defines and directs the work, rather than a big project plan created at the beginning of the initiative.



Scrum is:

- Lightweight
- Simple to understand
- Difficult to master

3.2.1 Scrum Characteristics

• Self-organizing teams

• Product progresses in a series of month-long "sprints"

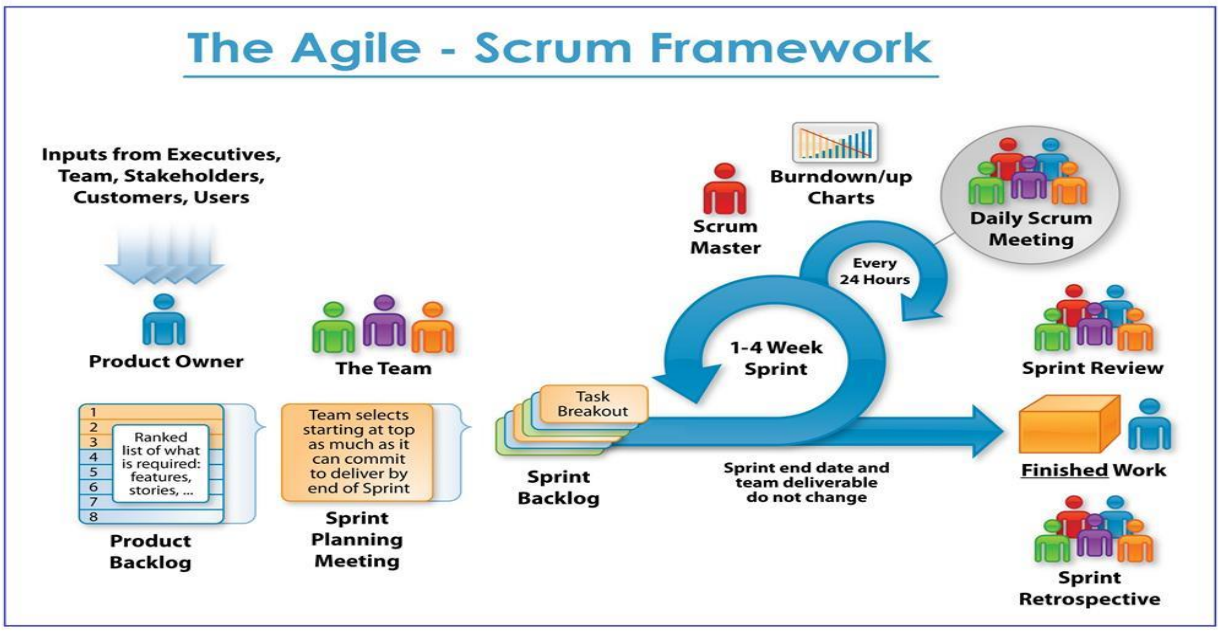
• Requirements are captured as items in a list of "product backlog

•No specific engineering practices prescribed

•Uses generative rules to create an agile environment for delivering projects

•One of the "agile processes"

3.2.2 Scrum Framework



3.2.3 Scrum Elements

Roles

- Product owner
- Scrum master
- Team

Events

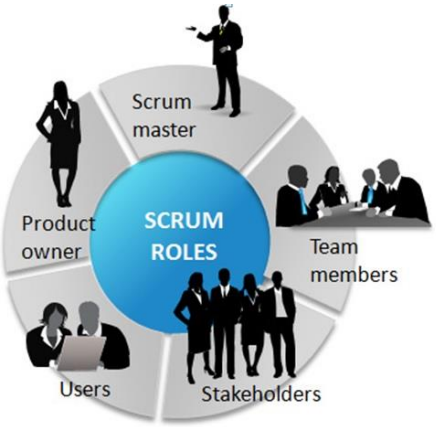
- Sprint planning
- Sprint review
- Sprint retrospective
- Daily scrum meeting

Artifacts

- Product backlog
- Sprint backlog
- Burn down charts

3.2.4 The Roles of the Scrum Team

The Scrum Team consists of a Product Owner, the Development Team, and a Scrum Master. Scrum Teams are self-organizing and cross-functional. Self-organizing teams choose how best to accomplish their work, rather than being directed by others outside the team. Cross-functional teams have all competencies needed to accomplish the work without depending on others not part of the team. The team model in Scrum is designed to optimize flexibility, creativity, and productivity.



a) Product owner

• Define the features of the product

• Decide on release date and content

- Be responsible for the profitability of the product (ROI)
- Prioritize features according to market value
- Adjust features and priority every iteration, as needed
- Accept or reject work results

The product owner represents the product's stakeholders and the voice of the customer; and is accountable for ensuring that the team delivers value to the business. The product owner defines the product in customer-centric terms (typically user stories), adds them to the product backlog, and prioritizes them based on importance and dependencies , Scrum teams should have one product owner. This role should not be combined with that of the scrum master. The product owner should focus on the business side of product development and spend the majority of their time liaising with stakeholders and should not dictate how the team reaches a technical solution This role is equivalent to the customer representative role in some other agile frameworks such as extreme programming (XP).

Communication is a core responsibility of the product owner. The ability to convey priorities and empathize with team members and stakeholders is vital to steer product development in the right direction. The product owner role bridges the communication gap between the team and its stakeholders, serving as a proxy for stakeholders to the team and as a team representative to the overall stakeholder community a product owner converses with different stakeholders, who have a variety of backgrounds, job roles, and objectives. A product owner must be able to see from these different points of view. To be effective, it is wise for a product owner to know the level of detail the audience needs

b) Scrum master

- Represents management to the project
- Responsible for enacting Scrum values and practices
- Removes impediments
- Ensure that the team is fully functional and productive
- Enable close cooperation across all roles and functions
- Shield the team from external interferences

Scrum is facilitated by a scrum master, who is accountable for removing impediments to the ability of the team to deliver the product goals and deliverables. The scrum master is not a traditional team lead or project manager but acts as a buffer between the team and any distracting influences. The scrum master ensures that the Scrum framework is followed. The scrum master helps to ensure the team follows the agreed processes in the Scrum framework, often facilitates key sessions, and

encourages the team to improve. The role has also been referred to as a team facilitator or servant-leader to reinforce these dual perspectives

The core responsibilities of a scrum master include (but are not limited to):

- Helping the product owner maintain the product backlog in a way that ensures the needed work is well understood so the team can continually make forward progress
- Helping the team to determine the definition of done for the product, with input from key stakeholders
- Coaching the team, within the Scrum principles, in order to deliver high-quality features for its product
- Promoting self-organization within the team
- Helping the scrum team to avoid or remove impediments to its progress, whether internal or external to the team
- Facilitating team events to ensure regular progress
- Educating key stakeholders in the product on Scrum principles
- Coaching the development team in self-organization and cross-functionality

One of the ways the scrum master role differs from a project manager is that the latter may have people management responsibilities and the scrum master does not. Scrum does not formally recognize the role of project manager, as traditional command and control tendencies would cause difficulties

c) Teams

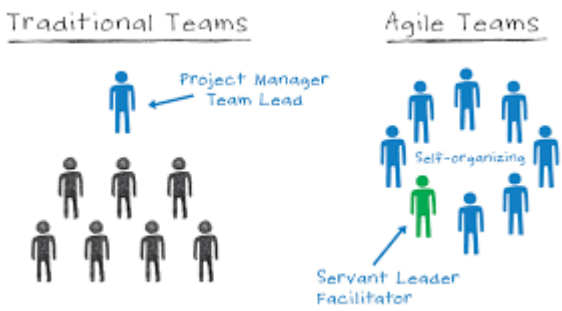
• Typically 5-9 people

• Cross-functional:

• Programmers, testers, user experience designers, etc.

• Members should be full-time

• May be exceptions (e.g., database administrator)



The development team is responsible for delivering potentially shippable product increments every sprint (the sprint goal).

The team has from three to nine members who carry out all tasks required to build the product increments (analysis, design, development, testing, technical writing, etc.).[18] Although there will be several disciplines represented in the team, its members are referred to generically as developers. To avoid potential confusion that this only refers to programmers, some organizations call this a delivery team and its members just team members.

The development team in Scrum is self-organizing, even though there may be interaction with other roles outside the team, such as a project management office (PMO).

Product Owner	Mohamed Abdullah

Scrum Master	Marwa Awad
Team Member	Mohamed Abdullah, Marwa Awad

3.2.5 The Scrum Events

Prescribed events are used in Scrum to create regularity and to minimize the need for meetings not defined in Scrum. All events are time-boxed. Once a Sprint begins, its duration is fixed and cannot be shortened or lengthened. The remaining events may end whenever the purpose of the event is achieved, ensuring an appropriate amount of time is spent without allowing waste in the process. The Scrum Events are:

- Sprint Planning
- Daily Scrum
- Sprint Review
- Sprint Retrospective

A) Sprint planning

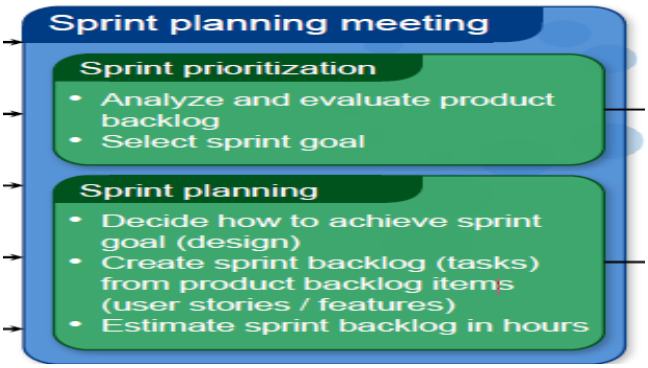
A sprint (or iteration) is the basic unit of development in Scrum. The sprint is a time boxed effort; that is, it is restricted to a specific duration the duration is fixed in advance for each sprint and is normally between one week and one month, with two weeks being the most common.

Each sprint starts with a sprint planning event that aims to define a sprint backlog, identify the work for the sprint, and make an estimated forecast for the sprint goal. Each sprint ends with a sprint review and sprint retrospective, that reviews progress to show to stakeholders and identify lessons and improvements for the next sprints.

Scrum emphasizes working product at the end of the sprint that is really done. In the case of software, this likely includes that the software has been fully integrated, tested and documented

Sprint planning at the beginning of a sprint, the scrum team holds a sprint planning event to:

- Mutually discuss and agree on the scope of work that is intended to be done during that sprint
- Select product backlog items that can be completed in one sprint
- The recommended duration is four hours for a two-week sprint (pro-rata for other sprint durations)
  - During the first half, the whole scrum team (development team, scrum master, and product owner) selects the product backlog items they believe could be completed in that sprint
  - During the second half, the development team identifies the detailed work (tasks) required to complete those product backlog items; resulting in a confirmed sprint backlog
    - As the detailed work is elaborated, some product backlog items may be split or put back into the product backlog if the team no longer believes they can complete the required work in a single sprint



Task	Name	Estimate
proposal	Marwa, Mohamed	8 hours
Documentation	Marwa	9 hours
Agile software development	Mohamed	6 hours
UML	Marwa, Mohamed	3 hours
Database	Mohamed, Marwa	10 hours
Write code and connect to database	Mohamed	12 hours
Testing	Marwa	3 hours
Design	Mohamed	3 hours

B) Sprint review

At the end of a sprint, the team holds two events: the sprint review and the sprint retrospective.

At the sprint review, the team:

- Reviews the work that was completed and the planned work that was not completed
- Presents the completed work to the stakeholders

To ensure that this feature what he needed and if he want to modify any features

- The team and the stakeholders collaborate on what to work on next

At the end of each sprint the team and the stakeholders decided what the next sprint in priority

C) Sprint retrospective

At the sprint retrospective,

• Periodically take a look at what is and is not working

• Typically 15–30 minutes

• Done after every sprint

• Whole team participates

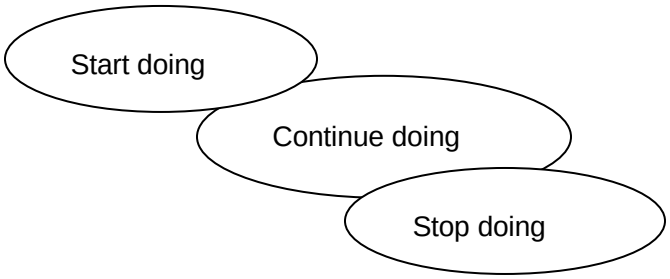
• Scrum Master

• Product owner

• Team

• Possibly customers and others

Whole team gathers and discusses what they'd like to:



D) Daily scrum meeting

Each day during a sprint, the team holds a daily scrum (or stand-up) with specific guidelines:

- All members of the development team come prepared. The daily scrum:
  - starts precisely on time even if some development team members are missing
  - should happen at the same time and place every day
  - is limited (time boxed) to fifteen minutes
  - Only team members, Scrum Master, product owner, can talk
  - Helps avoid other unnecessary meetings
- During the daily scrum, each team member typically answers three questions:
  - What did I complete yesterday that contributed to the team meeting our sprint goal?
  - What do I plan to complete today to contribute to the team meeting our sprint goal?
  - Do I see any impediment that could prevent me or the team from meeting our sprint goal?

3.2.6 Scrum Artifacts

Scrum's artifacts represent work or value to provide transparency and opportunities for inspection and adaptation. Artifacts defined by Scrum are specifically designed to maximize transparency of key information so that everybody has the same understanding of the artifact. The Scrum Artifacts are:

- Product Backlog
- Sprint Backlog
- Burn down charts

A) Product backlog

The product backlog comprises an ordered list of requirements that a scrum team maintains for a product It consists of features, bug fixes, non-functional requirements, etc.—whatever must be done to successfully deliver a viable product. The product owner prioritizes those product backlog items (PBIs) based on considerations such as risk, business value, dependencies, size, and date needed. Items added to a backlog are commonly written in story format. The product backlog is what will be delivered, ordered into the sequence in which it should be delivered. It is visible to everyone but may only be changed with the consent of the product owner, who is ultimately responsible for ordering product backlog items for the development team to choose.

The product backlog:

- Captures requests to modify a product—including new features, replacing old features, removing features, and fixing issues
- Ensures the development team has work that maximizes business benefit to the product owner

Prioritized by the product owner

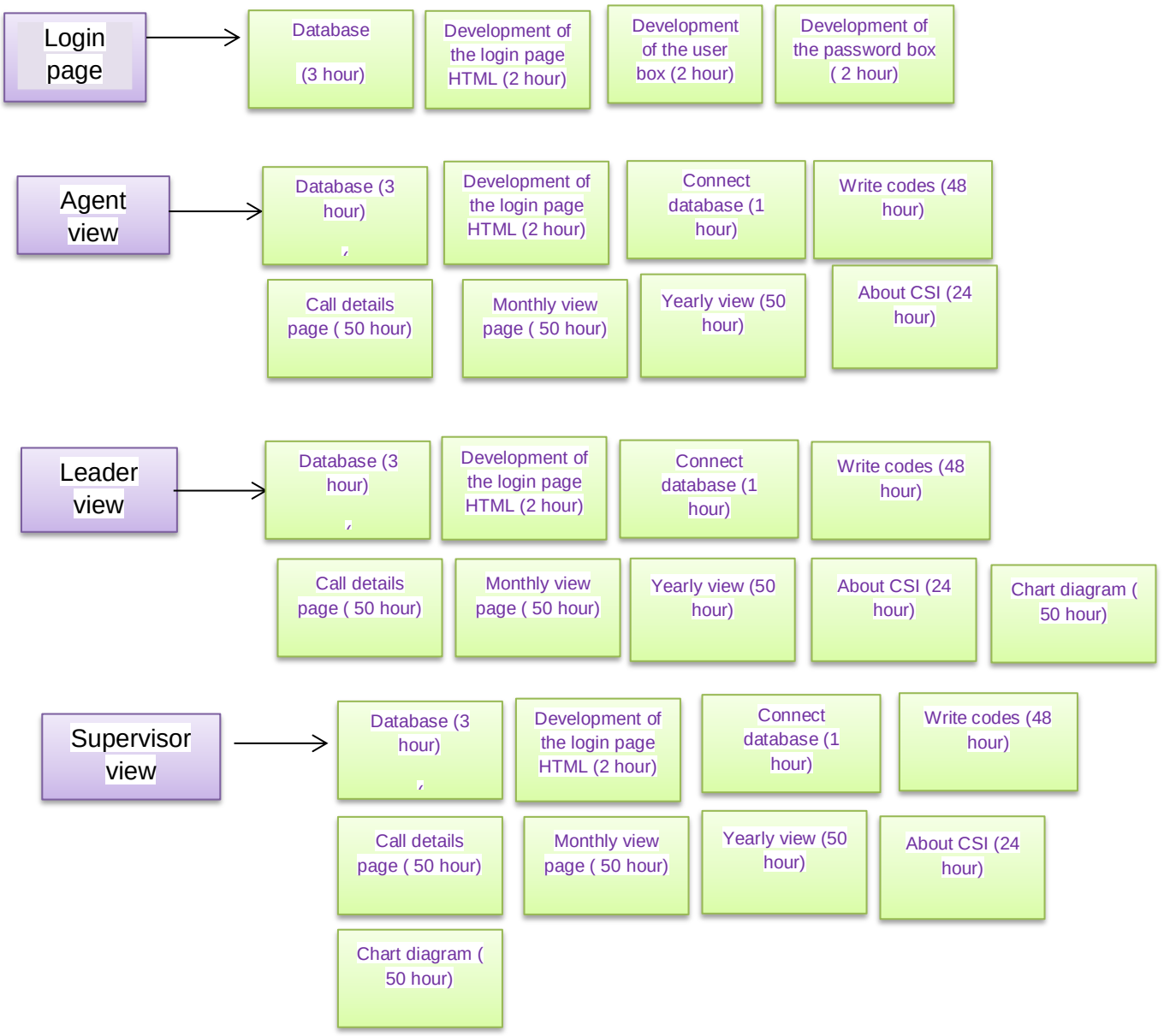
•Reprioritized at the start of each sprint

In our project the product backlog:

Product Backlog	Priority	Estimate (weeks)
Database	1	2
Login Page	2	3
Agent View	3	3
Leader View	4	4
Supervisor View	5	4

B) Sprint backlog

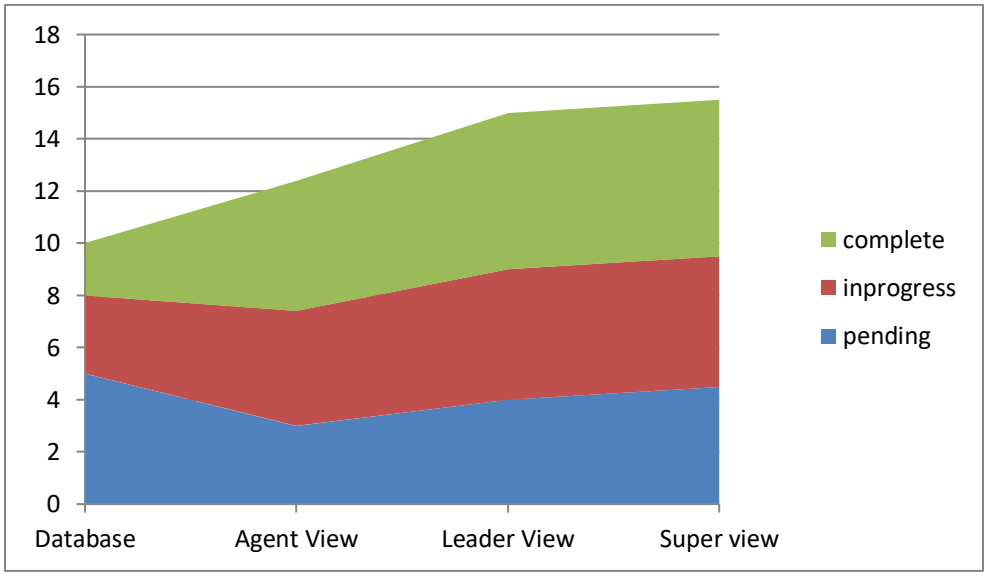
Product Backlog **Sprint Backlog**



C) Sprint burn-down chart

The sprint burn-down chart is a public displayed chart showing remaining work in the sprint backlog Updated every day; it gives a simple view of the sprint progress. It also provides quick visualizations for reference. The horizontal axis of the sprint burn-down chart shows the days in a sprint, while the vertical axis shows the amount of work remaining each day (typically representing estimate of hours of work remaining).

During sprint planning the ideal burned own chart is plotted. Then, during the sprint, each member picks up tasks from the sprint backlog and works on them. At the end of the day, they update the remaining hours for tasks to be completed. In such a way, the actual burn down chart is updated day by day



We use xp under supervision of scrum

3.3 DEFINITION OF EXTREME PROGRAMMING:

Extreme Programming (XP) is an agile software development framework that aims to produce higher quality software, and higher quality of life for the development team. XP is the most specific of the agile frameworks regarding appropriate engineering practices for software development.

Extreme programming (XP) is a software development methodology which is intended to improve software quality and responsiveness to changing customer requirements. As a type of agile software development it advocates frequent "releases" in short development cycles, which is intended to improve productivity and introduce checkpoints at which new customer requirements can be adopted.

3.3.1 Practices:

The core of XP is the interconnected set of software development practices listed below. While it is possible to do these practices in isolation, many teams have found some practices reinforce the others and should be done in conjunction to fully eliminate the risks you often face in software development.
The XP Practices have changed a bit since they were initially introduced. The original twelve practices are listed below:

1. The Planning Game
2. Small Releases
3. Metaphor
4. Simple Design
5. Testing
6. Refactoring
7. Pair Programming
8. Collective Ownership
9. Continuous Integration
10. Sustainable pace
11. On-site Customer
12. Coding Standard

1. Pair Programming:

- Pair Programming means all production software is developed by two people sitting at the same machine.
- The idea behind this practice is that two brains and four eyes are better than one brain and two eyes.
- Pair programming is an agile software development technique in which two programmers work together at one workstation. One, the driver, writes code while the other, the observer or navigator,[1] reviews each line of code as it is typed in. The two programmers switch roles frequently.
- Teams that have used pair programming have found that it improves quality and does not actually take twice as long because they are able to work through problems quicker and they stay more focused on the task at hand, thereby creating less code to accomplish the same thing.
- In an online survey of pair programmers, 96% of them stated that they enjoyed their work more than when they programmed alone and 95% said that they were more confident in their solutions when they pair programmed
- Remote pair programming, also known as virtual pair programming or distributed pair programming, is pair programming in which the two programmers are in different locations, working via a collaborative real-time editor, shared desktop, or a remote pair programming IDE plugin

Mohammed	**PHP developer**
Marwa	PHP developer

2. Continuous Integration:

- Continuous Integration is a practice where code changes are immediately tested when they are added to a larger code base.
- The benefit of this practice is you can catch and fix integration issues sooner.
- Most teams dread the code integration step because of the inherent discovery of conflicts and issues that result.
- Most teams take the approach "If it hurts, avoid it as long as possible".
- Practitioners of XP suggest "if it hurts, do it more often".
- The reasoning behind that approach is that if you experience problems every time you integrate code, and it takes a while to find where the problems are, perhaps you should integrate more often so that if there are problems, they are much easier to find because there are fewer changes incorporated into the build.

Marwa	**Tester**

Database	**Written in 6 versions**
PHP codes	Written in 12 versions

3. Test -First Programming:

- In XP, tests are prepared for a required feature or functionality before its corresponding source code is written.
- Instead of following the normal path of: Develop code -> write tests -> run tests
- The practice of Test-First Programming follows the path of: Write failing automated test -> Run failing test -> develop code to make test pass -> run test -> repeat
- Write failing automated test: In test-driven development, each new feature begins with writing a test. Write a test that defines a function or improvements of a function, which should be very succinct. To write a test, the developer must clearly understand the feature's specification and requirements. The developer can accomplish this through use cases and stories to cover the requirements and exception conditions
- Run failing test: This validates that the test harness is working correctly, shows that the new test does not pass without requiring new code because the required behavior already exists, and it rules out the possibility that the new test is flawed and will always pass. The new test should fail for the expected reason. This step increases the developer's confidence in the new test.
- Write the code: The next step is to write some code that causes the test to pass. The new code written at this stage is not perfect and may, for example, pass the test in an inelegant way.

- Run test: If all test cases now pass, the programmer can be confident that the new code meets the test requirements, and does not break or degrade any existing features. If they do not, the new code must be adjusted until they do.
- Repeat: Starting with another new test, the cycle is then repeated to push forward the functionality. The size of the steps should always be small, with as few as 1 to 10 edits between each test run.

- As with Continuous Integration, Test-First Programming reduces the feedback cycle for developers to identify and resolve issues, thereby decreasing the number of bugs that get introduced into production.

- We write list to know which code test first

4. System Metaphor

- This includes the standardization of all naming conventions so that its purpose and function is easily deciphered.
- The system metaphor is a story that everyone - customers, programmers, and managers - can tell about how the system works. It's a naming concept for classes and methods that should make it easy for a team member to guess the functionality of a particular class/method, from its name only
- In our team we practiced this in variable names we arranged our project on naming objects in a professional way to avoid complexity through using our product.

NPS	Quota
Promoter	Very unsatisfied
Passive	Unsatisfied
Detractor	Natural
TTB	Satisfied
BB	Very satisfied
Overall satisfaction	IVR
Agent satisfaction	

5. Planning Game

- This is the planning part of the project, referred to as the “Planning Game”.
- It includes planning for the next iteration and release, in consultation with the user/client, as well as an internal planning of the teams, as to the tasks they will work on.
- The client and development team work together in planning the product.
- This initials a larger planning session at project initiation and smaller sessions at each iteration.
- Planning happens often and is done with an expectation of change. How can you start development with a rough plan?

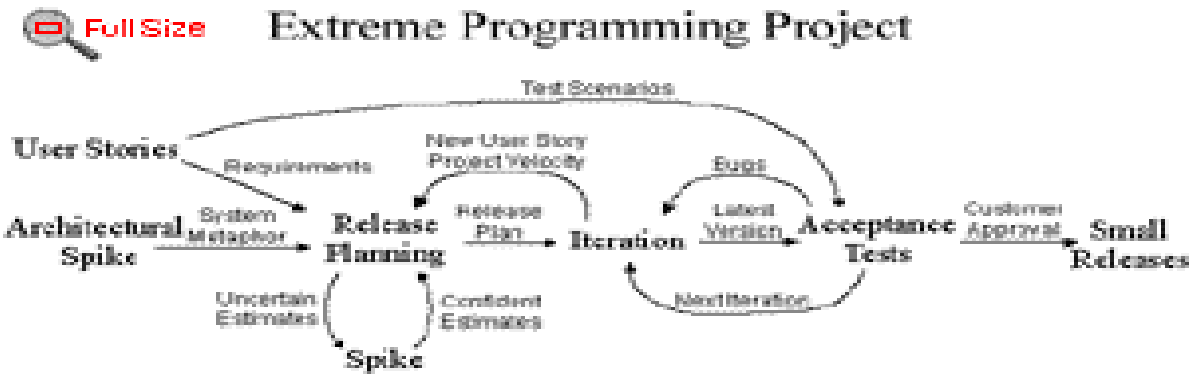
1.Introduction	2.Documentation	3.Database
4.Login page	5.Agent view	6.Leader view

6. Sustainable pace

- A key concept for better work-life balance with developers on an Extreme Programming project is the notion that nobody should be required to work in excess of the normal scheduled work week.
- Overtime is frowned upon, as is the concept of "crunch time", where developers are expected to work extreme hours near the end of a release to get everything completed on time.

7. Small Releases

The release planning meeting is used to plan small units of functionality that make good business sense and can be released into the customer's environment early in the project. This is critical to getting valuable feedback in time to have an impact on the system's development. The longer you wait to introduce an important feature to the system's users the less time you will have to fix it.



Agent &leader& supervisor view	Database release 1
Coding release 1 and 2 of home page	Database release 2
Coding release 1 connect database	Database release 3
Coding release 1, 2, 3, 4, 5, 6, 7 of project	Imagination view of design
	Database release 4
	Database release 5 and 6

8. Simple Design

These four famous rules are:

1. Passes all the tests.
2. Express every idea we need to express.
3. Contains no duplication.
4. Minimized the number of classes, methods and other moving parts.

Programmers should take a "simple is best" approach to software design. Whenever a new piece of code is written, the author should ask themselves 'is there a simpler way to introduce the same functionality?'. If the answer is yes, the simpler course should be chosen. Refactoring should also be used, to make complex code simpler.

9. On-site Customer

One of the few requirements of extreme programming (XP) is to have the customer available. Not only to help the development team, but to be a part of it as well. All phases of an XP project require communication with the customer, preferably face to face, on site. It's best to simply assign one or more customers to the development team. Beware though, this seems like a long time to keep the customer hanging and the customer's department is liable to try passing off a trainee as an expert. You need the expert.

User Stories are written by the customer, with developers helping, to allow time estimates, and assign priority. The customers help make sure most of the system's desired functionality is covered by stories.

Mohamed stay at company with responsible team to cover all project requirements

10. Coding Standard

Coding standard is an agreed upon set of rules that the entire development team agree to adhere to throughout the project. The standard specifies a consistent style and format for source code, within the chosen programming language, as well as various programming constructs and patterns that should be avoided in order to reduce the probability of defects The coding standard may be a standard conventions specified by the language vendor (e.g. The Code Conventions for the Java Programming Language, recommended by Sun), or custom defined by the development team.

In our project we agreed with write comments and the code is clear and every one of the team can understand it.

11. Collective code ownership

Collective code ownership (also known as "team code ownership" and "shared code") means that everyone is responsible for all the code; therefore, everybody is allowed to change any part of the code. Collective code ownership is not only an organizational policy but also a feeling. "Developers feel team code ownership more when they understand the system context, have contributed to the code in question, perceive code quality as high, believe the product will satisfy the user needs, and perceive high team cohesion." Pair programming, especially overlapping pair rotation, contributes to this practice: by working in different pairs, programmers better understand the system context and contribute to more areas of the code base.

Collective code ownership may accelerate development because a developer who spots an error can fix it immediately, which can reduce bugs overall. However, programmers may also introduce bugs when changing code that they do not understand well. Sufficiently well-defined unit tests should mitigate

this problem: if unforeseen dependencies create errors, then when unit tests are run, they will show failures.

12. Refactoring

Refactoring is the technique of improving code without changing functionality. Refactoring is an ongoing process of simplification that applies to code, design, testing, and XP itself. Rather than just saying "you should keep trying to make your code better," you will need a repeatable process to guide refactoring. In some ways, you've always done some form of refactoring as you review your code and make changes and improvements.

4 CHAPTER FOUR

UML: UNIFIED MODELING LANGUAGE

UML Project Diagrams

Use case Diagrams

Describe the functional behavior of the system as seen by the user.

Class diagrams
Describe the static structure of the system: Objects, Attributes, and Associations

Sequence diagrams
Describe the dynamic behavior between actors and the system and between objects of the system

4.1 Use Case Diagram

Describe the functional behavior of the system as seen by the user

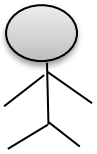
Use case diagrams represent the functionality of the system from user's point of view.

In many instance, a function requirement maps directly to use case

Use case consists of

- Unique name.
- Participating actors.
- Entry conditions.
- Flow of events.
- Exit condition.
- Special requirements.

Actor:



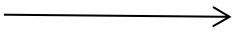
- Represent roles, that is, a type of user of the system.
- Actor is user of system; actor can be person, device and other system.

Use case:

Represent a sequence of interaction for a type of functionality. The use case model is the set of all use case.it is a complete description of the functionality of the system and its environment.

Arrow

Indicate the relationship between actor and use case.



Extends

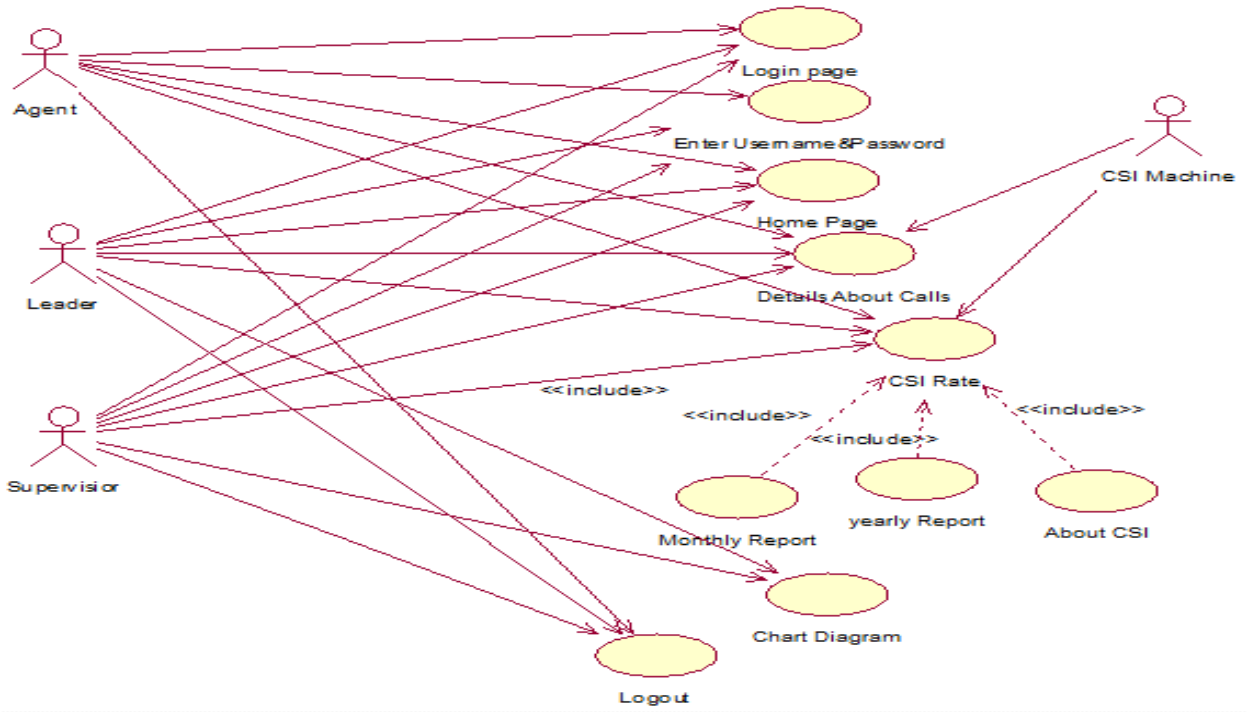
The <<extends>> relationship adds increment behavior to use case.

4.1.1 Use case diagram:

- Name: CSI
- Participating actor: Agent, Leader, Supervisor, CSI Machine
- Event Flow:

1. Agent, Leader and supervisor open login page.
2. Agent, Leader and supervisor enter Username and Password.
3. Agent, Leader and supervisor show Home page and Call details
4. Agent, Leader and supervisor show CSI rate (Monthly report, Yearly report, About CSI).
5. Leader and supervisor can show Chart Diagram.
6. Agent, Leader and supervisor made logout.

- Entry condition: Enter Username & Password
- Exit condition: Logout

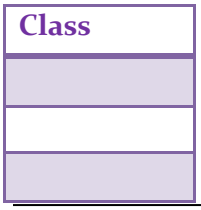


4.2 Class Diagrams

Represent the structure of the system.

Describe the static structure of the system: object, attributes, and associations.

Class:



A Class describe group of object with same properties (attributes) behavior (operation).

Association

An association is description of group of links with common structure.

Association may be:

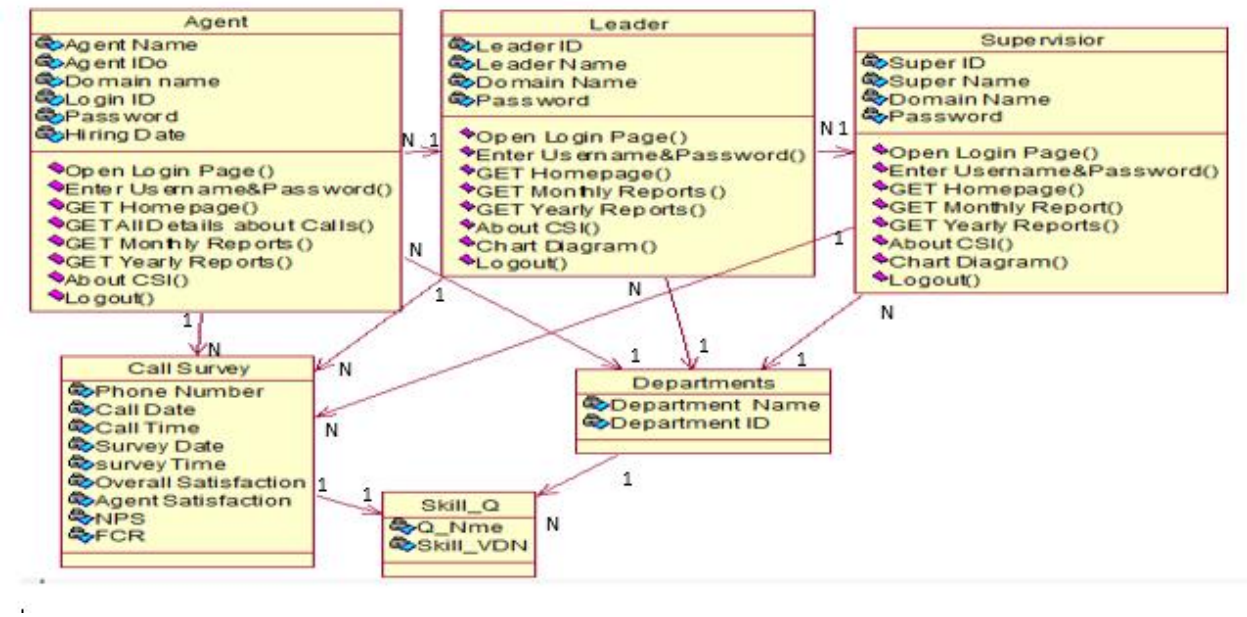
- ✓ 1 _to _1 association.
- ✓ 1 _to_ many association.
- ✓ Many _to_ many association.

Class Consists of:

- A class represents a concept.
- A class encapsulates state (attributes) and behavior (operations).
- Each attributes has type.
- Each operation has a signature.

The class name is the only mandatory information

CSI Classes and Relations



4.3 Sequence Diagram

Sequence diagrams represent the behavior as interactions.
Used during requirements analysis:

- To refine use case descriptions.
- To find additional objects.

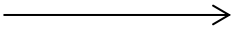
Object

In sequence diagram each actor, object or system is represented by vertical line called object life line.

Activation

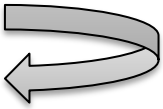
Describe that the system is in process by means system in use.

Message



Return message:

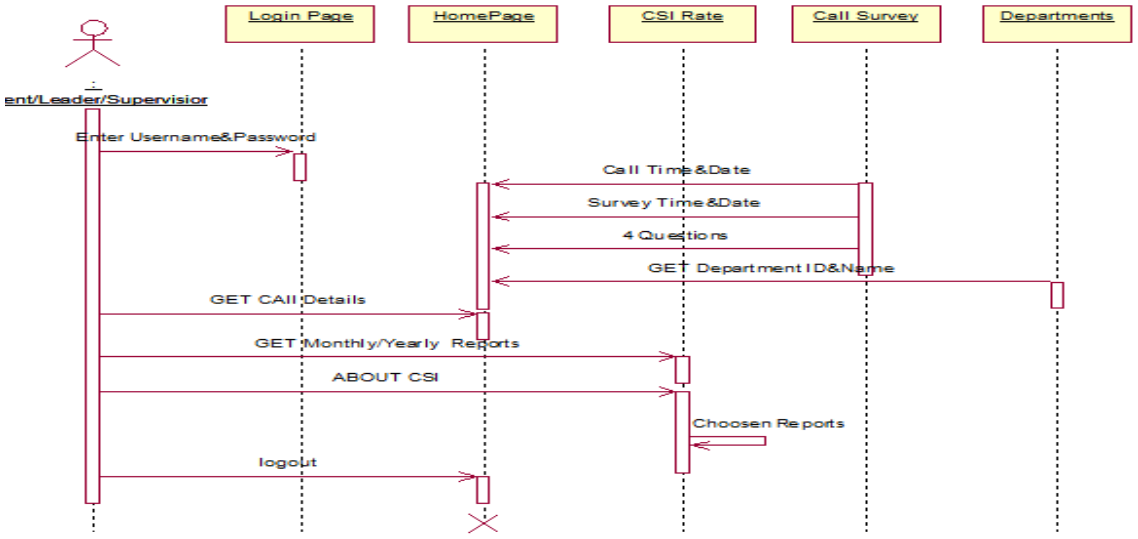
Message extend from the life line of one object to the life line of another except in the case of message from an object to itself in which case the message begins and end on the same life line.



Sequence diagram consists of:

- Classes are represented by columns.
- Messages are represented by arrows.
- Activations are represented by narrow rectangles.
- Life lines are represented by dashed lines.

UML Sequence diagram



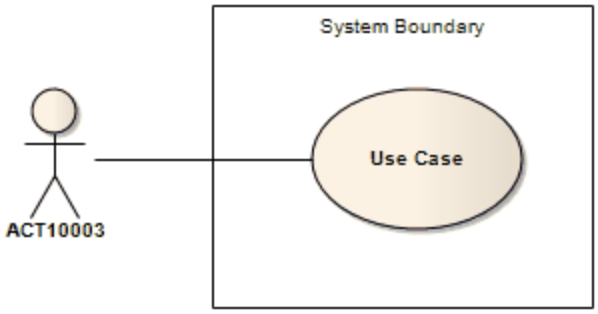
4.4 System Boundary

A System Boundary element is a non-UML element used to define conceptual boundaries. You can use System Boundaries to help group logically related elements (from a visual perspective, not as part of the UML model).

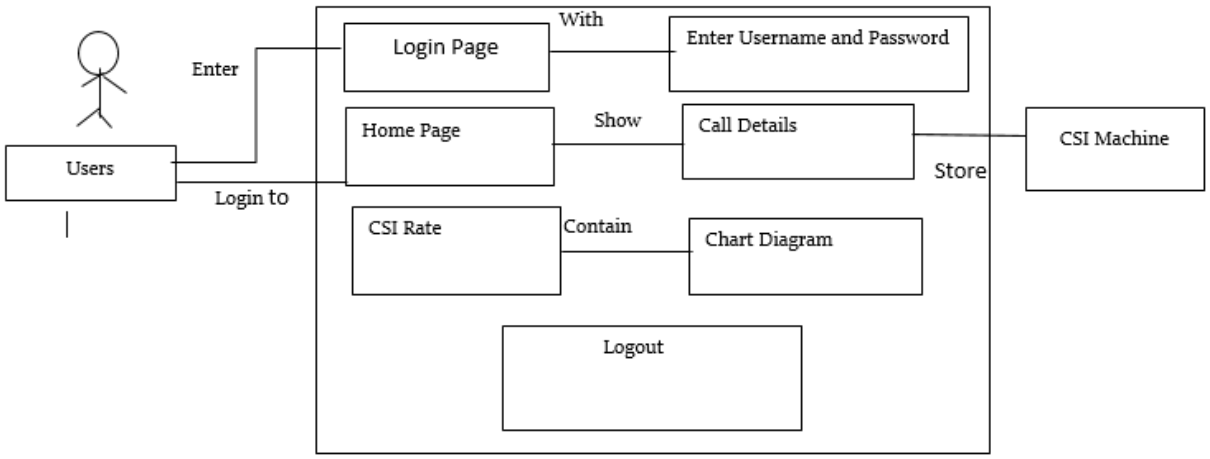
In the UML Superstructure Specification, v2.1.1, System Boundaries are described in the sections on Use Cases, because the System Boundary is often used to indicate the application of a Use Case to another entity. In this context, the System Boundary:

- Encloses the Use Case, and
- Is associated with a classifier such as a Class, Component or Subsystem (Actor) through the 'Select <Item>' dialog

- By associating the System Boundary - and not the Use Case - with the classifier, the classifier is linked to the Use Case as a user, but not as an owner.



- You can also define a Use Case as the classifier of a System Boundary element, to link the elements enclosed in the System Boundary (such as parts of an Activity diagram) to their representation in a logical Use Case.
- The element properties for a System Boundary element comprise the name, the border style, and the number of horizontal or vertical swim lanes. You can also change the overall shape of the System Boundary.
- **A System Boundary element can be marked as 'Selectable', using the element's context menu. When the element is not selectable, you can click on the other elements within the System Boundary space without activating or selecting the System Boundary itself**



5 CHAPTER FIVE

DATABASE

ENTITY RELATION DIAGRAM

5.1 Database Introduction

A collection of related data.

5.2 Database Queries

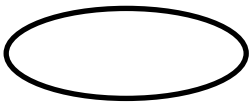
A query is a question or a request.

We can query a database for specific information and have a record set returned.

5.3 Entities:

Entities are specific objects or things in the mini-world that are represented in the database.

5.4 Attributes:



Are properties used to describe an entity.

5.5 key attributes:

A key attribute is the unique, distinguishing characteristic of the entity.

5.6 Relationships:

Relationships illustrate how two entities share information in the database structure.
, connect the two entities, and then drop the relationship notation on the line.

5.7 Cardinality:

Cardinality specifies how many instances of an entity relate to one instance of another entity. Ordinarily is also closely linked to cardinality. While cardinality specifies the occurrences of a relationship, ordinarily describes the relationship as either mandatory or optional. In other words, cardinality specifies the maximum number of relationships and ordinarily specifies the absolute minimum number of relationships.

- One-to-one (1:1)
- One-to-many (1:N) or Many-to-one (N:1)

- Many-to-many (M:N)

5.8 THE CSI WEBSITE (ER)

5.9 Data Requirements:

- Agent described by Agent name, hiring date, Password, Domain name (unique), Agent ID (unique) and Login ID (unique).
- Agent leaded by Leader which described by Leader ID (unique),Leader name, Domain name (unique) and password
- Leader managed by supervisor which described by Sup ID (unique), Sup name, Domain name (unique) and password.
- Agent , Leader and super has call survey which described by phone number, call date, call time, survey date, survey time , overall satisfaction , agent satisfaction , NPS and FCR.
- Agent, Leader and super works on department which described by department name (unique), department ID (unique).
- Call survey on skill _Q which described by Q_ name (unique) and skill _VDN.
- There is relation between department and skill _Q.

6 CHAPTER SIX

QUALITY ASSURNCE

6.1 REVIEW CHECK LIST

6.1.1 REQUIREMENT ANALYSIS

- Have the software and the hardware environments been specified?
- Is the CSI reduce the consumption of human resources?
- Is the CSI provide accurate numbers?
- Is the CSI send daily report with the result?
- Is the CSI solve the issue of duplication?
- Is the CSI solve the issue of Mail Quota?
- Is the CSI solve the issue of Variance between the same records for different report?
- Is the CSI reduce of cost?
- Is the CSI solve the issue of Delay in time of calculate the equation?
- Is the CSI explain how to calculate the equation?
- Is the CSI solve the issue of Intolerance against one (integrity)?
- Is the CSI provide a dashboard for most important report?
- Is the CSI provide Monthly and yearly views?
- Is the CSI help teams to know who is the man of the Month according to his CSI's reports?
- Is the CSI provide a several of user's privilege?

6.1.2 PLANNING ANALYSIS

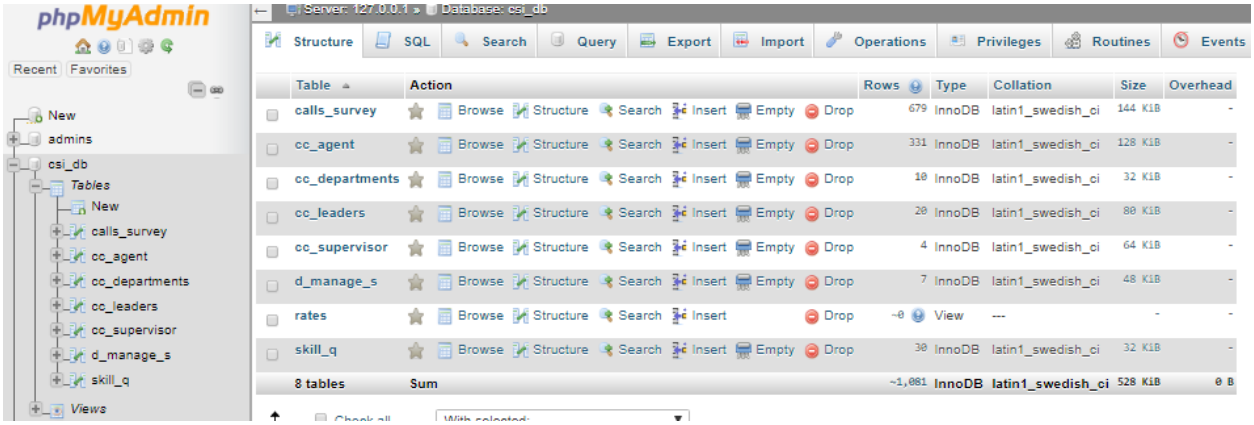
- Are tasks properly defined and sequenced?
- Are pre-established budgets and deadlines realistic?
- Is the goal of CSI clear enough?
- Is the tasks broken to sub-tasks?

6.1.3 MAINTENANCE ANALYSIS

- Are the codes are clear and easy to understand?
- Are there any modifications in the future?
- Are all design formats specified?
- Are all report formats specified?

6.1.4 CAPACITY REQUIREMENT:

- The CSI should be able to support Millions of calls.
- Forecasting future capacity need
- Database volume
- password =8 char at least



6.1.5 ACCURACY REQUIREMENT

- The name should be less than 250 char.
- Reports should be accrue and available per monthly.
- The Agent must be work in one department, has one leader and one supervisor (referential integrity).
- The Agent must know the formula to trust the system output.

6.1.6 USABILITY REQUIREMENT

- The supervisor will know the CSI records for Leaders and Agent easily.
- Every user will know his Monthly and Yearly reports.
- Every user will enter his number and the CSI system Calculate it easily.

6.1.7 Security requirements:

- Each users has his specific username and password.
- CSI has local access
- We used hashed password encryption
- The agent cannot see the result of another agent

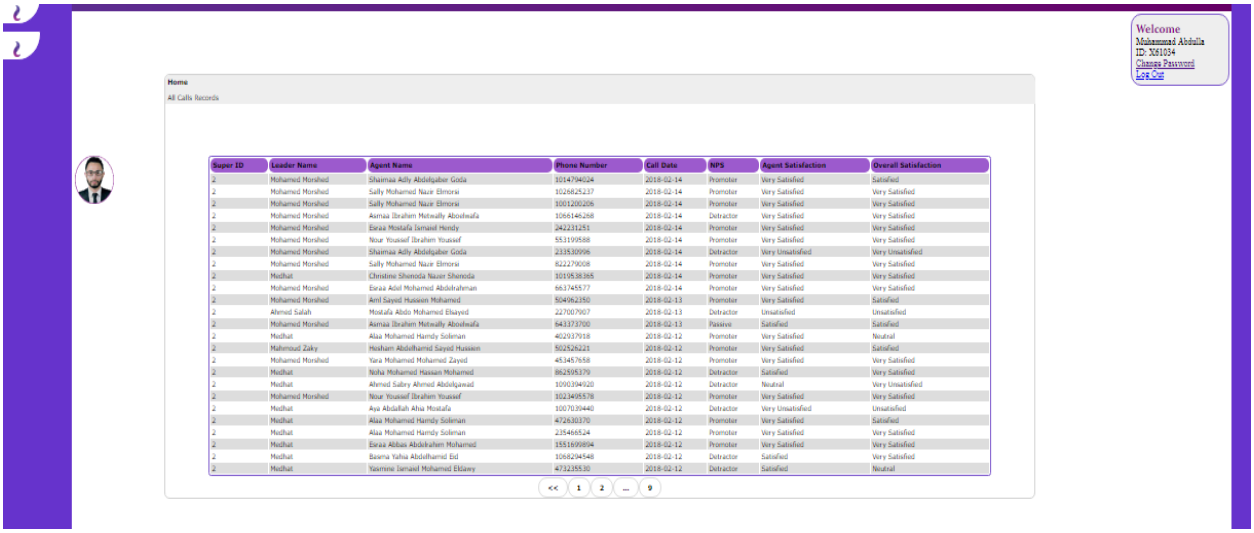
6.2 MCCALL FACTOR (QUALITY GRID)

Quality factors for ticketing system	Very high	high	moderate	Low	Very low
Operation					
Integration			√		
Correctness	√				
Reliability	√				
Efficiency		√			
Revision					
Maintainability		√			
Testability	√				
Flexibility	√				
Transition					
Portability	√				
Reusability			√		
Instability					

7 CHAPTER SEVEN

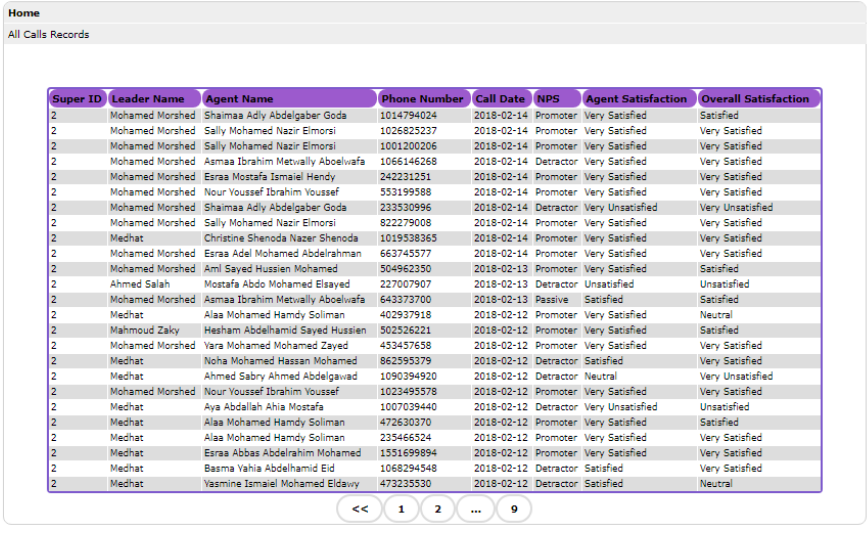
PROPOSED SYSTEM

7.1 DESIGN SPECIFICATION



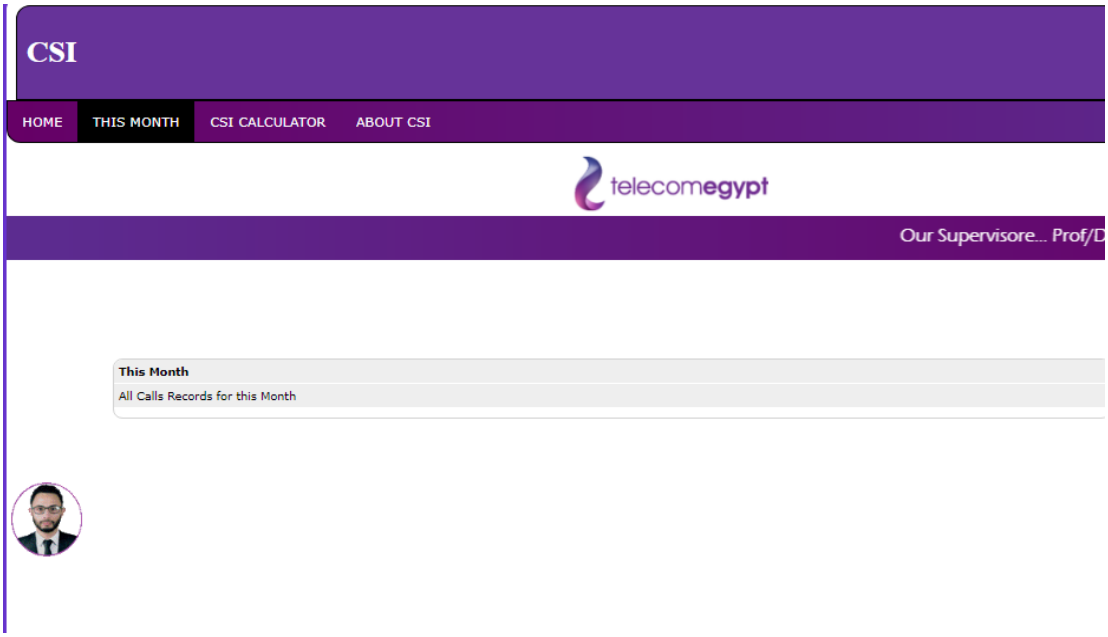
7.2 CSI Record Home page

It contain all CSI records by details without performance like Super ID, Leader Name, Agent Name , Phone number, Call date, NPS, Overall satisfaction, Agent Satisfaction



7.3 This Month

It contain all records about this month without performance just records



7.4 CSI Calculator

Agent enter his numbers of Calls, promoter ,detractor, TTB Overall Satisfaction, BB Overall Satisfaction, TTB Agent Satisfaction and BB Agent Satisfaction then the equation calculated automatically and show to him his performance

CSI Calculation

Count Of Calls : 5

NPS Calculation

Count Of Promoters : 3

Count Of Detractors : 2

Overall Satisfaction Calculation

To Calculate TTB

Count of satisfied calls : 1

Count of very satisfied calls : 2

To Calculate BB

Count of very unsatisfied calls : 1

Agent Satisfaction Calculation

To Calculate TTB

Count of satisfied calls : 1

Count of very satisfied calls : 1

To Calculate BB

Count of very unsatisfied calls : 2

Begin to Calculate

Begin to Calculate

NPS	Over all Satisfaction		Agent Satisfaction		Count of Calls
Net Promoter Score	TTB	BB	TTB	BB	
0.2%	0.6%	0.2%	0.4%	0.4%	5

7.5 About CSI

It help user to well understand the CSI through the knowledge that he will know from this link he will know what's CSI, the survey Question, what's NPS mean and how to calculate CSI and our team provided an example to explain how to calculate this equation.

About CSI

Customer Satisfaction Indicator

1.1 What is CSI:

The Customer Satisfaction Indicator provides functionality that allows you to quickly evaluate a Customer's satisfaction with their service. After a Customer completes the Survey, their score is stored on their Customer record

The CSI Survey Question is:

Q1. NPS, How Likely Are You To Recommend company To A Friend Or Colleague

Q2. Overall Satisfaction, How would You Evaluate your overall satisfaction based on your Last call with company Contact Center?

Q3. Agent Satisfaction: How Satisfied Are You With The Representative You Spoke To?

The above Rating Score from 0 to 10 by which (0) means (not at all satisfied) and (10) means (extremely satisfied)

Q4. FCR, Did We Resolve Your Issue Or Answer Your Inquiry?

The above Rating Score from 1 to 4 by which

1. Yes, in the first time I contacted company
2. Yes but I had to contact company more than once
3. Still waiting for a follow-up call
4. Not solved

1.2 What is NPS…?

Net Promoter Score is a customer loyalty metric that gauges how willing a customer is to recommend a product or service

The concept of NPS is based on the customers rating of their willingness to recommend your organization, on a scale of 0 to 10:

- Any respondent giving you a 9 or a 10 is considered a Promoter,
- While anyone giving you a 7 or an 8 is considered a Passive.
- On the other hand, any score 6 or below is considered a Detractor.

1.3 How to calculate the CSI…?

We can use the blew formulas to calculate our CSI performance around the month

Attribute	Formula
TTB	= (Count of Satisfaied Calls + Count of Very Satisfaied Calls) / Count of all Calls Records around the Month
BB	= Count fo very Unstatisfaied Calls / Count of all Calls Records around the Month
% Promoter	= Count of Promoter Calls / Count of all Calls Records around the Month
% Passive	= Count of Passive Calls / Count of all Calls Records around the Month
% Detractor	= Count of Detractor Calls / Count of all Calls Records around the Month
Net Promoter Score	= % Promoter - % Detractor

1.4 Example

An example how we can calculate our CSI we assume we have 4 records for this month as the below as its taken from IVR

Super ID	Leader Name	Agent Name	Phone Number	Call Date	NPS	Agent Satisfaction	Overall Satisfaction
2	Mostafa.Ameen	Mohamed.Alnahtta	01141921498	15-6-2018	9	5	5
2	Mostafa.Ameen	Mohamed.Alnahtta	0228409372	18-6-2018	10	3	3
2	Mostafa.Ameen	Mohamed.Alnahtta	0452694019	1-6-2018	10	3	4
2	Mostafa.Ameen	Mohamed.Alnahtta	01227951418	28-6-2018	3	5	5

Converting the number as we consider it

Super ID	Leader Name	Agent Name	Phone Number	Call Date	NPS	Agent Satisfaction	Overall Satisfaction
2	Mostafa.Ameen	Mohamed.Alnahtta	01141921498	15-6-2018	Promoter	Very Satisfaied	Very Satisfaied
2	Mostafa.Ameen	Mohamed.Alnahtta	0228409372	18-6-2018	Promoter	neutral	neutral
2	Mostafa.Ameen	Mohamed.Alnahtta	0452694019	1-6-2018	Promoter	neutral	Satisfaied
2	Mostafa.Ameen	Mohamed.Alnahtta	01227951418	28-6-2018	Detractor	Very Satisfaied	Very Satisfaied

After we implement the Forumla for the above example

After we implement the Forumla for the above example

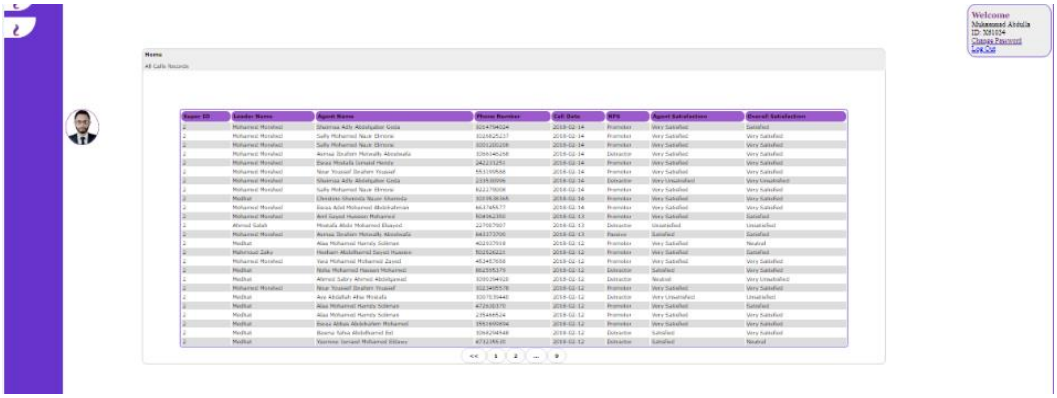
Attribute	Formula
TTB Over all Satisfaction	= ((1+ 2) / 4)*100
BB Over all Satisfaction	= (0 / 4)*100
TTB Agent Satisfaction	= ((0 + 2) / 4)*100
BB Agent Satisfaction	= (0 / 4)*100
% Promoter	= (3 / 4)*100
% Passive	= (0 / 4)*100
% Detractor	= (1 / 4)*100
Net Promoter Score	= 75 - 25

The performance will be as the blew in the End

Name	NPS	Over all Satisfaction		Agent Satisfaction		Count of Calls
Score	Net Promoter Score	TTB	BB	TTB	BB	
Mohamed.AlNahtta	50%	75%	0.00%	50%	0.00%	4

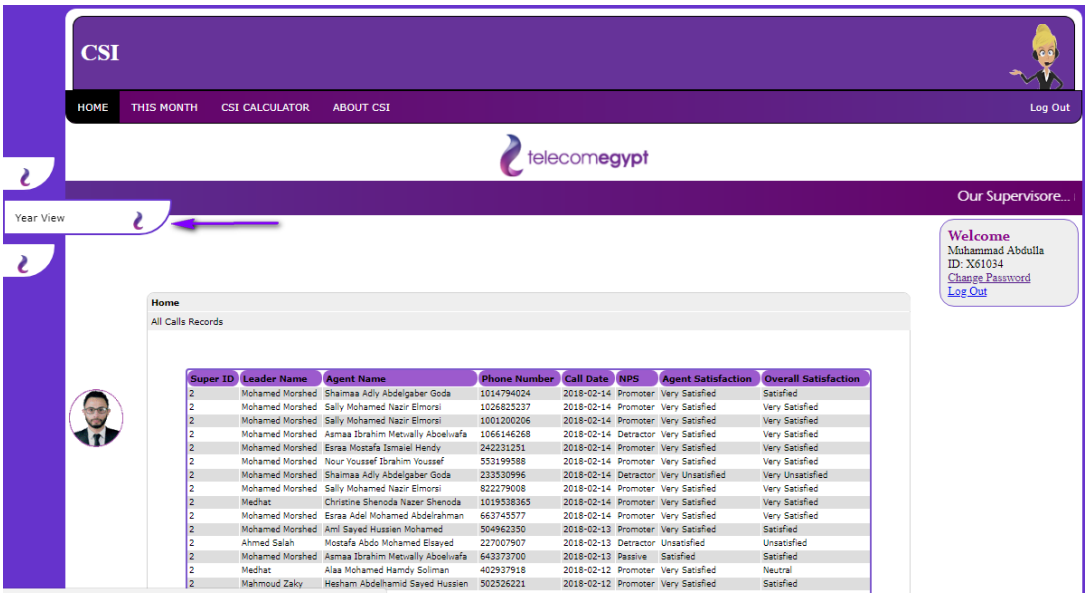
7.6 Month view

It contain the performance of the month



7.7 Year view

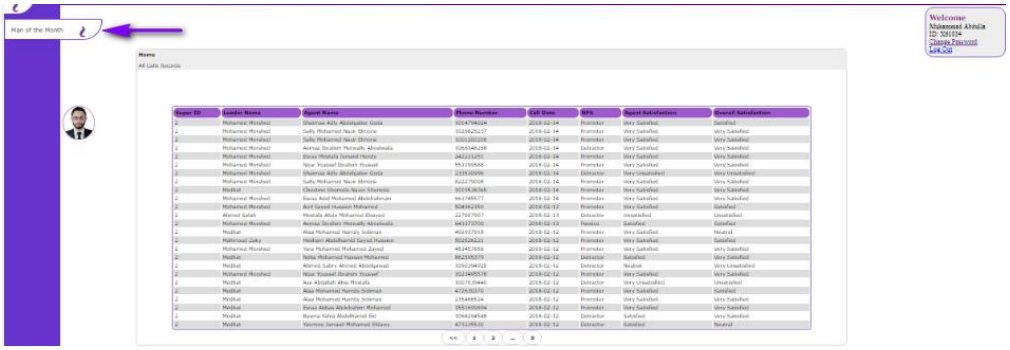
It contain the performance by year



Super ID	Leader Name	Agent Name	Phone Number	Call Date	NPS	Agent Satisfaction	Overall Satisfaction
2	Mohamed Morshed	Shaimaa Adly Abdelgaber Goda	1014794024	2018-02-14	Promoter	Very Satisfied	Satisfied
2	Mohamed Morshed	Sally Mohamed Nazir Elmorsi	1026825237	2018-02-14	Promoter	Very Satisfied	Very Satisfied
2	Mohamed Morshed	Sally Mohamed Nazir Elmorsi	1001200206	2018-02-14	Promoter	Very Satisfied	Very Satisfied
2	Mohamed Morshed	Asmaa Ibrahim Metwally Aboelwafa	1066146268	2018-02-14	Detractor	Very Satisfied	Very Satisfied
2	Mohamed Morshed	Esraa Mostafa Ismaiel Hendy	242231251	2018-02-14	Promoter	Very Satisfied	Very Satisfied
2	Mohamed Morshed	Nour Youssef Ibrahim Youssef	553199588	2018-02-14	Promoter	Very Satisfied	Very Satisfied
2	Mohamed Morshed	Shaimaa Adly Abdelgaber Goda	233530996	2018-02-14	Detractor	Very Unsatisfied	Very Unsatisfied
2	Mohamed Morshed	Sally Mohamed Nazir Elmorsi	822279008	2018-02-14	Promoter	Very Satisfied	Very Satisfied
2	Medhat	Christine Shenoda Nazer Shenoda	1019538365	2018-02-14	Promoter	Very Satisfied	Very Satisfied
2	Mohamed Morshed	Esraa Adel Mohamed Abdelrahman	663745577	2018-02-14	Promoter	Very Satisfied	Very Satisfied
2	Mohamed Morshed	Aml Sayed Husien Mohamed	504962350	2018-02-13	Promoter	Very Satisfied	Satisfied
2	Ahmed Salah	Mostafa Abdo Mohamed Elsayed	227007907	2018-02-13	Detractor	Unsatisfied	Unsatisfied
2	Mohamed Morshed	Asmaa Ibrahim Metwally Aboelwafa	643373700	2018-02-13	Passive	Satisfied	Satisfied
2	Medhat	Alaa Mohamed Hamdy Soliman	402937918	2018-02-12	Promoter	Very Satisfied	Neutral
2	Mahmoud Zaky	Hesham Abdelhamid Sayed Hussien	502526221	2018-02-12	Promoter	Very Satisfied	Satisfied

7.8 Man of the Month

It helps to know that the best one get high score of CSI by month



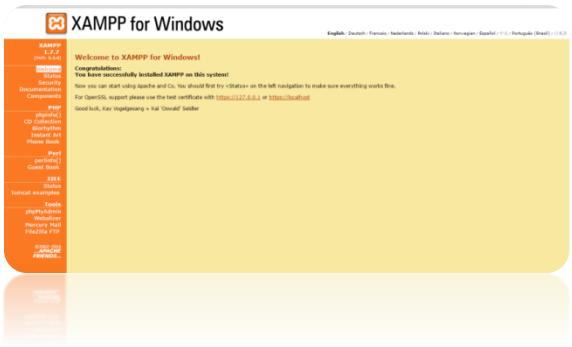
8 CHAPTER EIGHT

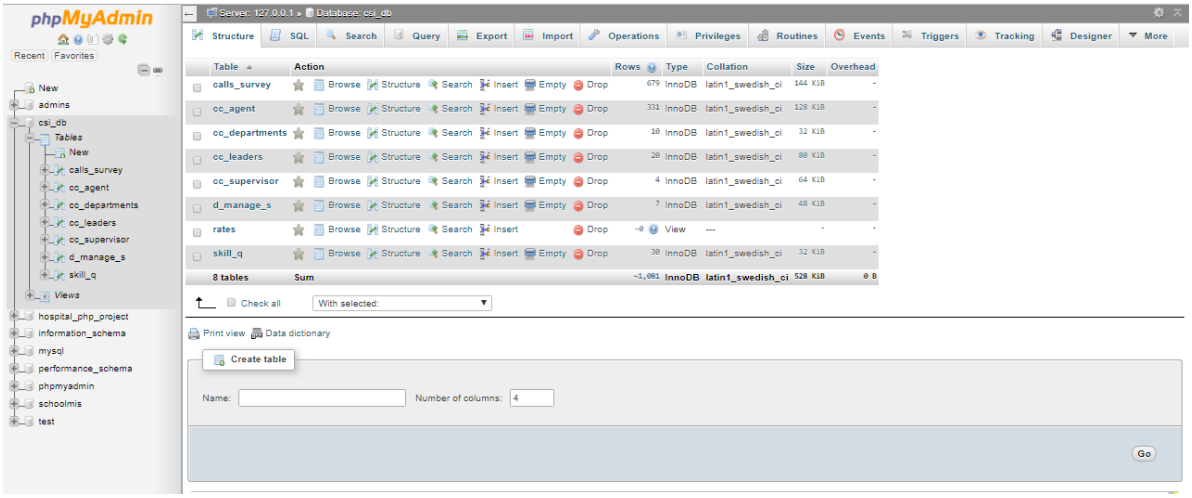
DATABASE AND WEB SERVICE

8.1 WEB SERVICES

Step 1. I already install XAMPP in my computer to use it as a server and localhost.

Step 2. I create database at http://localhost/phpmyadmin





8.2 WEB DEVELOP PHP MYSQL

- PHP is a server scripting language and a powerful tool for making dynamic and interactive Web pages
- PHP scripts are executed on the server.
- PHP is an acronym for "PHP: Hypertext Preprocessor".

- PHP is free to download and use.
- PHP files have extension ". php".
- PHP runs on various platforms (Windows, Linux, Mac, OS X, etc.).
- PHP is compatible with almost all servers used today (Apache, Wamp, Xamp, etc.).

Use:

PHP help our project to support service to it as fetching data from database and reduce repeating in design.

8.2.1 OPEN A CONNECTION TO MYSQL

Before we can access data in the MySQL database, we need to be able to connect to the server.

```
<?php

    // Declare and assign the varibales
    $servername = "localhost";
    $username = "root";
    $password = "";
    $dbname = "csi_db";

    // Create connection
    $connection=Mysqli_connect($servername, $username, $password, $dbname);

    // Checking the connection
    if (mysqli_connect_error()){

            echo "<h1>Connection Failed</h1>";
                }
```

8.2.2 PHP SELECT DATA FROM MYSQL

```
    // retrive the selected record from the database
                $sql = "SELECT Super_ID, Leader_Name, Agent_name, Phone_Number,
    Call_Date, NPS, Agent_Satisfaction, Overall_Satisfaction
                FROM rates WHERE Super_ID=2 order by Call_Date DESC Limit
    ".$limit_start_num.",".$rec_limit ;
                            $result = mysqli_query($connection, $sql);
```

9 CHAPTER NINE

IMPLEMENTATION

9.1 Home. CSS

```
body {
    overflow-y:scroll;
    text-align:center;
    background-color:#6633CC;
}



.header
{
    margin:0px 10px 0px 10px;
    /* Na7tta Rounded corner*/
    border:1px solid black;
    -moz-border-radius:15 15 0 0;
    border-radius:15px 15px 0px 0px;
    background-color:#663399;
    padding:10px;
    color: white;

}

.scenario_name
{
```

```
    /* N# Rounded corner*/
/*  border-radius:10px 10px 10px 10px; */
    padding:10px;
    padding-left:50px;
    color:#FFFFFF;
    font-size:20px;
    font-family:"Eras ITC";
    background:linear-gradient(to left,#660066,#5C2D91  );
}

.container
{

    padding-top:10px;
    width:90%;
    /* Na7tta Rounded corner*/
    border-radius: 15px 15px 0px 0px;
    -moz-border-radius:15 15 15 15;
    background-image: url("../offline/img/Untitled.png");
    background-repeat: no-repeat;
    background-color:#ffffff;
    text-align:left;
    min-height:600px;
    max-height:2000px;
    font-size:100%;
```

```
    display:table;


}

/*Main NAV Bar*/



ul {
    list-style-type: none;
    margin-bottom: 1%;
    margin-top: opx;
    margin-left: opx;
    margin-right: opx;
    padding: o;
    overflow: hidden;
    background: linear-gradient(to right,#660066,#5C2D91 );
    border-radius:  opx opx 15px 15px;
    border:1px solid black;
    font-family:  Verdana, Geneva, sans-serif;
    font-size: 14px;
    font-weight:normal;



}
```

```
li {
    float: left;



}

li:last-child {
    border-right: none;

}

li a {
    display: block;
    color: white;
    text-align: center;
    padding: 14px 16px;
    text-decoration: none;
}

li a:hover:not(.active) {
    background-color:rgb(190, 0, 255);

}

.Active_page {
```

```
    background-color: black;


}



/* right Bar*/
#navBeta {
        width:170px;
    float: right;
    margin:5px;
    border-radius: 20px;
        border:1px solid rgb(126, 90, 205);
        background-color:#eee;
        padding:10px;
        z-index:1;
}



/*left bar*/


.container .mySidenav a {
    z-index: 2;
    position: absolute;
    left: -160px;
    transition: 0.3s;
```

```
    padding: 15px;
    width: 200px;
    text-decoration: none;
    color: black;
    border:2px solid #6633CC;
    border-radius: 0 5px 50px 0;
    font-family:  Verdana, Geneva, sans-serif;
    font-size: 14px;

}
.container .mySidenav a:hover {
    left: 0;
}

.container .Month_View {
    top: 210px;
    background-color:White;
}

.container .Year_View {
    top: 270px;
    background-color:White;
}

.container .Man_of_the_Month {
```

```
    top: 330px;
    background-color:White;
}



/* image card idea */
.card {
    width: 90px;
    height: 85px;
    top: 240px;
    background: url("../02 Image/2.. copy.gif") no-repeat;
    margin: auto;
    margin-left: 5px;




}
.card:hover {
    background: url("../02 Image/1.. copy.gif") no-repeat;


}
.card {
position: relative;
display: inline-block;
}
```

```
.card .tooltiptext {
visibility: hidden;
width: 100px;
background-color: #eee;
color: black;
text-align: center;
border-radius: 6px;
padding: 0px 0;

/* Position the tooltip */
position: absolute;

bottom: 90px;
left: 20%;
}

.card:hover .tooltiptext {
visibility: visible;
}



/* container for content*/

.box{
```

```
    margin-left: 8%;
    min-width:140px;
    border-radius: 10px;
    border: 1px solid LightGray;
    width:75%;
    font-size: 12px;
    font-family:  Verdana, Geneva, sans-serif;
    font-weight: normal;
    z-index: 3;
}
/* Table style for record*/
.box .Records table {
    margin:auto;
    margin-top: 5%;
    min-width:120px;
    border-radius: 5px;
    border: 2px solid rgb(126, 90, 205);
    width:90%;
    font-family:  Verdana, Geneva, sans-serif;
    font-weight: normal;
    line-height: 15px;

}

.box .Records th{
```

```
    border-radius: 10px;
    background-color: rgb(156, 90, 205);
    padding: 4px;
    line-height: 16px;
    font-size: 12px;
    text-align: left;
}
.box .Records td {
    text-align: left;
    padding: 2px;
    font-size: 11px;
    font-family:  Verdana, Geneva, sans-serif;
    font-weight: normal;
    line-height: 15px;



}

.box .Records tr:nth-child(even) {
    background-color: #dddddd;
}

/*Pagination style  */
.box .pagination {
```

```
    display: block;
}

.box .pagination table {
    margin: auto;
}
.box .pagination a {
    margin: auto;
    text-align:center;
    border-radius: 20px;
    color: black;
    float: left;
    padding: 8px 16px;
    text-decoration: none;
    transition: background-color .3s;
    border: 2px solid #ddd;
}



.box .pagination a:hover:not(.active) {
    background-color: rgb(176, 90, 205);
    border-radius: 5px;
}
```

```
.go_btn
{
    margin: 2px;
    padding: 10px;
    border-radius:15px 15px 15px 15px;
    color:  #ffffff ;
    background-color:#660099;
    text-align: center;
}

footer{
    font-family: Constantia;
    font-size: 15px;
    background: linear-gradient(to right,#660066,#5C2D91);
    padding: 10px;
    text-align: center;
    margin: 5Px;
    margin-top:20%;
    margin-bottom:0px;
    border:1px solid black;
    border-radius: 15px 15px 0px 0px;
    color: white;
}
```

9.2 Super Records

```
<!DOCTYPE html>
<html>
 <head>
            <title>CSI</title>
            <link rel="stylesheet" type="text/css" href="../01 Style/Home.css">
 </head>
  <body>
    <center>
     <div class="container">

              <div class="header">
           <img src="../02 Image/Call-center-Face-right.gif" style="float: right;" width="80px" height="90px">

        <h1 class="title"> CSI </h1>
   </div>

<!--  Main NAV Bar-->
<ul>
  <li><a class="Active_page" href="#home">HOME</a></li>
  <li><a href="This Month.php">THIS MONTH</a></li>
  <li><a href="CSI Calculator.php">CSI CALCULATOR</a></li>
  <li><a href="About CSI.php">ABOUT CSI</a></li>
  <li style="float:right"><a href="#about">Log Out</a></li>
</ul>


   <center>
            <img src="../02 Image/logo.png">
    <div class="scenario_name">
    <marquee behavior="scroll" direction="left" >Our Supervisor... Prof/Dr. Atef Raslan</marquee>
    </div>
   </center>

   <div class="card">
      <span class="tooltiptext"> Hello !!..... How can I help you</span>
            </div>

            <p id="navBeta">
   <a style=" text-align: center; color:#8b008b; font-family: Constantia; font-size:
20px;"><b>Welcome</b><br>
   <a>Muhammad Abdulla </a><br>
   <a>ID: X61034 </a><br>
   <a href="#">Change Password</a><br>
            <a href="#about">Log Out</a>
   </p>

<div Class="mySidenav" >
  <p><a href="#" class="Month_View">Month View<img src="../02 Image/015.png" style="margin-left:
85px;position: absolute;"></a>
```

```
 <a href="#" class="Year_View">Year View<img src="../02 Image/015.png" style="margin-left: 95px;position: absolute;"></a>
 <a href="#" class="Man_of_the_Month">Man of the Month<img src="../02 Image/015.png" style="margin-left: 40px;position: absolute;"></a>

</div>


<?php

    // Declare and assign the varibales
    $servername = "localhost";
    $username = "root";
    $password = "";
    $dbname = "csi_db";

    // Create connection
    $connection=Mysqli_connect($servername, $username, $password, $dbname);

    // Checking the connection
    if (mysqli_connect_error()){

            echo "<h1>Connection Failed</h1>";
                }

                // define how many record per page to display
                $rec_limit = 25;


                // find out the count of stored record
                $sql = "SELECT Super_ID, Leader_Name, Agent_name, Phone_Number, Call_Date,
NPS, Agent_Satisfaction, Overall_Satisfaction
                FROM rates WHERE Super_ID=2";
                $result = mysqli_query($connection, $sql);
                $rec_count= mysqli_num_rows($result);

                // Checking the mysql query
                if (mysqli_connect_error()){
                  echo " query  Failed to be excuted";
                  }


                 // detmine number of total pages we need
     // using ceil function to remove decimal point
                 $number_of_pages=ceil($rec_count/$rec_limit);



                 // detrmnine which page we visiting
    if(!isset($_GET['page'])){
                        $page=1;
                        } else {
```

```
                    $page=$_GET['page'];
                }

                // detrmine sql starting number from the result which displayed
                $limit_start_num=($page-1)*$rec_limit;




                // retrive the selected record from the database
                $sql = "SELECT Super_ID, Leader_Name, Agent_name, Phone_Number, Call_Date,
NPS, Agent_Satisfaction, Overall_Satisfaction
                FROM rates WHERE Super_ID=2 order by Call_Date DESC Limit
".$limit_start_num.",".$rec_limit ;
                $result = mysqli_query($connection, $sql);

                echo "<div class='box'>";
                echo"<p style='background:#eee;border-radius: 10px 10px 0px 0px ;margin-
top:0px;margin-bottom: 0px;padding:5px;'><b>Home</b></p>";
                echo"<p style='background:#eee;margin-top:1px;padding:5px;'>All Calls
Records</p>";
                echo"<div class='Records'>";

                    echo "<table><tr><th>Super ID</th><th>Leader Name</th><th>Agent
Name</th><th>Phone Number</th><th>Call Date</th>
                    <th>NPS</th><th>Agent Satisfaction</th><th>Overall Satisfaction</th></tr>";
        while($row = mysqli_fetch_array($result)) {

                    echo
"<tr><td>".$row["Super_ID"]."</td><td>".$row["Leader_Name"]."</td><td>".$row["Agent_name"]."</td><t
d>".$row["Phone_Number"]."</td>
                                <td>".$row["Call_Date"]."</td><td style='background-
color:'>".$row["NPS"]."</td><td>".$row["Agent_Satisfaction"]."</td>
                                <td>".$row["Overall_Satisfaction"]."</td></tr>";
                               /*";
                                if ($row["NPS"]="Promoter") {
                                        echo "green";
                                } elseif($row["NPS"]="Passive") {
                                 echo "yellow";
                                }
                               elseif($row["NPS"]="Passive") {
                                 echo "yellow";
                                }echo"*/

        }
                                echo "</table>";


                echo"</div>";
```

```
                        echo "<div class='pagination'>";
                        echo "<table><tr><th>";

        $counter=$page+2;

       // displaying the links for each page
                        echo "<a href=Super_Records.php?page=1 > <<  </a>";

                        // loop to show all count of pages

       for($page;$page<$counter;$page++){
              if ($counter<=$number_of_pages) {
                              echo "<a href=Super_Records.php?page=".($page)."> ".($page)." </a>";
              }
                        }

       echo "<a href=Super_Records.php?page=".($page)." >...</a>";
                        echo "<a href=Super_Records.php?page=$number_of_pages >".$number_of_pages."
</a>";

       echo "</th></tr></table>";
                        echo"</div>";
                        echo"</div>";



      // close connection
      Mysqli_close($connection);

              ?>

              </p>

              <!-- Footer -->
   <footer>
              <p>Developed and Maintained by: <a href="#" >Mohamed Abdulla alnahtta</a><br>CC-OpsDev
- TE Data</p>
              </footer>
              </center>
 </div>
  </body>
</html>
```

9.3 This Month.

```
<!DOCTYPE html>
<html>
 <head>
            <title>CSI</title>
            <link rel="stylesheet" type="text/css" href="../01 Style/Home.css">
 </head>
  <body>
  <center>
     <div class="container">

              <div class="header">
           <img src="../02 Image/Call-center-Face-right.gif" style="float: right;" width="80px" height="90px">

        <h1 class="title"> CSI </h1>
   </div>

<!--  Main NAV Bar-->
<ul>
  <li><a href="Super_Records.php">HOME</a></li>
  <li><a class="Active_page" href="#Current Month Records">THIS MONTH</a></li>
  <li><a href="CSI Calculator.php">CSI CALCULATOR</a></li>
  <li><a href="About CSI.php">ABOUT CSI</a></li>
  <li style="float:right"><a href="#about">Log Out</a></li>
</ul>


 <center>
            <img src="../02 Image/logo.png">
    <div class="scenario_name">
    <marquee behavior="scroll" direction="left" >Our Supervisor... Prof/Dr. Atef Raslan</marquee>
    </div>
   </center>

   <div class="card">
      <span class="tooltiptext"> Hello !!..... How can I help you</span>
            </div>

            <p id="navBeta">
   <a style=" text-align: center; color:#8b008b; font-family: Constantia; font-size:
20px;"><b>Welcome</b><br>
   <a>Muhammad Abdulla </a><br>
   <a>ID: X61034 </a><br>
   <a href="#">Change Password</a><br>
            <a href="#about">Log Out</a>
   </p>

<div Class="mySidenav" >
  <p><a href="#" class="Month_View">Month View<img src="../02 Image/015.png" style="margin-left:
85px;position: absolute;"></a>
```

```
 <a href="#" class="Year_View">Year View<img src="../02 Image/015.png" style="margin-left: 95px;position: absolute;"></a>
 <a href="#" class="Man_of_the_Month">Man of the Month<img src="../02 Image/015.png" style="margin-left: 40px;position: absolute;"></a>

</div>



  <?php


    // Declare and assign the varibales
    $servername = "localhost";
    $username = "root";
    $password = "";
    $dbname = "csi_db";

    // Create connection
    $connection=Mysqli_connect($servername, $username, $password, $dbname);

    // Checking the connection
    if (mysqli_connect_error()){

            echo "<h1>Connection Failed</h1>";
                }

                // define how many record per page to display
                $rec_limit = 25;


                // find out the count of stored record
                $sql = "SELECT Super_ID, Leader_Name, Agent_name, Phone_Number, Call_Date,
NPS, Agent_Satisfaction, Overall_Satisfaction
                FROM rates WHERE Super_ID=2 and survey_date  between curdate() -
dayofmonth(curdate()) + 1 and LAST_DAY(curdate()))";
                $result = mysqli_query($connection, $sql);
                $rec_count= mysqli_num_rows($result);

                // Checking the mysql query
                if (mysqli_connect_error()){
                  echo " query  Failed to be excuted";
                  }


                 // detmine number of total pages we need
     // using ceil function to remove decimal point
                  $number_of_pages=ceil($rec_count/$rec_limit);
```

```
                    // detrmnine which page we visiting
    if(!isset($_GET['page'])){
                        $page=1;
                        } else {
                        $page=$_GET['page'];
                    }

                    // detrmine sql starting number from the result which displayed
                    $limit_start_num=($page-1)*$rec_limit;



                    // retrive the selected record from the database
                    $sql = "SELECT Super_ID, Leader_Name, Agent_name, Phone_Number, Call_Date,
NPS, Agent_Satisfaction, Overall_Satisfaction
                    FROM rates WHERE Super_ID=2 and survey_date  between curdate() -
dayofmonth(curdate()) + 1 and LAST_DAY(curdate()) order by Call_Date DESC Limit
".$limit_start_num.",".$rec_limit;
                    $result = mysqli_query($connection, $sql);

                    echo "<div class='box'>";
                    echo"<p style='background:#eee;border-radius: 10px 10px 0px 0px ;margin-
top:0px;margin-bottom: 0px;padding:5px;'><b>This Month</b></p>";
                    echo"<p style='background:#eee;margin-top:1px;padding:5px;'>All Calls Records for
this Month</p>";
      echo"<div class='Records'>";
        // checking if there is records to show
        if ($rec_count>0) {

                        echo "<table><tr><th>Super ID</th><th>Leader Name</th><th>Agent
Name</th><th>Phone Number</th><th>Call Date</th>
                        <th>NPS</th><th>Agent Satisfaction</th><th>Overall Satisfaction</th></tr>";

          while($row = mysqli_fetch_array($result)) {
                        echo
"<tr><td>".$row["Super_ID"]."</td><td>".$row["Leader_Name"]."</td><td>".$row["Agent_name"]."</td><t
d>".$row["Phone_Number"]."</td>

<td>".$row["Call_Date"]."</td><td>".$row["NPS"]."</td><td>".$row["Agent_Satisfaction"]."</td>
          <td>".$row["Overall_Satisfaction"]."</td></tr>";
          }
                                echo "</table>";

                    echo"</div>";



                    echo "<div class='pagination'>";
                    echo "<table><tr><th>";

      $counter=$page+2;
```

```
	// displaying the links for each page
                        echo "<a href=Super_Records.php?page=1 > <<  </a>";

                        // loop to show all count of pages

	for($page;$page<$counter;$page++){
		if ($counter<=$number_of_pages) {
                        echo "<a href=Super_Records.php?page=".($page).."> ".($page)." </a>";
		}
                        }

	echo "<a href=Super_Records.php?page=".($page)." >...</a>";
                        echo "<a href=Super_Records.php?page=$number_of_pages >".$number_of_pages."
</a>";

                        echo "</th></tr></table><br>";

	}
                        echo"</div>";
                        echo"</div>";




	// close connection
	Mysqli_close($connection);

		?>

		</p>

		<!-- Footer -->
  <footer>
		<p>Developed and Maintained by: <a href="#" >Mohamed Abdulla alnahtta</a><br>CC-OpsDev
- TE Data</p>
		</footer>
		</center>
 </div>
  </body>
</html>
```

9.4 CSI Calculator.

```
<!DOCTYPE html>
<html>
 <head>
            <title>CSI</title>
            <link rel="icon" href="../02 Image/015.png" type="image/x-icon">
            <link rel="stylesheet" type="text/css" href="../01 Style/Home.css">
 </head>
  <body>

        <center>
          <div class="container">

                    <div class="header">
            <img src="../02 Image/Call-center-Face-right.gif" style="float: right;" width="80px" height="90px">

            <h1 class="title" style="font-family: Constantia;">Customer Satisfaction Indicator</h1>
           </div>



<!--  Main NAV Bar-->
<ul>
  <li><a href="Super_Records.php">HOME</a></li>
  <li><a href="This Month.php">THIS MONTH</a></li>
  <li><a class="Active_page" href="#CSI Calculator">CSI CALCULATOR</a></li>
  <li><a href="About CSI.php">ABOUT CSI</a></li>
  <li style="float:right"><a href="#about">Log Out</a></li>
</ul>


  <center>
            <img src="../02 Image/logo.png">
    <div class="scenario_name">
    <marquee behavior="scroll" direction="left" >Our Supervisor... Prof/Dr. Atef Raslan</marquee>
    </div>
   </center>
   <p id="navBeta">
   <a style=" text-align: center; color:#8b008b; font-family: Constantia; font-size:
20px;"><b>Welcome</b><br>
   <a>Muhammad Abdulla </a><br>
   <a>ID: X61034 </a><br>
   <a href="#">Change Password</a><br>
            <a href="#about">Log Out</a>
   </p>


   <div class="card">
      <span class="tooltiptext"> Hello !!..... How can I help you</span>
   </div>
```

```
<div Class="mySidenav" >
  <p><a href="#" class="Month_View">Month View<img src="../02 Image/015.png" style="margin-left:
85px;position: absolute;"></a>
  <a href="#" class="Year_View">Year View<img src="../02 Image/015.png" style="margin-left: 95px;position:
absolute;"></a>
  <a href="#" class="Man_of_the_Month">Man of the Month<img src="../02 Image/015.png" style="margin-
left: 40px;position: absolute;"></a>

</div>




<div class='box'>
    <p style='background:#eee;border-radius: 10px 10px 0px 0px ;margin-top:0px;margin-bottom:
0px;padding:5px;'><b>CSI Calculation</b></p>

        <div class='Records'>

         <form method="GET">
            <br>
         <label style=" padding-left: 20px;font-weight: bold;">Count Of Calls : </label>
                <input type="number" name="Count_Of_Calls" min="1" ><br>
              <p style=" color:#8b008b; padding-left: 20px; font-family: Constantia; font-size: 20px; ">NPS
Calculation</p>
              <div style="padding-left: 20px;">
                 <label>Count Of Promoters : </label>
                 <input type="number" name="Promoters" min="0" ><br><br>
                 <label>Count Of Detractors : </label>
                 <input type="number" name="Detractors" min="0" ><br>

                <br>
                <br>
               </div>



              <p style=" color:#8b008b; padding-left: 20px; font-family: Constantia; font-size: 20px; ">Overall
Satisfaction Calculation</p>

               <div style="padding-left: 20px;">
               <p style="font-weight: bold;">To Calculate TTB</p>
                 <label>Count of satisfied calls : </label>
                 <input type="number" name="Over_All_Count_of_satisfied" min="0" >
                 <br>
                 <br>

                 <label>Count of very satisfied calls : </label>
```

```
            <input type="number" name="Over_All_Count_of_very_satisfied" min="0" >
            <br>
            <br>

            <p style="font-weight: bold;">To Calculate BB</p>
            <label>Count of very unsatisfied calls : </label>
            <input type="number" name="Over_All_Count_of_unsatisfied" min="0" >
          <br>
          <br>
          </div>




          <p style=" color:#8b008b; padding-left: 20px; font-family: Constantia; font-size: 20px; ">Agent Satisfaction Calculation</p>


          <div style=" padding-left: 20px;">
            <p style="font-weight: bold;">To Calculate TTB</p>

          <label>Count of satisfied calls : </label>
          <input type="number" name="Agent_Count_of_satisfied" min="0" >
          <br><br>
          <label>Count of very satisfied calls : </label>
          <input type="number" name="Agent_Count_of_very_satisfied" min="0" >
          <br><br>


           <div >
           <p style="font-weight: bold;">To Calculate BB</p>
           <label>Count of very unsatisfied calls : </label>
           <input type="number" name="Agent_Count_of_unsatisfied" min="0" >
          <br><br>

         </div>

          <div style="text-align: center;">
          <input class="go_btn" type="submit" name="submit" value="Begin to Calculate">
          <br><br>


        </div></div>
      </form>

<?php
if (isset($_GET['submit'])){
$Promoters = $_GET['Promoters'];
$Detractors =  $_GET['Detractors'];
$Count_Of_Calls =  $_GET['Count_Of_Calls'];
```

```
$Over_All_Count_of_unsatisfied = $_GET['Over_All_Count_of_unsatisfied'];
$Over_All_Count_of_satisfied = $_GET['Over_All_Count_of_satisfied'];
$Over_All_Count_of_very_satisfied =  $_GET['Over_All_Count_of_very_satisfied'];
$Agent_Count_of_unsatisfied = $_GET['Agent_Count_of_unsatisfied'];
$Agent_Count_of_satisfied= $_GET['Agent_Count_of_satisfied'];
$Agent_Count_of_very_satisfied =  $_GET['Agent_Count_of_very_satisfied'];
if($Count_Of_Calls > 0 ){
  $Net_Promoter_Score = (($Promoters/$Count_Of_Calls) - ($Detractors/$Count_Of_Calls)) * 100 / 100  ;
  $Over_All_BB = ($Over_All_Count_of_unsatisfied/ $Count_Of_Calls) * 100 / 100 ;
  $Over_All_TTB = (($Over_All_Count_of_satisfied+$Over_All_Count_of_very_satisfied) / $Count_Of_Calls
) * 100 / 100 ;
  $Agent_BB = ($Agent_Count_of_unsatisfied / $Count_Of_Calls) * 100 / 100 ;
  $Agent_TTB = (($Agent_Count_of_satisfied+$Agent_Count_of_very_satisfied) / $Count_Of_Calls ) * 100 /
100 ;
  echo "<table><tr>" ;
    echo "<td>NPS</td>
        <td>Over all Satisfaction </td>
        <td></td>
        <td>Agent Satisfaction</td>
        <td></td>
        <td>Count of Calls</td>
        </tr>
        <tr>
        <td>Net Promoter Score</td>
        <td>TTB</td>
        <td>BB</td>
        <td>TTB</td>
        <td>BB</td>
        <td></td>
        </tr>" ;
        echo "<tr>
        <td>".$Net_Promoter_Score."%</td>
        <td>".$Over_All_TTB."%</td>
        <td>".$Over_All_BB."%</td>
        <td>".$Agent_TTB."%</td>
        <td>".$Agent_BB."%</td>
        <td>".$Count_Of_Calls."</td>
        </tr></table><br>";


}
}else {
   echo "<table><tr>" ;
   echo "<td>NPS</td>
        <td>Over all Satisfaction </td>
        <td></td>
        <td>Agent Satisfaction</td>
        <td></td>
        <td>Count of Calls</td>
        </tr>
        <tr>
        <td>Net Promoter Score</td>
```

```
        <td>TTB</td>
        <td>BB</td>
        <td>TTB</td>
        <td>BB</td>
        <td></td>
        </tr>" ;
        echo "<tr>
        <td>0%</td>
        <td>0%</td>
        <td>0%</td>
        <td>0%</td>
        <td>0%</td>
        <td>0</td>
        </tr></table><br>";

}
?>

</div>

</div>


  <!-- Footer -->
    <footer >
  <p>Developed and Maintained by: <a href="#" >Mohamed Abdulla alnahtta</a><br>CC-OpsDev - TE
Data</p>
    </footer>
    </center>
  </body>
</html>
```

9.5 About CSI

```
<!DOCTYPE html>
<html>
 <head>
            <title>CSI</title>
            <link rel="stylesheet" type="text/css" href="../01 Style/Home.css">
 </head>
  <body>
  <center>
     <div class="container">

<div class="header">
          <img src="../02 Image/Call-center-Face-right.gif" style="float: right;" width="80px" height="90px">

        <h1 class="title"> CSI </h1>
</div>
<!--  Main NAV Bar-->

<ul>
  <li><a href="Super_Records.php">HOME</a></li>
  <li><a href="This Month.php">THIS MONTH</a></li>
  <li><a href="CSI Calculator.php">CSI CALCULATOR</a></li>
  <li><a class="Active_page" href="#About CSI">ABOUT CSI</a></li>
  <li style="float:right"><a href="#about">Log Out</a></li>
</ul>
 <center>
    <img src="../02 Image/logo.png">
    <div class="scenario_name">
     <marquee behavior="scroll" direction="left" >Our Supervisor... Prof/Dr. Atef Raslan</marquee>
    </div>
 </center>


 <p id="navBeta">
   <a style=" text-align: center; color:#8b008b; font-family: Constantia; font-size:
20px;"><b>Welcome</b><br>
   <a>Muhammad Abdulla </a><br>
   <a>ID: X61034 </a><br>
   <a href="#">Change Password</a><br>
            <a href="#about">Log Out</a>
   </p>

   <div class="card">
      <span class="tooltiptext"> Hello !!..... How can I help you</span>
   </div>

<div Class="mySidenav" >
  <p><a href="#" class="Month_View">Month View<img src="../02 Image/015.png" style="margin-left:
85px;position: absolute;"></a>
  <a href="#" class="Year_View">Year View<img src="../02 Image/015.png" style="margin-left: 95px;position:
absolute;"></a>
```

```
 <a href="#" class="Man_of_the_Month">Man of the Month<img src="../02 Image/015.png" style="margin-
left: 40px;position: absolute;"></a>

</div>




                    <div class='box'>
                    <p style='background:#eee;border-radius: 10px 10px opx opx ;margin-top:opx;margin-
bottom: opx;padding:5px;'><b>About CSI</b></p>
        <p style='background:#eee;margin-top:1px;padding:5px;'>Customer Satisfaction Indicator</p>


                    <div class='Records'>
        <p><center><img src="../02 Image/00.jpg" style="margin:auto; "></center></p>
        <p style=" color:#8b008b; padding-left: 20px; font-family: Constantia; font-size: 20px; "><b><u>1.1
What is CSI: </b></u></p>
        <p style="padding-left:20px;">The Customer Satisfaction Indicator
           provides functionality that allows you to quickly evaluate a Customer's satisfaction with their
service.
          After a Customer completes the Survey, their score is stored on their Customer record<p>
        <p><img src="../02 Image/00.gif" style="height: 25%;width: 25%;"></p>
        <p style=" color:#8b008b; padding-left: 20px; font-family: Constantia; font-size: 20px; "><b><u>The
CSI Survey Question is:</b></u></p>
        <p style="padding-left: 50px;"> <b>  Q1. NPS, How Likely Are You To Recommend company  To A
Friend Or Colleague</b> </p>
        <p style="padding-left: 50px;"> <b>  Q2. Overall Satisfaction, How would You Evaluate your overall
satisfaction based on your Last call with company Contact Center? </b></p>
        <p style="padding-left: 50px;"> <b>  Q3. Agent Satisfaction: How Satisfied Are You With The
Representative You Spoke To? </b></p>
        <p style="color:#8b008b; padding-left: 30px; font-family: Constantia; font-size: 16px;"> The above
Rating Score from 0 to 10 by which (0) means (not at all satisfied) and (10) means (extremely satisfied)</p>
        <p style="padding-left: 50px;"> <b>  Q4. FCR, Did We Resolve Your Issue Or Answer Your Inquiry?
</b> </p>
        <p style="color:#8b008b; padding-left: 30px; font-family: Constantia; font-size: 16px;"> The above
Rating Score from 1 to 4 by which</p>
        <p style="color:#8b008b; padding-left: 60px; margin-bottom: opx; font-family: Constantia; font-size:
12px;"> 1. Yes, in the first time I contacted company</p>
        <p style="color:#8b008b; padding-left: 60px; margin-top: opx; margin-bottom: opx; font-family:
Constantia; font-size: 12px;"> 2. Yes but I had to contact company more than once</p>
        <p style="color:#8b008b; padding-left: 60px; margin-top: opx; margin-bottom: opx; font-family:
Constantia; font-size: 12px;"> 3. Still waiting for a follow-up call</p>
        <p style="color:#8b008b; padding-left: 60px; margin-top: opx; margin-bottom: opx; font-family:
Constantia; font-size: 12px;"> 4. Not solved</p>
        <p style=" color:#8b008b; padding-left: 20px; font-family: Constantia; font-size: 20px;
"><br><b><u>1.2 What is NPS...?</b></u></p>
        <p style="padding-left:20px;"><b>Net Promoter Score</b> is a customer loyalty metric that gauges
how willing a customer is to recommend a product or service<p>
        <p><img src="../02 Image/00.png" style="height: 35%;width: 35%; padding-left: 20px;"></p>
```

The concept of NPS is based on the customers rating of their willingness to recommend your organization, on a scale of 0 to 10:
- Any respondent giving you a 9 or a 10 is considered a Promoter,
- While anyone giving you a 7 or an 8 is considered aPassive.
- On the other hand, any score 6 or below is considered a Detractor.
<img src="../02 Image/02.jpg" style="height: 35%;width: 35%; padding-left: 20px;">

<u>1.3 How to calculate the CSI…?</u>
We can use the blew formulas to calculate our CSI performance around the month

<table>
<tr>
<th>Attribute</th>
<th>Formula</th>
</tr>
<tr>
<td>TTB</td>
<td> = (Count of Satisfaied Calls + Count of Very Satisfaied Calls) / Count of all Calls Records around the Month </td>
</tr>
<tr>
<td>BB</td>
<td> = Count fo very Unstatisfaied Calls / Count of all Calls Records around the Month</td>
</tr>
<tr>
<td style=" background-color: Green;"> % Promoter </td>
<td> = Count of Promoter Calls / Count of all Calls Records around the Month</td>
</tr>
<tr>
<td style=" background-color: yellow;"> % Passive </td>
<td>= Count of Passive Calls / Count of all Calls Records around the Month</td>
</tr>
<tr>
<td Style=" background-color: Red;"> % Detractor </td>
<td>= Count of Detractor Calls / Count of all Calls Records around the Month</td>
</tr>
<tr>
<td>Net Promoter Score</td>
<td> = % Promoter - % Detractor </td>
</tr>
</table>

<u>1.4 Example</u>

An example how we can calculate our CSI we assume we have 4 records for this month as the below as its taken from IVR

<table>
<tr>
<th>Super ID</th>
<th>Leader Name</th>
<th>Agent Name</th>
<th>Phone Number</th>
<th>Call Date</th>
<th>NPS</th>
<th>Agent Satisfaction</th>
<th>Overall Satisfaction</th>
</tr>
<tr>
<td>2</td>
<td>Mostafa.Ameen</td>
<td>Mohamed.Alnahtta</td>
<td>01141921498</td>
<td>15-6-2018</td>
<td>9</td>
<td>5</td>
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<td>18-6-2018</td>
<td>10</td>
<td>3</td>
<td>3</td>

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<tr>
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<td>Mohamed.Alnahtta</td>
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<td>1-6-2018</td>
<td>10</td>
<td>3</td>
<td>4</td>

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<td>Mostafa.Ameen</td>

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<td>Mohamed.Alnahtta</td>
<td>01227951418</td>
<td>28-6-2018</td>
<td>3</td>
<td>5</td>
<td>5</td>


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</table>
<br>
<p style="padding-left:20px;">Converting the number as we consider it</p>


<table>
<tr>
<th>Super ID</th>
<th>Leader Name</th>
<th>Agent Name</th>
<th>Phone Number</th>
<th>Call Date</th>
<th>NPS</th>
<th>Agent Satisfaction</th>
<th>Overall Satisfaction</th>
</tr>
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<td>Mohamed.Alnahtta</td>
<td>01141921498</td>
<td>15-6-2018</td>
<td>Promoter</td>
<td>Very Satisfaied</td>
<td>Very Satisfaied</td>


</tr>
<tr>
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<td>Mohamed.Alnahtta</td>
<td>0228409372</td>
<td>18-6-2018</td>
<td>Promoter</td>
<td>neutral</td>
<td>neutral </td>


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<tr>
<td>2</td>
<td>Mostafa.Ameen</td>
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 <td>1-6-2018</td>
 <td>Promoter</td>
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 <td>Satisfaied</td>


</tr>
<tr>
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 <td>Mohamed.Alnahtta</td>
 <td>01227951418</td>
 <td>28-6-2018</td>
 <td>Detractor</td>
 <td>Very Satisfaied</td>
 <td>Very Satisfaied</td>


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    </table>
<p style="padding-left:20px;">After we implement the Forumla for the above example </p>
<table>
<tr>
 <th>Attribute</th>
 <th>Formula</th>
</tr>
<tr>
 <td>TTB Over all Satisfaction</td>
 <td> = ((0+ 2) / 4 )*100</td>
</tr>
<tr>
  <td>BB Over all Satisfaction</td>
  <td> = (0 / 4)*100</td>
</tr>
<tr>
 <td>TTB Agent Satisfaction</td>
 <td> = ((1 + 2) / 4)*100 </td>
</tr>
<tr>
  <td>BB Agent Satisfaction</td>
  <td> = (0 / 4)*100</td>
</tr>
  <tr>
  <td style=" background-color: Green;"> % Promoter </td>
  <td> = (3 / 4)*100</td>
</tr>
<tr>
  <td style=" background-color: yellow;"> % Passive </td>
```

```
  <td>= (0 / 4)*100</td>
 </tr>
 <tr>
  <td Style=" background-color: Red;"> % Detractor </td>
  <td>= (1 / 4)*100</td>
 </tr>
 <tr>
  <td>Net Promoter Score</td>
  <td> = 75 - 25 </td>
 </tr>
</table>
<br>

<p style="padding-left:20px;">The performance  will be as the blew in the End <p>
<table>
 <tr>
  <td>Name</td>
  <td>NPS</td>
  <td>Over all Satisfaction </td>
  <td></td>
  <td>Agent Satisfaction</td>
  <td></td>
  <td>Count of Calls</td>
 </tr>
 <tr>
  <td>Score</td>
  <td>Net Promoter Score</td>
  <td>TTB</td>
  <td>BB</td>
  <td>TTB</td>
  <td>BB</td>
  <td></td>
 </tr>
 <tr>
  <td>Mohamed.AlNahtta</td>
  <td>50%</td>
  <td>50%</td>
  <td>0.00%</td>
  <td>75%</td>
  <td>0.00%</td>
  <td>4</td>
 </tr>
</table>


 <br>


</div>
                    </div>
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```
            </p>

            <!-- Footer -->
   <footer>
            <p>Developed and Maintained by: <a href="#" >Mohamed Abdulla alnahtta</a><br>Copyright ©
Operation Development and System Support Team . All rights reserved.</p>
   </footer>
   </div>
   </center>
  </body>
</html>
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