ST. LAWRENCE COLLEGE

(Affiliated to Tribhuvan University)
Chabahil, Kathmandu

A Final Year Internship Project Report
On
"Customer Satisfaction Survey Web Widget and BI Dashboard"
At
Podamibe Nepal Pvt. Ltd.

[CSC-452]

For the partial fulfillment of Bachelor's Degree of Computer Science and Information Technology

Submitted to
Department of Computer Science and Information Technology
St. Lawrence College
Institute of Science and Technology
Tribhuvan University

Under the Supervision of

Mr. Tika Dahal

Submitted by
Akash Acharya (5667/071)

MENTOR'S RECOMMENDATION

I hereby recommend that this report has been prepared under my supervision by **Akash Acharya** on **"Customer Satisfaction Survey Web Widget and BI Dashboard"** in partial fulfillment of the requirements for the degree of BSc. in Computer Science and Information Technology, be processed for evaluation.

……..

Mr. Rajendra Maharjan

Chief Executive Officer

Internship Mentor

Podamibe Nepal Pvt. Ltd., Kathmandu

SUPERVISOR'S RECOMMENDATION

I hereby recommend that his report has been prepared under my supervision by **Akash Acharya** in partial fulfillment of the requirements for the degree of BSc. in Computer Science and Information Technology, be processed for evaluation.

……..

Mr. Tika Dahal

Supervisor/ Lecturer

St. Lawrence College

CERTIFICATE OF APPROVAL

We certify that we have read this dissertation work and in our opinion, an internship report submitted by Akash Acharya is satisfactory on the scope and quality as a dissertation in the partial fulfillment for the requirement of Bachelors of Science in Computer Science and Information Technology.

Signature of Supervisor ……. Mr. Tika Dahal	Signature of HOD/ Coordinator ……. Mr. Deepak Thakur
Signature of Internal Examiner ……. 	Signature of External Examiner …….

ACKNOWLEDGEMENT

This intern report is prepared in the partial fulfillment of the requirements for the degree of Bachelor in Computer Science and Information Technology. The satisfaction and success of completion of this task would be incomplete without heartfelt thanks to people whose constant guidance, support and encouragement made this work successful.

Firstly, I would like to give my gratitude towards my mentor **Mr. Rajendra Maharjan,** Chief Executive Officer, for his unquestionable support. Without his support and encouragement, it would have been difficult to work on.

I would also like to thank supervisor **Tika Dahal** who is also the lecturer of St. Lawrence College, for his invaluable encouragement, guidance and ever willingness to spare time from his otherwise busy schedule.

I would like to dedicate our hearty gratitude to **Podamibe Nepal Pvt. Ltd** for providing us with an opportunity to do internship at this reputed organization with full support and cooperation. I would also like to thank **Mr. Biplob Manadhar**, QA Analyst, **Mr. Santosh Shrestha**, Marketing Executive and entire mentors for their unquestionable support.

At the end, I would like to express my sincere thanks and appreciation to all my colleagues and seniors who have helped me directly or indirectly during this internship period. I would like to make them the part of my success.

Akash Acharya

T.U. Exam Roll No: 5667/071

ABSTRACT

Customer Satisfaction Survey Web Widget and BI Dashboard is a combination of web widget that survey the data of user and BI dashboard that show the visualization of data regarding the quality of service, features, information and user interface and interaction management of the product. The product can be website or mobile application. The survey is done by the user of product via the web widget and the dashboard is accessed by the admin of the product. It gives the information about the customer's survey on the visualize form which can be monitored on real time.

Basically, the system is the essential part for the business associates and business analyst for the business making decision regarding the customer satisfaction about the product. The major focus of this system is to act as the BI tools whose data is collected from client and whose insight is provided to the business associates regarding the customer satisfaction.

This report provides an insight on the internship work carried out as the BI Analyst/Developer of Customer Satisfaction Survey Web Widget and BI Dashboard. This project was originally developed in R Studio IDE using Shiny and Shiny dashboard as our core packages.

The report includes the project which is application of data science in business intelligence.

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LIST OF ABBREVIATIONS

BI	Business Intelligence
BSc. CSIT	Bachelors in Science in Computer Science and Information Technology
UI	User Interface
IDE	Integrated Development Environment
QA	Quality Assurance
DFD	Data Flow Diagram

CHAPTER 1: INTRODUCTION

1.1 Introduction to Internship

The internship is six credit (minimum ten weeks/180 hour long) as a part of the course requirement included in 'Bachelors in Science in Computer Science and Information Technology' a course affiliated by Tribhuvan University. The internship experience is expected to enable the students to assist in the resolution of complex problem. Main goal is to assist students in focusing their interests, thus aiding in their professional carrier. It gives students the opportunity to re-examine their career objectives and explore the variety of opportunities in the field of Computer Science and Information Technology. The broad objectives of internship are as follows:

- To test the interest in particular field before permanent commitment are made.
- To develop skills in the application of theory to practical work situations.
- To test the aptitude for a particular career.
- To know the value of time management and interpersonal skills.
- To develop skills and techniques directly applicable to the careers.
- To acquire in depth knowledge of the formal functional activities of a participating organization.

During author's internship period, author was introduced to the organizational structure and the professional world. Being the student of BSc. CSIT, author was interested in web-based application development. Therefore, to enhance knowledge in the web-based application development author joined Podamibe Nepal Pvt. Ltd. part of Podamibe UK as an intern. After joining the company author was assigned for web BI Dashboard design. During internship period author was involved in the research and front end and back end development of Customer Satisfaction Survey Web Widget and BI Dashboard.

1.1.1 Introduction to Project

Taking survey from the customer is hard but an important task for any product. The consideration taken from survey of customer can help in business decision and the overall growth of project as well." Customer Satisfaction Survey Web Widget and BI Dashboard" is the online survey widget developed in order to know the status and the usability of features of the product from the customer they are using. The main focus of this project is to provide the survey widget and BI dashboard made from the survey in real time. The project is the application of data science in a different way where you can collect the data with the help of web widget and the data is automatically visualized on the dashboard.

I worked as an intern at Podamibe Nepal Pvt. Ltd., Kathmandu and during the internship period, I was introduced to the organizational structure, professional world and real- working environment etc.

1.1.2 Scope and Limitation of Project

This project has a great scope to every website or application that need to determine the customer's satisfaction related to product they are using. Since the web widget can vary according the requirement of the product so we can modify the web widget per our requirement of the project.

A software solution is never 100% perfect and error free. Like other software systems, this system is also not perfect. After the deploy of product we can't add the new menu and features which can only be modified from the source code. Since the project is developed from R language with Shiny package which is not familiar for many developers. The project is based on google sheets so the big data scenario can be hard to implement.

1.1.3 Brief Introduction of Organization

Podamibe Nepal Pvt. Ltd. is a global professional service company, providing a broad range of services and solutions in strategy, consulting, digital and technology since 2017. It is situated in Tripureshwor, Kathmandu. Podamibe believe in empowering with information,

building relationships and taking social responsibilities. To make software easier for people to use and operate, it performs a huge level of testing and debugging through qualified

professionals and native users. The main strategy is to discover and analyze the project to find the best possible solution for a product that contains all the possible current technologies and methodologies and test them in developer and user level.

Podamibe mission is to provide a digital solution for database management, website and application development. For each of the solution the Podamibe focuses on making it efficient, user friendly as well as cost effective. Podamibe works with languages and technologies like Java, PHP with Laravel, .NET, MySQL, WordPress and some other development tools.

Podamibe follows industry standards of software development approach to deliver the highest level of satisfaction to the client. The team keep themselves updated with new tools and technologies available in the market.

Following are the contact details of the Podamibe Nepal Pvt. Ltd.

Table 1: Contact Details of Organization

Address	Blue Star Complex, Tripureshwor, Kathmandu
Phone Number	01-4101043
Email	info@podamibenepal.com
Website	www.podamibenepal.com

1.1.4 Internship Duration

As per the requirement of the curriculum of B. Sc. CSIT. 8th Semester, the minimum requirement of internship period is 10 weeks/180 hours. It consists of different phase of training or tasks performed with a specific objective for each phase. Each phase shows the progress of intern in internship. It also consists of information about how and when interns will accomplish objectives of each task.

Table 2: Internship Duration

Office Hour	9:00 am – 6:00 pm
Working Hour	9 Hours per day
Working Days	5 days a week
Position	BI Analyst/Developer
Total Duration	2 months
Mentor	Mr. Rajendra Maharjan

1.2 Statement of Problem

The customer satisfaction survey has been major concern in the business solution. The method of survey is a hard task but important one. In any business, survey is taken using questionnaire and the method of taking survey from customer or client has been the hard job. Most of the organization uses Form to collect the survey data and the final collected data will later forwarded for visualization using different tools and techniques to bring the business decision." Customer Satisfaction Survey Web Widget and BI Dashboard" is the replication of Google Form but the visualization of each survey can be monitored on the dashboard in real time. The business analyst should not be worry about the tools and techniques to visualize the data or wait for finalization of the survey.

1.3 Objective

The internship program was done to fulfill the academic requirement of B. Sc. CSIT 8th Semester. An internship provides a variety of benefits for the young workers who want to broaden their chances for landing in a job and jump-starting their careers. The main objectives of the internship project were to understand how the application works in real time.

The following are the internship objectives that were to be achieved:

1.3.1 Objectives of Internship

The objectives of internship are as follows:

- To assist students in focusing their interests, thus aiding in their professional career.
- To give students the opportunity to re-examine their career objectives and explore the variety of opportunities in the field of computer networking.
- To be technically and organizationally eligible to work in the future after the completion of academic degree.
- To be able to work in team, maintain good public relation and develop strategic problem-solving skills.

1.3.2 Objectives of Project

The objectives of project are as follows:

- To develop the product that help in business decisions regarding the satisfaction of product by the user.
- Application of data science in business intelligence.
- To provide the real time visualization dashboard from the survey data which is collected from web widget.
- To develop the product which can be monitored on real time.

1.4 Roles and Responsibility

The 180-hour internship at Podamibe Nepal Pvt. Ltd involved various activities and tasks as per the requirement of both the organization and the project. Various responsibilities had been assigned to us such as designing web widget, components and modules and perform necessary modifications and upgrades, and small bug fixing. All these tasks were done using R language specified in package name R Shiny and R Dashboard. The responsibilities of individual were not specified only to complete project, along with phases of software

development life cycle, the responsibilities were varied. I worked as a BI Analyst/ Developer and was assigned to create the whole project.

Table 3: Task schedule during internship

Week 1	Understanding about the company's environment and researching about usage of Shiny for the development
Week 2	Designing of Survey web widget (UI)
Week 3	Development of Survey web widget (Server)
Week 4	Testing and validation of web widget
Week 5	Designing of BI Dashboard (UI)
Week 6	Development of BI Dashboard (Server)
Week 7	Integrating BI Dashboard with web widget
Week 8	Testing and validation of web widget and BI Dashboard
Week 9	Deploy in company's system

1.5 Motivation

1.5.1 Motivation for choosing Podamibe Nepal Pvt. Ltd.

Podamibe is a group of young, motivated, and skilled people whose main goal is to provide their clients with an innovative solution regarding web development and software development. Whether it's a mobile application, a content-rich responsive website, its work is built for scale, performance and longevity.

As per the requirement of the Tribhuvan University (TU), the final year students of B.Sc. CSIT are required to complete a six credit (minimum ten weeks/180 hours long) internship as a part of the course requirement. Internship is one of medium that helps to break down the bars between the professional and the student life. Since, an internship is the course curriculum of TU, every student perusing BSc. CSIT need to do the internship in any area of

their interest. So, the first motivation for choosing Podamibe was to fulfill my academic requirements. Besides this, working as an intern in the organization I also got the opportunity to work in real-time projects which motivated me to work more towards my area of interest.

1.5.2 Motivation for choosing R for Business Intelligence

R is a statistical programming language with lots of package that can help in analyze and visualize of the data. Since the project is based on data-oriented factor, choosing R became my first priority. I am familiar with the language and its application. For business intelligence, R has certain package which can create web widget and dashboard. So, it helps me to implement the features of R on my project.

1.6 Report Organization

Chapter 1: Introduction puts emphasis on Overview, Problem Statement, Objectives, Scope and Limitation of the project.

Chapter 2: Requirement and Feasibility Analysis the important sections such as, Requirement Analysis and Feasibility Analysis. Requirement Analysis explains Functional and Non-functional requirements of the project, and Feasibility Analysis explains why/how the project is practical to be implemented.

Chapter 3: System Design gives the design of the system developed so that it can be used during the project implementation.

Chapter 4: Implementation provides an indication of how the system is implemented, what tools / platforms have been used.

Testing clarifies the system workflow.

Chapter 5: Conclusion marks an end to the document by summing up the entire project and also opening the door further for research in improving the developed system. The lesson learnt is also included in this chapter.

CHAPTER 2: SYSTEM ANALYSIS

Generally, System development comprises of two major phases: System Analysis and System Design. In System Analysis, the details of the existing system or proposed one is understood and decided whether proposed system is desirable or not and decided whether the existing system needs improvements. System analysis helps to understand the proposed system architecture, working and goals. Thus, System Analysis can be summarized as the process of investigating a system, identifying problems and using the gathered information to improve existing system or develop the proposed one.

By interacting with business associates, studying the documents provided by the business analyst, discussing with the senior developers and studying the existing system we analyze the requirements of the system to be developed for the clear view of how the system should be and how it should be working so as to fulfill user requirements.

2.1 Requirement Analysis

This section presents complete set of functional and nonfunctional requirements. Functional requirements are listed first according to their relationship to the overall system. The non-functional requirements are listed after functional requirements. The functional requirements have been specified using natural language description using UML analysis model.

2.1.1 Functional Requirements

Functional Requirements defines what the system must do. It defines the behaviors or functions of a system, flows, business rules and other requirements of a system along with its output. The functional requirements are discussed below:

- The customer must fill the survey via web widget.
- The admin can access the dashboard which is based on the survey data.

2.1.1.1 Use Case Diagram

Use case diagram is representation of user's actions or interaction with system which can perform in collaboration with one or more external users of the system. In this application, the client can only fill the survey via web widget whereas the admin can access the dashboard which consist of visualization from survey data, fill the survey and even edit the survey data if it needs.

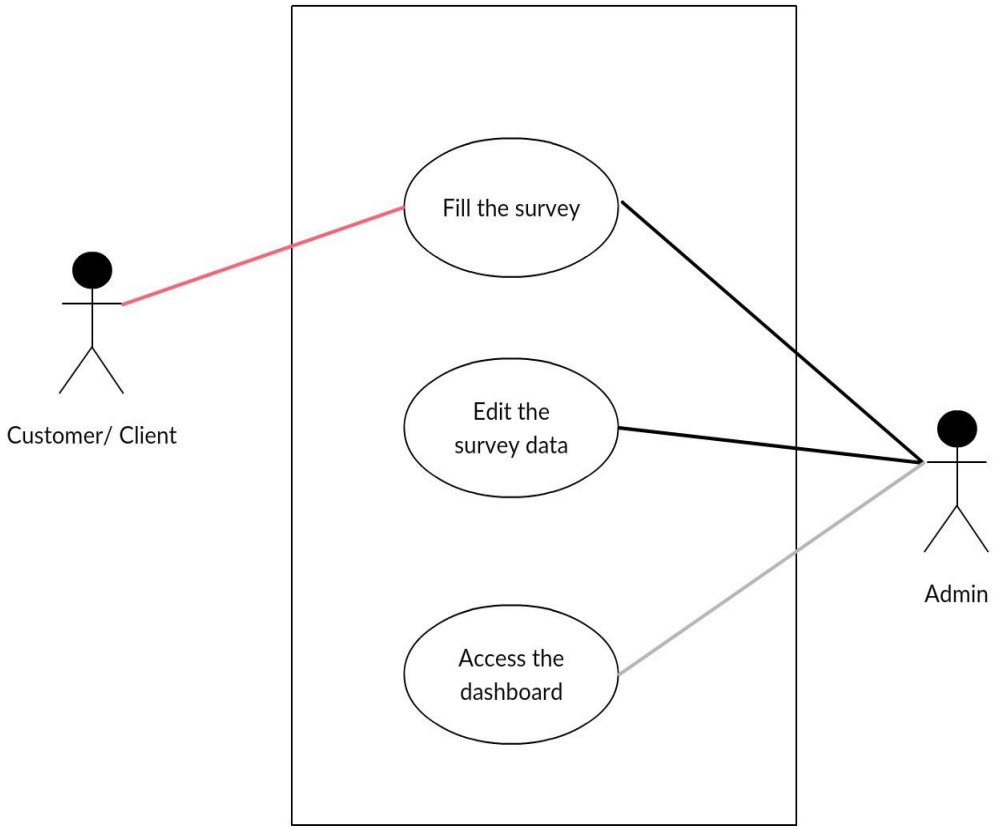

Figure 1: Use Case Diagram of the Project

2.1.1.2 Non-Functional Requirements

Non-functional requirements define how the system should be. It covers all the remaining requirements which are not covered by functional requirements. Customer Satisfaction Survey Web Widget and BI Dashboard is easy to use and works without downgrading the performance. It follows some of the properties like reliability, user-friendly, maintainability and usability.

2.2 Feasibility Analysis

Feasibility Study is used to determine the viability of an idea. It is often used before the actual implementation of the project. The objective of such a study is to ensure a project is legally and technically feasible and economically justifiable. It tells us whether a project is worth the investment.

2.2.1 Technical Feasibility

Technical feasibility involves evaluation of the hardware and the software requirements of the proposed system. This application is developed using R Studio IDE, google sheet for database. Google Chrome and Mozilla Firefox are used to run the application for facilitating user interface. So, this system is technically feasible. All the necessary hardware and software required for developing and installing the system are available.

2.2.2 Operational Feasibility

Operational feasibility is dependent on human resources available for the project and involves projecting whether the system will be used if it is developed and implemented. Our system makes the maximum use of available resources including people, time and flow of forms. Our system provides reliable services to the business analyst or associates and the user should be familiar about the product they are using. This will enhance reduction in cost and increase in benefits for the business.

2.2.3 Economic Feasibility

Economic feasibility is the cost and logistical outlook for a business project or endeavor. We considered various factors affecting the systems economic value and performance and

implemented the best one. The application is just a web widget and dashboard and so it is economically feasible which means we can make the use of it at feasible cost and get much more benefit from it. It requires not many resources except what we already have along with our knowledge.

2.3 Dataflow Diagram

A data flow diagram (DFD) is a graphical representation of the "flow" of data through an information system, modeling its process aspects. A DFD is often used as a preliminary step to create an overview of the system, which can later be elaborated.

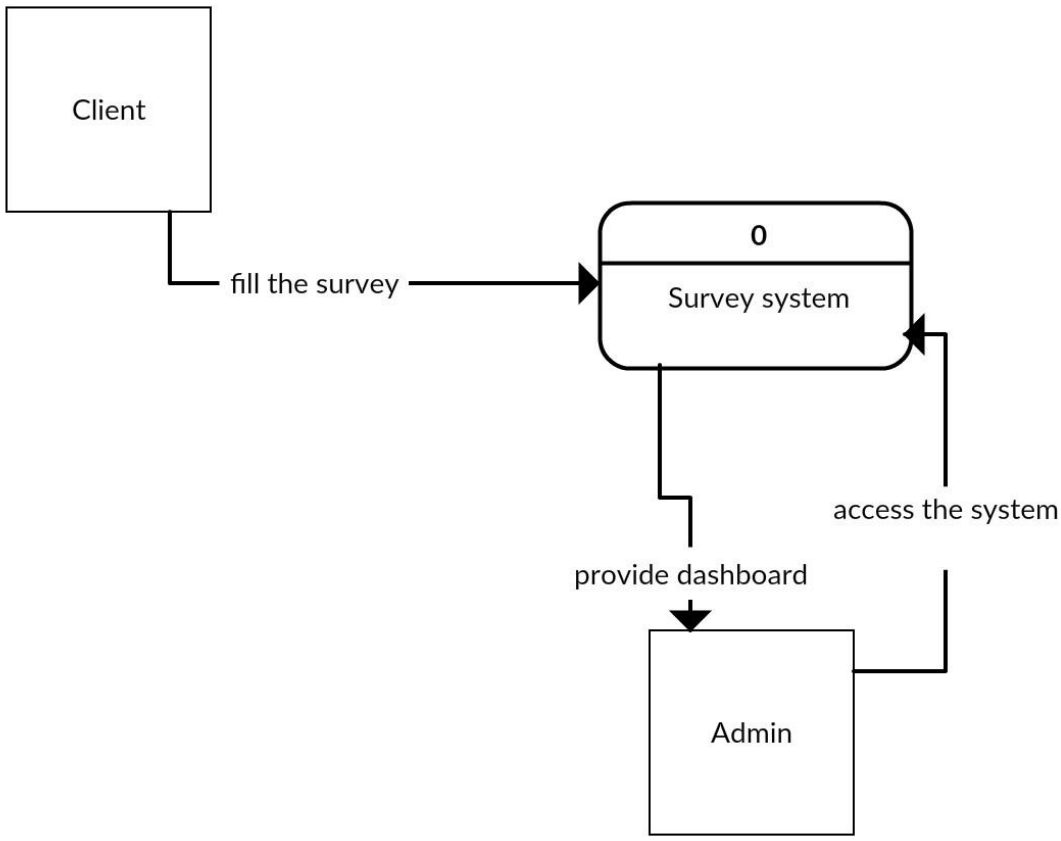

Figure 2: Context Diagram of System

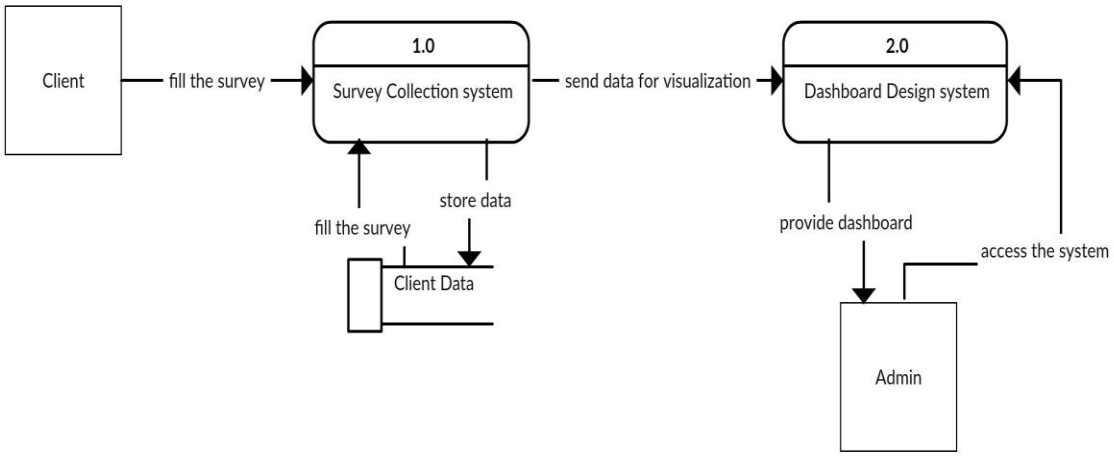

Figure 3: Level-1 DFD of System

2.4 Technical Requirements

2.4.1 Hardware Requirements

The standard input devices like keyboard and mouse are to get input. The outputs are generated and displayed on the screen.

2.4.2 Software Requirements

- Platform: Windows/ Linux
- Programming Language: R, Shiny
- Front End: R Shiny, R Dashboard
- Back End: Google Sheet

CHAPTER 3: SYSTEM DESIGN

Systems design is the process of defining elements of a system like modules, architecture, components and their interfaces and data for a system based on the specified requirements.

3.1 Architectural Design

The system architectural design is shown below:

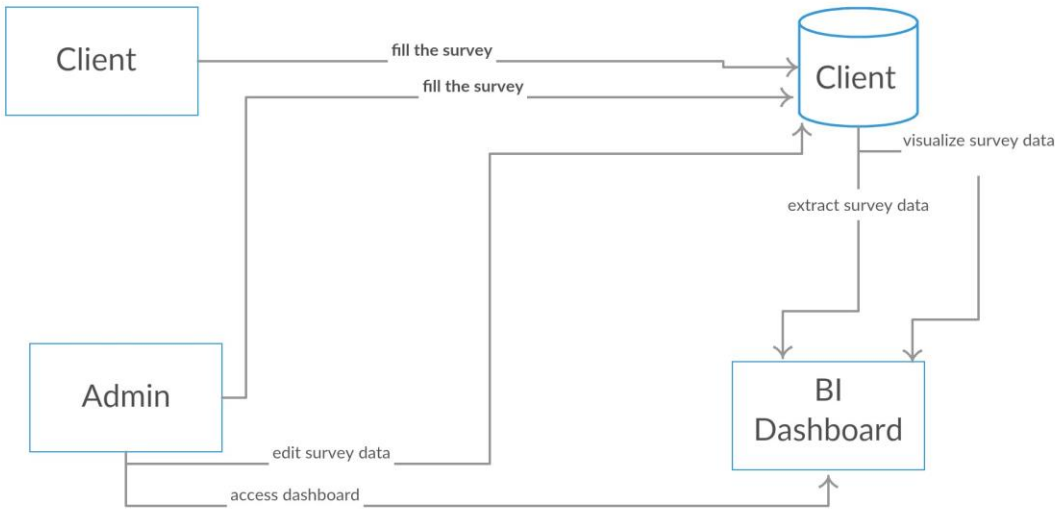

Figure 4:Architectural Design

The architectural design of the system as shown above describes the view, models, behavior, and structure of the overall system. The system follows a 3-tier architecture which is composed of presentation tier, logical tier and data tier and for this, we have used MVC pattern.

3.2 Database Design

Database design is the part of system development. Since the data is stored in Google Sheet, the database takes the form of single tabular format. The table is singular so there is no chance of the relationship among any other table.

Time	Full Name	Email	Phone Number	Gender	Age	Quality of Service	Process of getting problem resolved	Quality of customer service representative

Knowledge of customer service representative	Wait time for my question to be answered	Possibility	Satisfy with the product features	Property Management Usage	Communication Usage	Online Payments Usage

Management of Tenant lease Usage	Additional products you think should be added in the product	Able to find information you were looking for	Able to find information you were looking for (Other)	Satisfy with the literature to describe our products and services	Easy to navigate our website	Satisfy with the delivery of products or services

Rate the comfortableness of using the product	Satisfy with the level of customer support we provide	Satisfy with our company's efforts to meet your communication needs	Interacting with Phone	Interacting with Email	Interacting with Social Media	Interacting with VOIP Application

Figure 5: Table Format of the system

3.3 Interface Design

Interface Design includes both user interface design and admin panel design.

3.3.1 User Interface Design

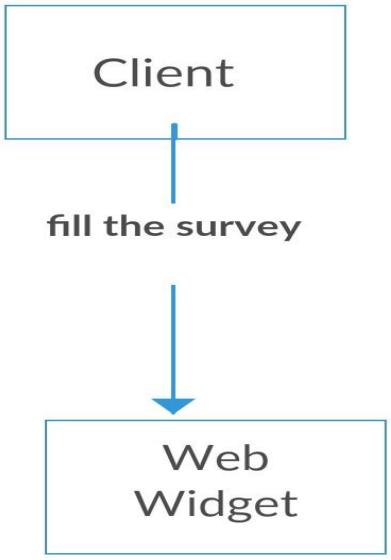

Figure 6:User Interface Design

Front end design is the interface seen as web widget which appears when the client is browsing the website. The client can fill the survey via the web widget.

3.3.2 Admin Panel Design

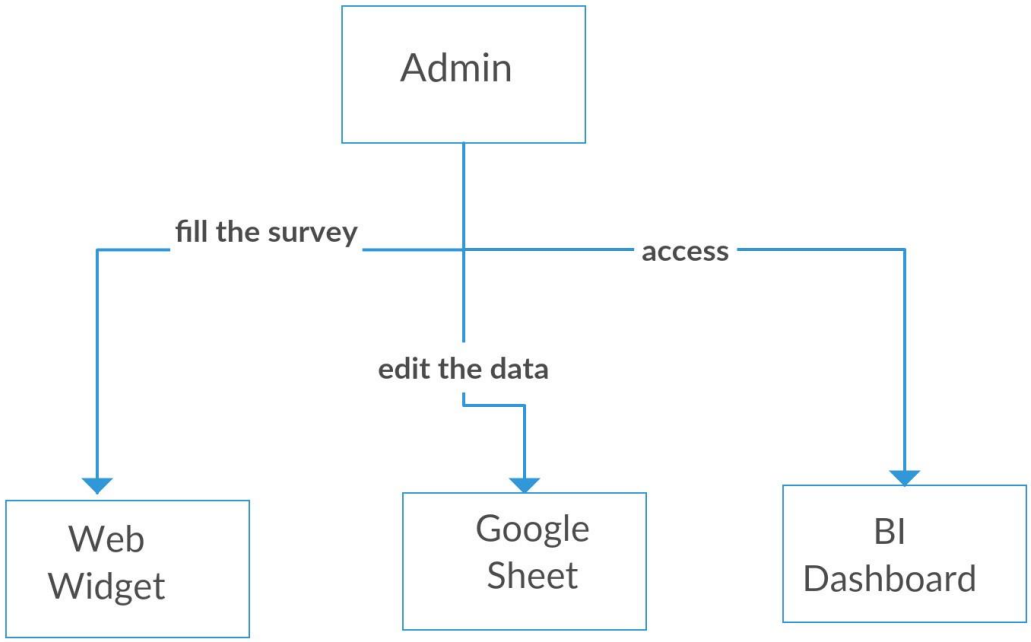

Figure 7:Admin Panel Design

Admin Panel is the interface where administrations and other site officials with appropriate privileges can access the BI dashboard.

The admin can

- Fill the survey via web widget
- Edit the data on google sheet
- Access the BI dashboard

CHAPTER 5: IMPLEMENTATION AND TESTING

4.1 Implementation

Implementation phase is one of the important phases of project development. In this phase we implement our conceptual design into the working program by using various tools. The successful implementation of project is nearer steps towards the project completion. Project implementation was not an easy step to us as we encountered various issues related to the programming logic as challenges.

4.1.2 Tools Used

Front end

- R Shiny was used to build web widget.
- R Dashboard was used to create an interactive dashboard.

Back end:

- Google Sheet was used for creating and managing the database.
- Shinyapps.io for the deployment of the web widget and dashboard.

Documentation Tools:

- Creately was used for designing of:
    - Data flow diagram
    - Use Case diagram
    - Architectural design
    - Interface design diagram
- MS Word was used as a text editor for documentation process.

4.1.3 Development Methodology

Waterfall model is followed for developing the system. The different phases that are required in this development methodology are requirement analysis, system design, implementation, testing, development and maintenance. The Project Manager and QA analyze all the functional and non-functional requirement of the system that needs to be developed. Knowing the requirements for the system we get a clear understanding and view about what the system is supposed to be.

After knowing the requirements for the system, now we define the overall architecture of the system through designs like, ERD, DFD, Database schemas, etc. R language is used for the implementation and testing of the system. For the data storage Google Sheet is used while Shinyapps.io server for deployment.

4.2 Testing

The testing phase can be carried out manually or by using automated testing tools to ensure each component works fine. After the project is ready, we tested its various components in terms of quality, performance to make it error free and remove any sort of technical jargons. The testing phase can be carried out manually or by using automated testing tools to ensure each component works fine.

4.2.1 Unit Testing

During the coding phase each individual module was tested to check whether it works properly or not. Different errors found during unit testing were debugged. Some of the major test cases are listed below:

Test Case 1: Validation of Empty Form

Table 4: Validation of Empty Form

S. No.	Test Inputs	Expected Output	Actual Output	Result
1.	Full Name: Akash Acharya Email Address: Cell Number: Gender: Male Age:	The form shouldn't be left empty.	Warning message are shown for empty form.	Test Successful

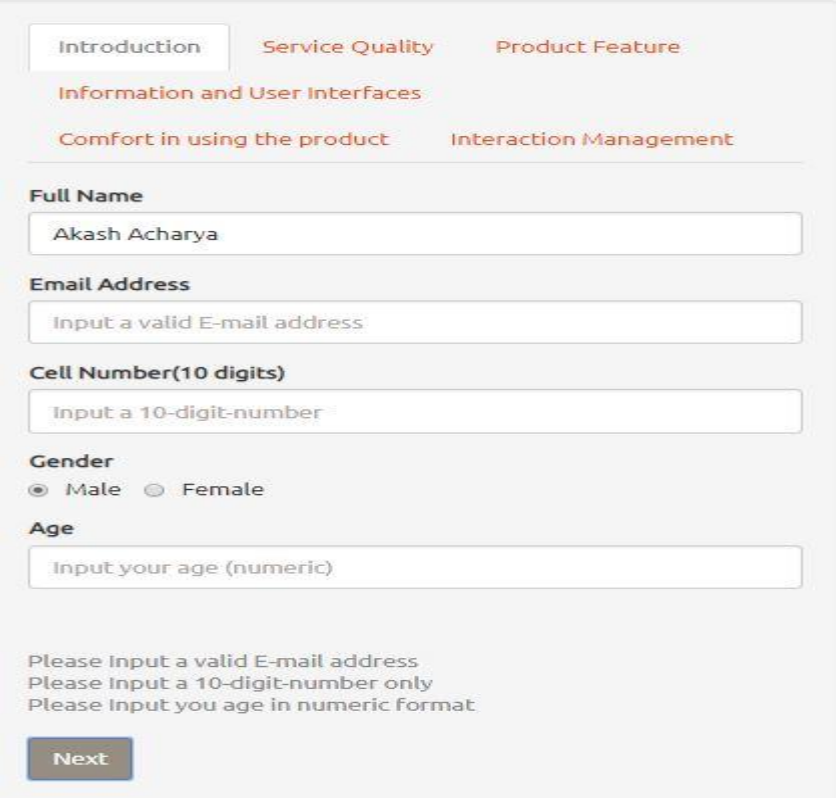

Figure 8:Test Case for the validation of empty form

Test Case 2: Validation of Email

Table 5:Validation of Email

S. No.	Test Inputs	Expected Output	Actual Output	Result
1.	Full Name: Akash Acharya Email Address: akshachrya Cell Number: 9843313377 Gender: Male Age:22	Email should be on standard format.	Warning message is shown for email.	Test Successful

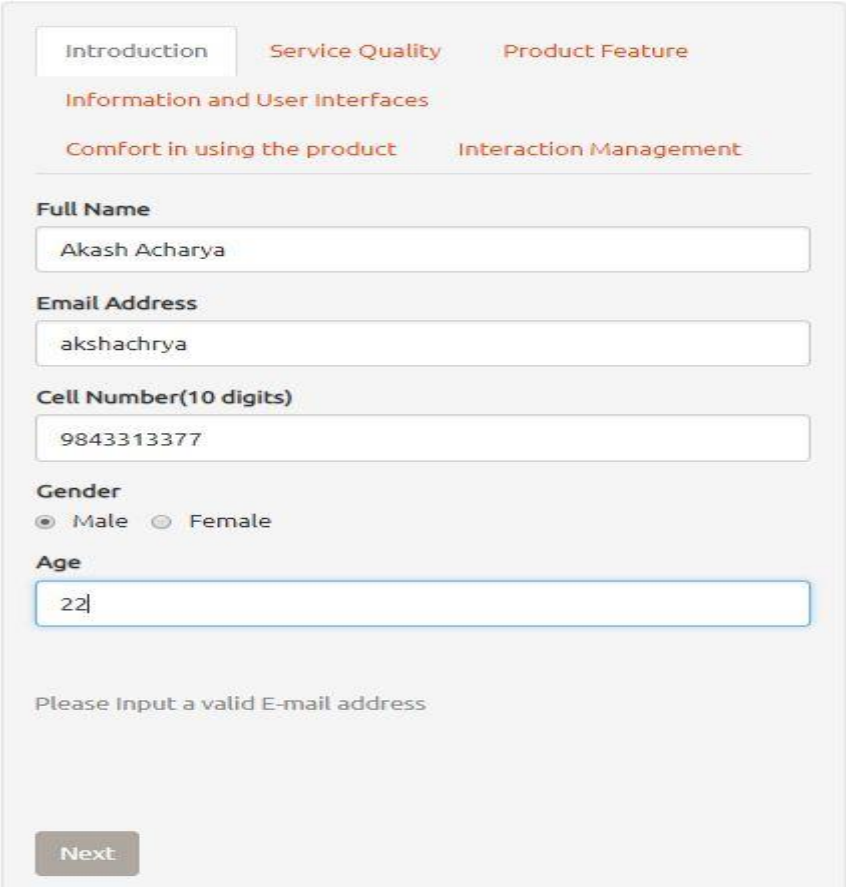

Figure 9:Test Case for the validation of Email

Test Case 3: Validation of Age in numeric format

Table 6:Validation of Age in numeric format

S. No.	Test Inputs	Expected Output	Actual Output	Result
1.	Full Name: Akash Acharya Email Address:	Age should be on numeric format.	Warning message is	Test Successful

	akshachrya@gmail.com Cell Number: 9843313377 Gender: Male Age: abc		shown for age.	

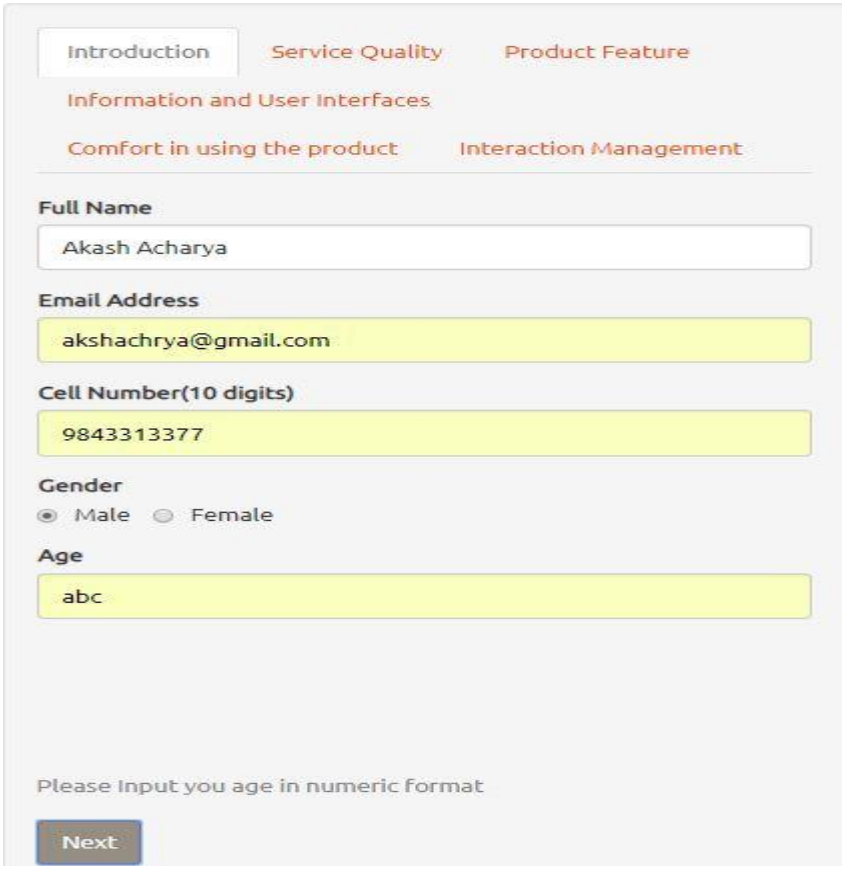

Figure 10: Test Case for the validation of age

4.2.2 Integration Testing

Integration testing was done after unit testing by combining different individual modules. Some of the major test cases are listed below:

Test Case 1: Fill the web widget and see the change in Google Sheet and Dashboard

Table 7: Integration testing

S. No.	Test Inputs	Expected Output	Actual Output	Result
1.	**Fill the web widget** Full Name: Akash Acharya Email Address: akshachrya@gmail.com Cell Number: 9843313377 Gender: Male Age: 23 …… **See the new add up in google sheet** Previously there are 22 survey data and after the new survey there should be 23 survey data. **See the change in BI Dashboard** The visualization and every data should be changed as per the survey data.	There should be update in Google Sheet and BI Dashboard.	There should be update in Google Sheet and BI Dashboard.	Test Successful

Time	Full Name	Email	Phone Number	Gender	Age	Quality of Servi	Process of getti	Quality of custo	Time taken by c	Knowledge of c	Wait time for my	Posibi
2018-12-26	Bimala Baral	bimalabaral@gm	9843313377	Female	45	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutra
2018-12-26	Namita Shrestha	naita@gmail.com	1234567890	Female	23	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutra
2018-12-26	Nimisa Acharya	nimisha.a@gmai	1234567890	Female	23	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutra
2018-12-26	Jitendra	j@gmail.com	1111111111	Male	34	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutra
2018-12-26	Bimala Bista	bimalabaral@gm	9843313377	Female	45	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutra
2018-12-26	Jaya	j@gmail.com	1111111111	Female	34	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutra
2018-12-26	Nini Acharya	nini.a@gmail.cor	1234567890	Female	23	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutra
2018-12-26	Bini Acharya	bini.a@gmail.cor	1234567890	Female	23	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutra
2018-12-26	Bisham Vanja	bisham@gmail.c	9843313322	Male	23	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutra
2018-12-27	Bir	bir@gmail.com	5555555555	Male	55	Unsatisfied	Unsatisfied	Unsatisfied	Unsatisfied	Unsatisfied	Unsatisfied	Unlike
2018-12-27	Bijay Karki	bijaykarki@gmail	1234567890	Male	78	Satisfied	Satisfied	Satisfied	Satisfied	Satisfied	Satisfied	Likely
2018-12-27	Basanta Shahi	bsnta@gmail.cor	1234567890	Male	22	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutra
2018-12-28	B	aasdas	123123123121	Male	34	Very Unsatisfied	Very Unsatisfied	Unsatisfied	Very Unsatisfied	Very Unsatisfied	Very Unsatisfied	Very U
2019-01-04	Bimala Baral	bimala.baral@gn	9843313311	Female	55	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutra
2018-01-04	Laxman Shahi	laxman@gmail.c	1234567911	Male	22	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutra
2019-01-07	Bimal Rai	bimalrai@gmail.c	9843355122	Male	22	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutra
2019-01-12	Bhuwan Bhujel	bhuwan@gmail.c	1111111111	Male	32	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutra
2019-01-21	bhabuk	bhabukpokharel2	9815214004	Male	25	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutra
2019-01-22	Basanta	bsnta@gmail.cor	1111111111	Male	22	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutra

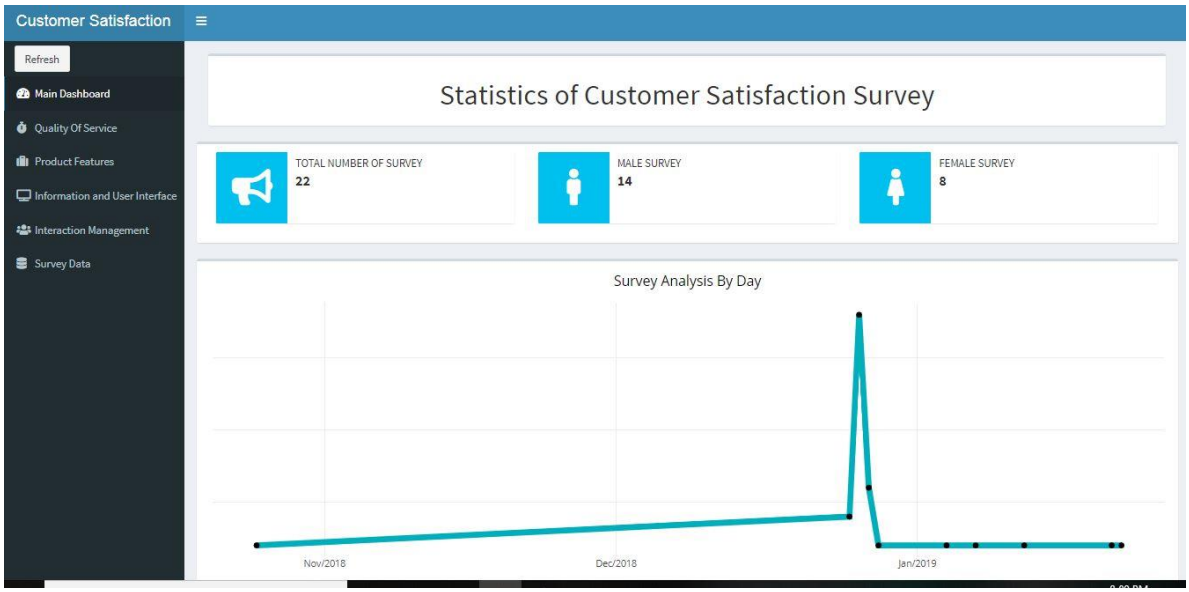

Figure 11:Before Integrated Test Case of google sheet and Dashboard

Time	Full Name	Email	Phone Number	Gender	Age	Quality of Servi	Process of getti	Quality of custo	Time taken by c	Knowledge of c	Wait time for my	Posibl
2018-12-26	Jaya	j@gmail.com	1111111111	Female	34	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutra
2018-12-26	Nini Acharya	nini.a@gmail.cor	1234567890	Female	23	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutra
2018-12-26	Bini Acharya	bini.a@gmail.cor	1234567890	Female	23	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutra
2018-12-26	Bisham Vanja	bisham@gmail.c	9843313322	Male	23	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutra
2018-12-27	Bir	bir@gmail.com	5555555555	Male	55	Unsatisfied	Unsatisfied	Unsatisfied	Unsatisfied	Unsatisfied	Unsatisfied	Unlike
2018-12-27	Bijay Karki	bijaykarki@gmail	1234567890	Male	78	Satisfied	Satisfied	Satisfied	Satisfied	Satisfied	Satisfied	Likely
2018-12-27	Basanta Shahi	bsnta@gmail.cor	1234567890	Male	22	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutra
2018-12-28	B	aasdas	123123123121	Male	34	Very Unsatisfied	Very Unsatisfied	Unsatisfied	Very Unsatisfied	Very Unsatisfied	Very Unsatisfied	Very U
2019-01-04	Bimala Baral	bimala.baral@gn	9843313311	Female	55	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutra
2018-01-04	Laxman Shahi	laxman@gmail.c	1234567911	Male	22	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutra
2019-01-07	Bimal Rai	bimalrai@gmail.(	9843355122	Male	22	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutra
2019-01-12	Bhuwan Bhujel	bhuwan@gmail.(	1111111111	Male	32	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutra
2019-01-21	bhabuk	bhabukpokharel2	9815214004	Male	25	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutra
2019-01-22	Basanta	bsnta@gmail.cor	1111111111	Male	22	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutra
2019-01-26	Akash Acharya	akshachrya@gm	9843313377	Male	21	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutra

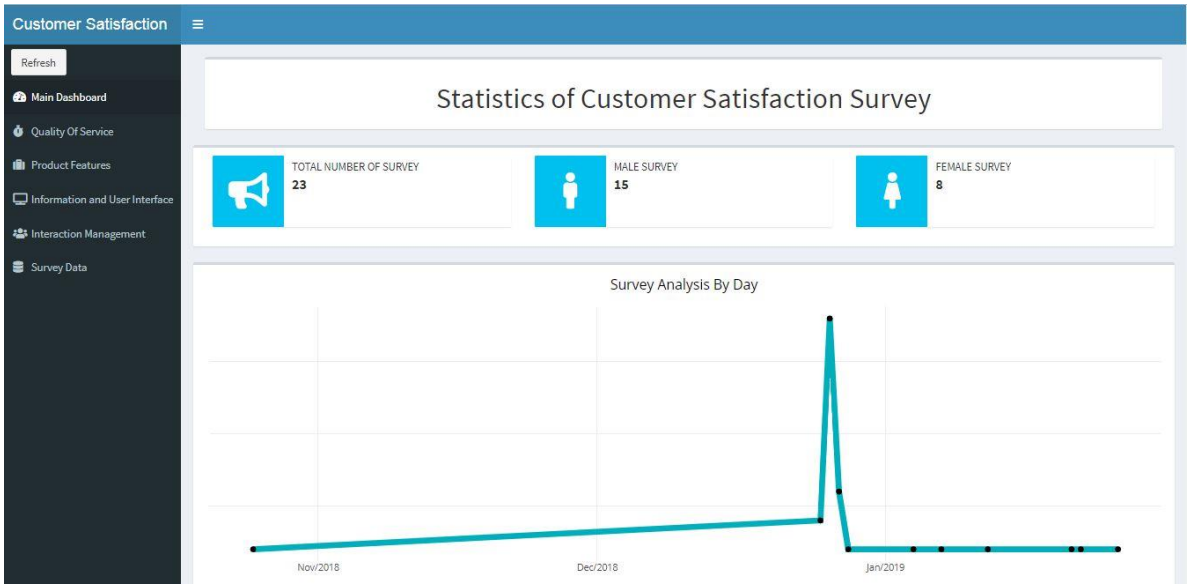

Figure 12:After Integrated Test Case of google sheet and Dashboard

4.2.3 System Testing

System testing has done after integrating testing in order to ensure that the whole systems functions properly. After the integration testing the whole system working process was checked. The output was as per the system specifications and hence the system was found to work properly.

CHAPTER 5: CONCLUSION

5.1 Conclusion

In current context, the increasing information Technology has built up the software development trend. To follow the trend internship provides a bridge for the industrial environment for the undergraduate to learn and experience the real world. Internship has helped in adapting well to working under pressure. Working with multiple features in a single week-long sprint and handling immediate and urgent bugs have assisted in enhancing professionalism to meet deadlines. The technical tasks that were undertaken during the internship period have helped the intern in improving software development and debugging skills. It has helped in gaining knowledge about various technical tools and frameworks used in software development and the process that should be followed for proper development completion. Working as an intern in one of the popular IT companies of Nepal, has boosted the confidence and has polished the professional as well as soft skills of the intern in the IT sector. As whole, this report includes project and the internship experiences, findings, knowledge and the technical skills.

5.2 Lessons Learnt

Through the internship from Podamibe, the lessons learnt were:

- Importance of time management and working with multiple features under pressure to meet deadlines.
- Immediate handling of urgent bugs and fixing them.
- Understanding the differences between theoretical and practical knowledge.
- Working in team with coordination and cooperation to make quality decisions.
- Working as BI Analyst/Developer can be considered as a potential career.

References

Appendix: Screenshots

1. Web Widget

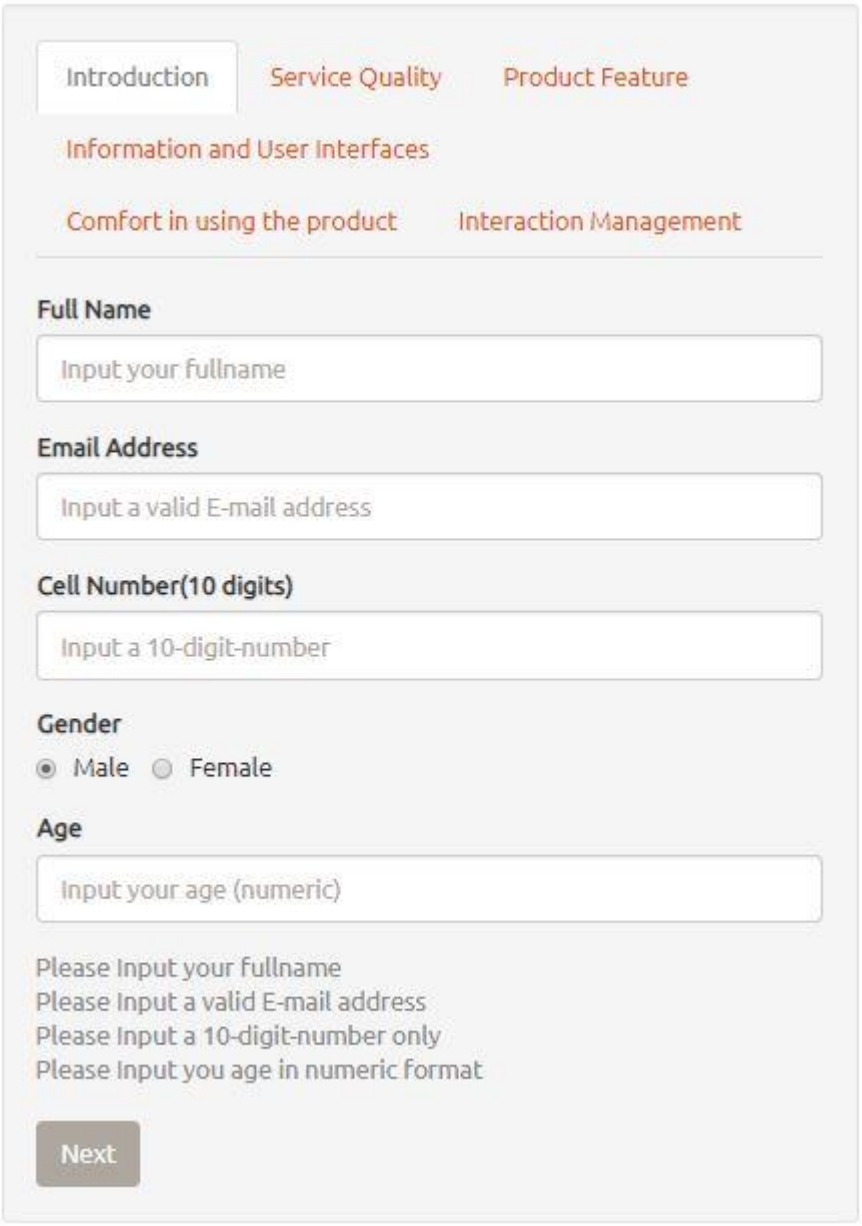

Figure 13:Web Widget

2. Google Sheet as Database

Time	Full Name	Email	Phone Number	Gender	Age	Quality of Servi	Process of getti	Quality of custo	Time taken by c	Knowledge of c	Wait time for my	Posibl
2018-12-26	Jaya	j@gmail.com	1111111111	Female	34	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutra
2018-12-26	Nini Acharya	nini.a@gmail.cor	1234567890	Female	23	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutra
2018-12-26	Bini Acharya	bini.a@gmail.cor	1234567890	Female	23	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutra
2018-12-26	Bisham Vanja	bisham@gmail.c	9843313322	Male	23	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutra
2018-12-27	Bir	bir@gmail.com	5555555555	Male	55	Unsatisfied	Unsatisfied	Unsatisfied	Unsatisfied	Unsatisfied	Unsatisfied	Unlike
2018-12-27	Bijay Karki	bijaykarki@gmail	1234567890	Male	78	Satisfied	Satisfied	Satisfied	Satisfied	Satisfied	Satisfied	Likely
2018-12-27	Basanta Shahi	bsnta@gmail.cor	1234567890	Male	22	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutra
2018-12-28	B	aasdas	123123123121	Male	34	Very Unsatisfied	Very Unsatisfied	Unsatisfied	Very Unsatisfied	Very Unsatisfied	Very Unsatisfied	Very U
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2018-01-04	Laxman Shahi	laxman@gmail.c	1234567911	Male	22	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutra
2019-01-07	Bimal Rai	bimalrai@gmail.c	9843355122	Male	22	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutra
2019-01-12	Bhuwan Bhujel	bhuwan@gmail.c	1111111111	Male	32	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutra
2019-01-21	bhabuk	bhabukpokharel2	9815214004	Male	25	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutra
2019-01-22	Basanta	bsnta@gmail.cor	1111111111	Male	22	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutra
2019-01-26	Akash Acharya	akshachrya@gm	9843313377	Male	21	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral	Neutra

Figure 14:Google Sheet as Database

3. BI Dashboard

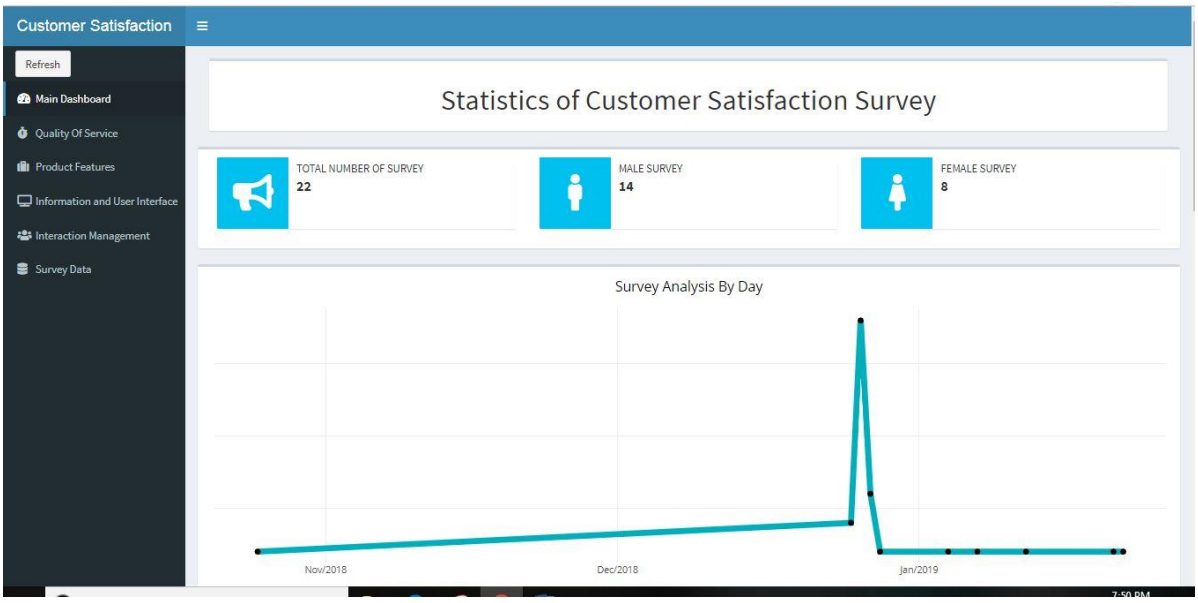

Figure 15: BI Dashboard

4. BI Dashboard with visualization

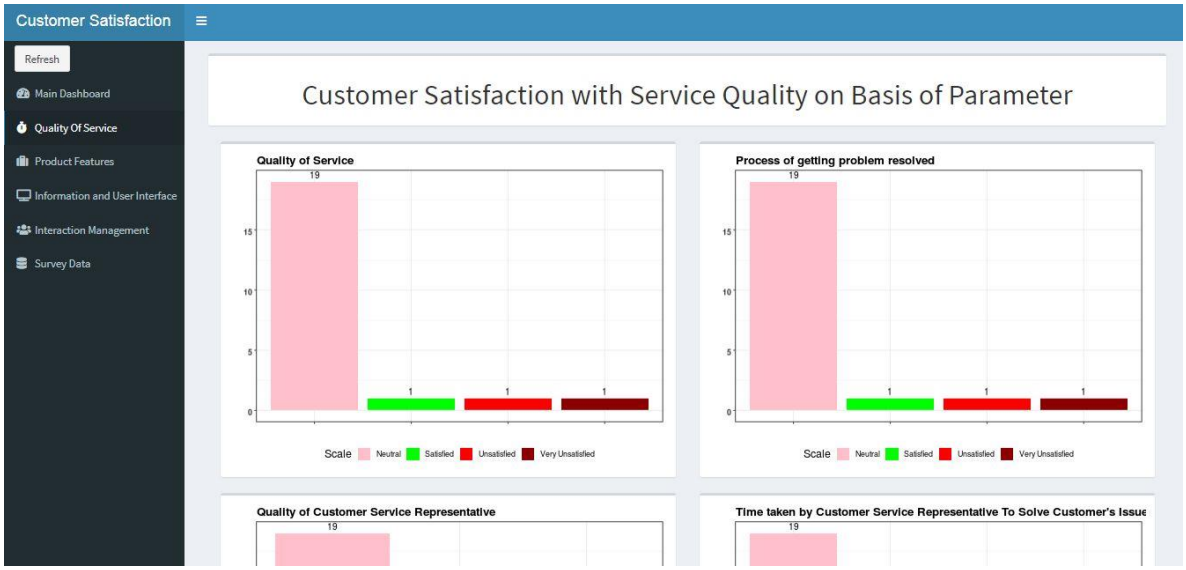

Figure 16:BI Dashboard with visualization