Shree Swaminarayan College of Computer Science

(Affiliated to M. K. Bhavnagar University)

ONLINE COURIER MANAGEMENT SYSTEM

BY

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UNDER GUIDANCE

OF

Ms. DRASHTI JANI

SUBMITTED TO

SHREE SWAMINARAYN COLLEGE OF COMPUTER SCIENCE

FOR DEGREE OF

BACHALOR OF COMPUTER APPLICATIONS

Shree Swaminarayan College of Computer Science

(Affiliated to M. K. Bhavnagar University)

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Candidate:

1.Chauhan Mansi S.

Abstract

It is now-a-days very important for the people to send or receive articles like imported furniture, electronic items, gifts, business goods and the like. People depend vastly on different transport systems which mostly use the manual way of receiving and delivering the articles.

There is no way to track the articles till they are received and there is no way to let the customer know what happened in transit, once he booked some articles. In such a situation, we need a system which completely computerizes the cargo activities including time to time tracking of the articles sent.

This need is fulfilled by Courier Management System software which is online software for the cargo management people that enables them to receive the goods from a source and send them to a required destination and track their status from time to time.

This project deals with the 'Courier Information System'. The system is used for daily activities such as booking a courier, maintain employee details, process payroll of employees, maintain hub details, maintain company details etc,..

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Project Profile

Project Title	Online Courier Management System
Developed For	Shree Swaminarayan College Of Computer Science
Developed By	Mansi Chauhan S(21260025)
Internal Guide	Ms. Drashti Jani
Tools	Microsoft Visual Studio 2012 (Asp.Net with C#) Microsoft SQL Server
Operating System	Windows X
Browser	Internet Explorer
Types of Application	Web Application
Project Duration	90 days
Academic Year	2019-2020

CHAPTER-1

INTRODUCTION

- Project Background
- Project Objectives
- Project Purpose
- Project Scope

1.1 Project Background

Online courier service is website provide different types of operation of courier management system. It provides courier booking, pick up facility ,billing tracking consignment,delivery status and more functionality for courier system.This website also helps to courier company as well as customer.

Courier services means any services provided to a customer, by a courier agency in
relation to door-to-door transportation of time sensitive documents, goods or articles.

"Courier agency means a commercial concern engaged in the door-to-door transportation of time sensitive documents, goods or articles, utilizing the services of
person, either directly or indirectly, to carry or accompany such goods, documents or articles

1.2 Objectives

The main objective of our website is that customer can direct book his consignment ,document or parcel without visit physically courier .Once a customer can book his document and send his pick up request them a pick up man visit his address and pick up document.The objective of the project is deliver and efficient courier management, a part from calculating the courier bill time required to reach the detination.

As per our client requirement our main objective should be managing consignment in an effective manner. The proposed system is elimating all problem of the existing system. And automate all process in high-teach .It should keep record of customer booking and delivery details and so on be proficient without much effort the success criteria depend on. The accuracy in predicting the time required to reach the destination.

1.3 Project of Purpose

Right now in courier system operation a customer can book his document through any courier company but need to go at courier office customer can just fill pick up request and send his document to destination so it is very easy for customer

and courier company. This is new features for any courier company.

Easily make all operation of courier in our website .The main scope of this system is system increases the customer satisfaction.

It should also provide often need reports to satify the need of the concern.

This project deals with the 'Courier management'. The system is used for daily activities such as booking, non delivery, out return, company details, hubr ates, and pickup centers. It is very difficult to do this process manually. Hence it is recommended to computerize the process by developing the relative software as the world is turning into information and technology; computerization becomes necessity in all walks of life.

1.4 Scope Of Project

- This project provides the facility to all users to send and receive the courier.
- They can get the information of the status of the courier. System development is also considered as a process backed by engineering approach.
- Courier agency is considered as an expansion of business relations.
- It contributes a lot by providing quick & fast services of sending documents letters (formal & informalboth) to business as it enables any business to flourish.
- This project is for only Domestic Courier Management
- In this project we only focus on Client Management and partially Employee Management.
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- Management and partially Employee Management.

CHAPTER-2

REQUIREMENT AND ANALYSIS

- Problem Definination
- Requirement Specification
- Feasibility Study
- Functional Requirement Specification
- Non-functional requirement
- Performance requirement
- Technology and literature review
- Planning and scheduling
- Hardware software requirements
- Preliminary production description

2.1 Problem Definition:

People when using any parcel service want to known whether their product has been shifted to their right place or not ,if not then by what time it will be shifted and where it is now Customer that deliver parcel were disadvantage in that they had to keep all information of parcel there are deliveries on paper and also they spent a lot trying to get the person who will receive the parcel by calling them which cost a lot of money to the company but by use of this system it will get rid of paper work and also the information of what was begin delivered will be kept for future reference.

2.2 Requirement Specification:

Requirement is concerned with identification the basic function of the software component in hardware / software / people system.

It is related to getting the requirements and the various specifications. Which are, require for developing particular software. The basic idea behind of requirement analysis is to know about what the customer wants all the details and information concerning to the software to be developed are taken from the client either by going to his place or getting the information pertaining to employees etc. This phase of system development life cycle if of almost important because it carries with a huge amount of relevant data which will be used in developing a software. If this phase is not carried out properly then there are changes that there will be shortcomings or bugs in the software, which is going to be developed by the programmers.

2.2.1 Feasibility Study

Every software project begins with a judgment as to whether the project is valuable or not. This is called a feasibility study. Sometimes this assessment is carried out in a detailed and systematic
fashion.

Software feasibility has three solid dimensions:

- Technical Feasibility
- Operational feasibility
- Cost-benefit analysis(Economic Feasibility)

Before beginning a project, there is a crucial decision that must be made: Is the proposal technically feasible? That is, will the technology actually work?
The answer of the above question is: “This project is technically feasible. It successfully satisfies the users’ basic requirements.

The tools and application software’s used in this project are very popular and easily available across the world”.ASP.NET provides a complete environment for building, deploying and running .NET Web Applications.

The purposes of the feasibility study are to find out if an information system project can be done and to suggest possible alternate solutions. Feasibility Study is done to check whether the proposed system will be able to work within available resources(hardware, software, other equipments), it is also use to determine whether the system gives benefit to people or society or not?, and whether the proposed system will work as per the expectation of the company or not.

1. Technical Feasibility:

A large part of determining resources has to do with assessing technical feasibility. It must be found out whether current technical resources can be upgraded or added to in a manner that fulfils the request under consideration.

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

- Can the system be upgraded if developed?
- Are there technical guarantees of accuracy, reliability, ease of access and data security?

Earlier no system existed to cater to the needs of 'Secure Infrastructure Implementation System'. The current system developed is technically feasible. It is a web based user interface for audit workflow at NIC-CSD. Thus it provides an easy access to the users. The database's purpose is to create, establish and maintain a workflow among various entities in order to facilitate all concerned users in their various capacities or roles. Permission to the users would be granted based on the roles specified. Therefore, it provides the technical guarantee of accuracy, reliability and security. The software and hard requirements for the development of this project are not many and are already available in-house at NIC or are available as free as open source. The work for the project is done with the current equipment and existing software technology. Necessary bandwidth exists for providing a fast feedback to the users irrespective of the number of users using the system.

2. Operational Feasibility:

The system will hold good GUI facilities which attract the user to use the system. The system will be developed using new technologies so the user will even get a chance work with and learn new technology and environment. Company is having sufficient employees for designing, implementing, testing, deploying and the training the employee to uses that system. The Proposed System is a Web-Based Computerized Application so it will require some training to be given to the admin of the system.

Proposed projects are beneficial only if they can be turned out into information system. That will meet the organization's operating requirements. Operational feasibility aspects of the project are to be taken as an important part of the project implementation. Some of the important issues raised are to test the operational feasibility of a project includes the following: -

- Is there sufficient support for the management from the users?
- Will the system be used and work properly if it is being developed and implemented?
- Will there be any resistance from the user that will undermine the possible application benefits?

This system is targeted to be in accordance with the above-mentioned issues. Beforehand, the management issues and user requirements have been taken into consideration. So there is no question of resistance from the users that can undermine the possible application benefits.

The well-planned design would ensure the optimal utilization of the computer resources and would help in the improvement of performance status.

3. Economical Feasibility:

The proposed system that is going to develop that returns (benefit) is indirect benefit and cost is direct cost that is to be paid. It cost for its development and hiring of the server space.Money provides the ready-made metric for measuring value. This kind of investigation is called investment appraisal or a cost-benefit analysis. The organization expereturn on investment. In this approach, two quantities are calculated:

1. The cost of providing the system
2. The money saved or created by using the system – the benefit.

If the benefit is greater than the cost, the system is worthwhile; otherwise, it is not. If there is some other way of accomplishing the same task, which may be manually, then it is necessary to compare the two costs. Whichever technique gives the smaller cost is the one to select, if the benefit is greater than the cost. With each of these criteria, we can associate a cost, though for some it is less easy.

cost to buy equipment, principally the hardware:

- cost to develop the software
- cost of training
- cost of lost work during switchover
- cost to maintain the system
- cost to repair the equipment in the event of failure

- cost of lost work in the event of failure
- cost to upgrade, in the event of changed requirements.

In This project, it also requires the salary structure of the employees. We could not manage to get those data for some unavoidable reasons. At this level, the project may be called a demo project at desktop level. Such study can be made when the project advances to a higher level.

1. Functional Requirement Specification

2.

o Input Design

Input design is a part of overall system design. The main objective during the input design is as given below:

- To produce a cost-effective method of input.
- To archive the highest possible level of accuracy.
- To ensure that the input is acceptable and understood by the user.

This section gives a functional requirement that is applicable to this online appointment system.

o Output Design

Outputs from computer systems are required primarily to communicate the results of processing to users. They are also used to provide a permanent copy of the results for later consultation. The various types of outputs in general are:

- External Outputs, whose destination is outside the organization.
- Internal Outputs whose destination is with in organization and they are the
- User's main interface with the computer.
- Operational outputs whose use is purely with in the computer department.
- Interface outputs, which involve the user in communicating directly.

3. Non-functional requirement

Performance requirement:

- The database shall be able to accommodate a minimum of 10,000 records of students.

- The software shall support use of multiple users at a time.
- There are no other specific performance requirements that will affect development.

Security Requirements

Security of the system shall be definitely be maintained through the password system. Each employee of every branch office will need to be authenticated with a login id and password. Any employee cannot change the system date to make proxy presentation of yourself.

Assign certain functions to different modules

- Restrict communications between some areas of the program
- Check data integrity for critical variables
- User must login with his own id and password.

Performance requirement

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

The requirement specification for any can be broadly stated given below

- The system should be able to interface with the existing system
- The system should be accurate
- The system should be better than the existing.

2.3 Technology and literature review

The various system tools that have been used in developing both the front end and the back end of the project are being discussed in this chapter.

2.3.1 What is .NET?

.NET is a “revolutionary new platform, built on open internet protocols and standards with tools and services that meld computing and communication in new ways”.

The .NET framework is just part of microsoft’s overall .NET platform strategy. The framework is made up of the common language runtime environment, base class library, and higher-level frameworks such as ASP.NET

And windows form as shown in figure.

The common language runtime (CLR) is the foundation that sits on top of the windows operating system. The base class library is a set of hundreds of classes that are provided as part of the framework to help us build applications that will execute in the CLR. To make building applications even easier Microsoft provides some higher-level framework like ASP.NET and windows forms that utilize and extend the functionality provided by the class library. ASP.NET greatly simplifies the building of internet applications by using web forms and web services. Windows forms provide the ability to develop for the rich environment that the windows platform provides.

The .NET Framework is a new computing platform that simplifies application development in the highly distributed environment of the Internet. The .NET Framework is designed to fulfill the following objectives:

- To provide a consistent object-oriented programming environment whether object code is stored and executed locally, executed locally but Internet-distributed, or executed remotely.
- To provide a code-execution environment that minimizes software

deployment and versioning conflicts.

- To provide a code-execution environment that guarantees safe execution of code, including code created by an unknown or semi-trusted third party.
- To provide a code-execution environment that eliminates the performance problems of scripted or interpreted environments.
- To make the developer experience consistent across widely varying types of applications, such as Windows-based applications and Web-based applications.
- To build all communication on industry standards to ensure that code based on the .NET Framework can integrate with any other code.

The .NET Framework has two main components: the common language runtime and the .NET Framework class library. The common language runtime is the foundation of the .NET Framework. You can think of the runtime as an agent that manages code at execution time, providing core services such as memory management, thread management, and remoting, while also enforcing strict type safety and other forms of code accuracy that ensure security and robustness. In fact, the concept of code management is a fundamental principle of the runtime. Code that targets the runtime is known as managed code, while code that does not target the runtime is known as unmanaged code. The class library, the other main component of the .NET Framework, is a comprehensive, object-oriented collection of reusable types that you can use to develop applications ranging from traditional command-line or graphical user interface (GUI) applications to applications based

on the latest innovations provided by ASP.NET, such as Web Forms and XML Web services.

The .NET Framework can be hosted by unmanaged components that load the common language runtime into their processes and initiate the execution of managed code, thereby creating a software environment that can exploit both managed and unmanaged features. The .NET Framework not only provides several runtime hosts, but also supports the development of third-party runtime hosts.

For example, ASP.NET hosts the runtime to provide a scalable, server-side environment for managed code. ASP.NET works directly with the runtime to enable Web Forms applications and XML Web services, both of which are discussed later in this topic.

Internet Explorer is an example of an unmanaged application that hosts the runtime (in the form of a MIME type extension). Using Internet Explorer to host the runtime enables you to embed managed components or Windows Forms controls in HTML documents. Hosting the runtime in this way makes managed mobile code (similar to Microsoft® ActiveX® controls) possible, but with significant improvements that only managed code can offer, such as semi-trusted execution and secure isolated file storage.

4. Features of the Common Language Runtime

The common language runtime manages memory, thread execution, code execution, code safety verification, compilation, and other system services. These features are intrinsic to the managed code that runs on the common language runtime.

The runtime enforces code access security. For example, users can trust that an executable embedded in a Web page can play an animation on screen or sing a song, but cannot access their personal data, file system, or network. The security features of the runtime thus enable legitimate Internet-deployed software to be exceptionally feature rich.

. The runtime also accelerates developer productivity. For example, programmers can write applications in their development language of choice, yet take full advantage of the runtime, the class library, and components written in other languages by other developers. Any compiler vendor who chooses to target the runtime can do so. Language compilers that target the .NET Framework make the features of the .NET Framework available to existing code written in that language, greatly easing the migration process for existing applications.

The runtime is designed to enhance performance. Although the common language runtime provides many standard runtime services, managed code is never interpreted. A feature called just-in-time (JIT) compiling enables all managed code to run in the native machine language of the system on which it is executing. Meanwhile, the memory manager removes the possibilities of fragmented memory and increases memory locality-of-reference to further increase performance.

Finally, the runtime can be hosted by high-performance, server-side applications, such as Microsoft® SQL Server™ and Internet Information Services (IIS). This infrastructure enables you to use managed code to write your business logic, while still enjoying the superior performance of the industry's best enterprise servers that support runtime hosting.

2.3.2. NET Framework Class Library

The .NET Framework class library is a collection of reusable types that tightly integrate with the common language runtime. The class library is object oriented, providing types from which your own managed code can derive functionality. This not only makes the .NET Framework types easy to use, but also reduces the time associated with learning new features of the .NET Framework. In addition, third-party components can integrate seamlessly with classes in the .NET Framework.

2.3.3 Introduction of C#:

To June 2000, Microsoft announced both the .Net platform and a new programming language called C#. C# is a strongly typed object-oriented language designed to give the optimum blend of simplicity, expressiveness and performanc

A. Features of C#:

- **Simplicity:** The foremost goal for this programming language was simplicity. Pointers are a prominent feature that is missing in C#. It provides working with managed code, whereunsafe operations such as direct manipulation are not allowed.
- **Extensive interoperability:**with C#, every object is automatically a COM object. Developers no longer have to explicitly implement the unknown and other COM interfaces. Instead those features are built in.
- **Object Oriented:**it supports three object-oriented concepts:
    1. Encapsulation
    2. Inheritance
    3. Polymorphism
- **Productivity and safety:**C# are designed to help developers do

more with fewer lines of code and fewer opportunities for errors.

- **Type-Safe:**C# does away unsafe casts. You can not cast from an integer to a reference type, and when you downcast, C# verifies that this is okay. Bounds checking are part of C#. reference parameters that are passed in C# are type-safe.

- **Power and flexibility:** The C# language allows for typed, extensible metadata that can be applied to any object. The developer then can programmatically examine the attributes on each element. This makes it easy.

B. ASP.NET

The .NET by Microsoft company is to overcome the difficulties in the ASP. Microsoft ensured the asp scripts execute without modification on the machine with the .NET framework.

- **Advantages**

Separation of code from the content ASP.NET allows the developer to separate script code from html. This allows for a clean separation of code from content and formatting and promotes code reuse.

Support for compiled languages. While ASP.NET still supports the traditional set of scripting languages, support is also provided for fully compiled language, instead of using scriptthe developer can use VB.NET and access features such as strong typing and object-oriented programming.

Greater support for different browsers via server-side controls and events. Following object-oriented design principles, ASP.NET pages make use of server-side controls called ASP.NET web controls.

C. Execution Process

The managed execution process includes the following steps:

1. **Choosing a Complier**

To obtain the benefits provided by the common language runtime, you must use one or more language compilers that target the runtime.

2. **Compiling your code to Microsoft Intermediate Language (MSIL)**

Compiling translates your source code into MSIL and generates the required metadata.

3. **Compiling MSIL to native code**

At execution time, a just-in-time (JIT) compiler translates the MSIL into native code. During this compilation, code must pass a verification process that examines the MSIL and metadata to find out whether the code can be determined to be type safe.

4. **Executing your code**

The common language runtime provides the infrastructure

2.3.4 DOT NET DATABASE CONNECTIVITY (ADO.NET)

ADO.NET uses a multilayered architecture that revolves around a few key concepts, such as Connection, Command, and Dataset objects. However, the ADO.NET architecture is quite a bit different from classic ADO.

One of the key differences between ADO and ADO.NET is how they deal with the challenge of different data sources. In ADO, programmers always use a generic set of objects, no matter what the underlying data source is. For example, if you want to retrieve a record from an Oracle database, you use the same Connection class you would use to tackle the same task with SQL Server. This isn't the case in ADO.NET, which uses a data provider model.

2.3.5 ADO.NET Data Providers

A data provider is a set of ADO.NET classes that allows you to access a specific database, execute SQL commands, and retrieve data. Essentially, a data provider is a bridge between your application and a data source.

The classes that make up a data provider include the following:

- **Connection:** You use this object to establish a connection to a data source.
- **Command:** You use this object to execute SQL commands and stored procedures.
- **Data Reader:** This object provides fast read-only, forward-only access to the data retrieved from a query.
- **Data Adapter:** This object performs two tasks. First, you can use it to fill a Dataset (a disconnected collection of tables and relationships) with information extracted from a data source. Second, you can use it to apply changes to a data source, according to the modifications you've made in a Dataset.

ADO.NET doesn't include generic data provider objects. Instead, it includes different data providers specifically designed for different types of data sources. Each data provider has a specific implementation of the Connection, Command, DataReader and DataAdapter classes that's optimized for a specific RDBMS (Relational database management system). For example, if you need to create a connection to a SQL Server database, you'll use a connection class named SQL Connection.

One of the key underlying ideas of the ADO.NET provider model is that it's extensible. In other words, developers can create their own provider for proprietary data sources. In fact, numerous proof-of-concepts examples are available that show how you can easily create custom ADO.NET providers to wrap no relational data stores, such as the file system or a directory service. Some third-party vendors also sell custom providers for .NET.

The .NET Framework is bundled with a small set of four providers:

- **SQL Server Provider:** Provides optimized access to a SQL

Server database(version 7.0 or later).

- **OLEDB Provider:** Provides access to any data source that has an OLEDB driver. This includes SQL Server databases prior to version 7.0.
- **Oracle Provider:** Provides optimized access to an Oracle database(version 8i or later).
- **ODBC Provider:** Provides access to any data source that has an ODBC driver.

2.4 Planning and scheduling

Sr.no	Planning	Days
1.	Analysis	10 days
2.	Requirement gathering	10 days
3.	Designing	20 days
4.	Coding	30 days
5.	Testing	10 days
6.	Implementation	5 days
7..	Reporting/Documentation	15 ays

Figure: 2.4.1 Scheduling chart

2.5 Hardware software requirements:

2.5.1 Hardware requirements:

- RAM : Minimum 1 GB
- Hard disk : 80 GB HDD

2.5.2 Software requirements:

- Front End : Asp.net with c # coding

- Back End : Microsoft SQL server
- Tool : Visual studio with sql server compact edition
- Operating system : windows X
- Browser : Internet Explorer or Google Chrome
- Types of application: web application

2.6 Preliminary production description:

Courier management system (CMS) is a modular full business software framework for an enterprise which posses operations in domestic and international courier services. CMS performs a variety of activities pertaining to the processes in the logistic context of a courier business. CMS solution handles the end to end process starting from initiating a courier order, driver pick up and delivery of a courier business. CMS covers all the controls and processes involved in international courier import services, international courier export services and domestic pick up & Delivery.

CHAPTER-3

SYSTEM DESIGN

- Over all System Design Using Designing Tools
- Data Dictionary
- Data flow Diagram (DFD)
- E-R Diagram
- Input/ Output Design

3.1 Overall System Design Using Designing Tools

1. Function of System

There are main three function of this web application.

- Admin
- Employee
- Courier

2. Main Moduales Of New System

The system under consideration has been divided into the several modules taking in consideration the above mentioned criteria.the different modules are

- User Rgistration
- Employee Registration
- courier Details
-

3.2. Project Designing

3. Design Document

- The entire system is projected with a physical diagram which specifics the actual storage parameters that are physically necessary for any database to be stored on to the disk. The overall systems existential idea is derived from this diagram.

- The relation upon the system is structure through a conceptual ER-Diagram, which not only specifics the existential entities but also the standard relations through which the system exists and the cardinalities that are necessary for the system state to continue.

- The content level DFD is provided to have an idea of the functional inputs and outputs that are achieved through the system. The system depicts the input and out put standards at the high level of the systems existence.

4. Data Flow Diagrams:

Data flows are data structures in motion, while data stores are data structures. Data flows are paths or 'pipe lines', along which data structures travel, where as the data stores are place where data structures are kept until needed.

Data flows are data structures in motion, while data stores are data structures at rest. Hence it is possible that the data flow and the data store would be made up of the same data structure.

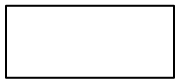
Data flow diagrams is a very handy tool for the system analyst because it gives the analyst the overall picture of the system, it is a diagrammatic approach.

A DFD is a pictorial representation of the path which data takes From its initial interaction with the existing system until it completes any interaction. The diagram

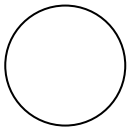
will describe the logical data flows dealing the movements of any physical items. The DFD also gives the insight into the data that is used in the system i.e., who actually uses it is temporarily stored.

A DFD does not show a sequence of steps. A DFD only shows what the different process in a system is and what data flows between them.

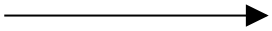
The following are some DFD symbols used in the project:



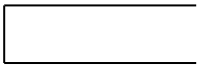
External entities



Process: A transaction of information that resides within the bounds of the system to be module.



Dataflow



DATASTORE:A repository of data that is to be stored for use by one or more processes, may be as simple as buffer of queue or as a relational database.

5. RULES FOR DFD:

- Fix the scope of the system by means of context diagrams.
- Organize the DFD so that the main sequence of the actions reads left to right and top to bottom.
- Identify all inputs and outputs.
- Identify and label each process internal to the system with rounded circles.
- A process is required for all the data transformation and transfers. Therefore, never connect a data store to a data source or the destinations or another data store with just a data flow arrow.
- Do not indicate hardware and ignore control information.
- Make sure the names of the processes accurately convey everything the process is done.
- There must not be unnamed process.
- Indicate external sources and destinations of the data, with squares.
- Number each occurrence of repeated external entities.

- Identify all data flows for each process step, except simple Record retrievals.
- Label data flow on each arrow.
- Use details flow on each arrow.
- Use the details flow arrow to indicate data movements.
- There can't be unnamed data flow.
- A data flow can't connect two external entities.

6. LEVELS OF DFD

The complexity of the business system means that it is a responsible to represent the operations of any system of single data flow diagram. At the top level, an Overview of the different systems in an organization is shown by the way of context analysis diagram. When exploded into DFD

They are represented by:

- LEVEL-0 : SYSTEM INPUT/OUTPUT
- LEVEL-1:SUBSYSTEM LEVEL DATAFLOW FUNCTIONAL
- LEVEL-2 : FILE LEVEL DETAIL DATA FLOW.

The input and output data shown should be consistent from one level to the next.

- LEVEL-0: SYSTEM INPUT/OUTPUT LEVEL

A level-0 DFD describes the system-wide boundaries, dealing inputs to and outputs from the system and major processes. This diagram is similar to the combined user-level context diagram.

- LEVEL-1: SUBSYSTEM LEVEL DATA FLOW

A level-1 DFD describes the next level of details within the system, detailing the data flows between subsystems, which makeup the whole.

- **LEVEL-2: FILE LEVEL DETAIL DATA FLOW**

All the projects are feasible given unlimited resources and infinite time. It is both necessary and prudent to evaluate the feasibility of the project at the earliest possible time. Feasibility and the risk analysis are pertained in many ways. If project risk is great.

3.3.1Zero Level Diagram(0'Level DFD)

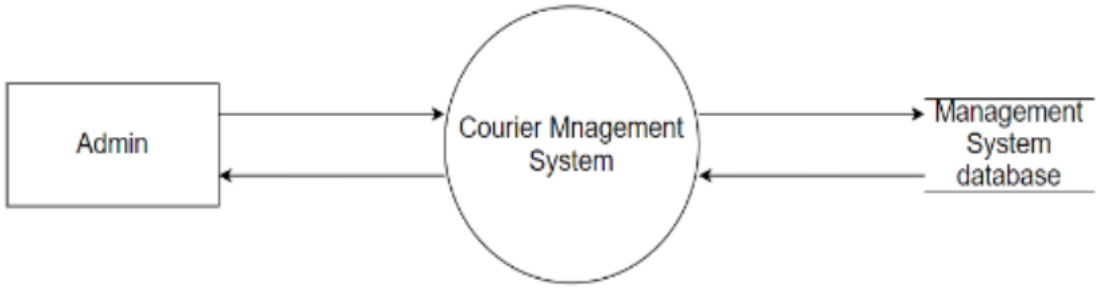


Figure: 3.2.1 Zero Level DFD

Description:

In above diagram, we shown that user login in the website and seller must store information in the database and admin can also access the information and it must be login in website.

3.2.2First Level Diagram (1'st Level DFD)

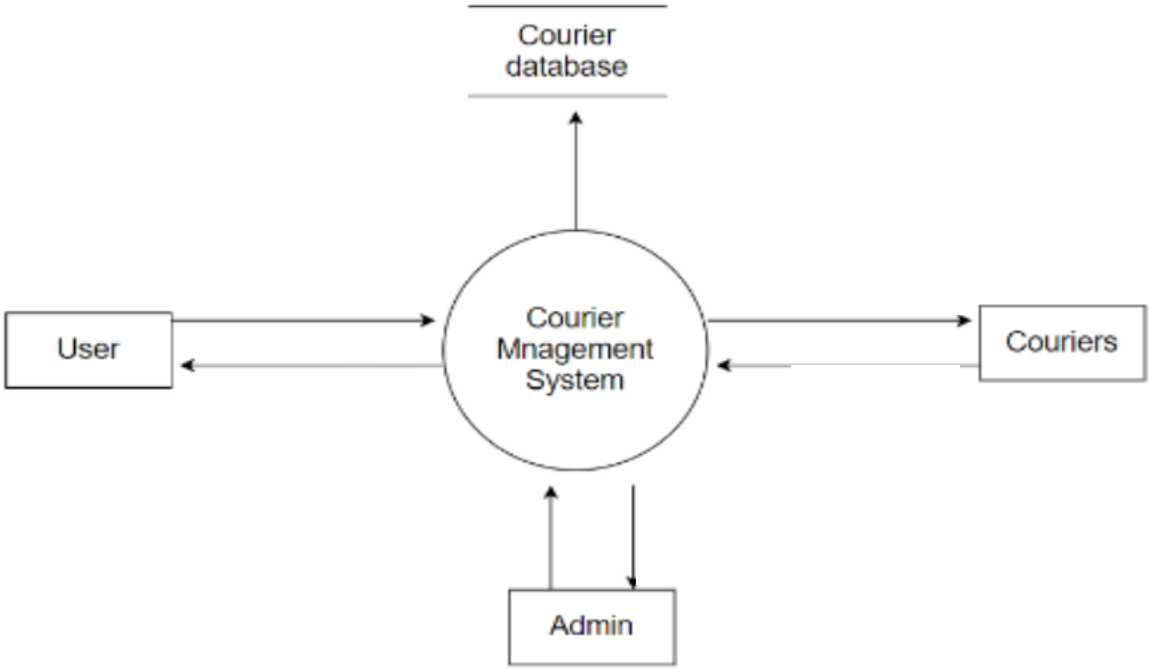


Figure: 3.2.2 First Level DFD

Description:

In above diagram we shown that admin login in website and access the information like View Detail, Modify the information etc.

3.2.3 Second Level Diagram

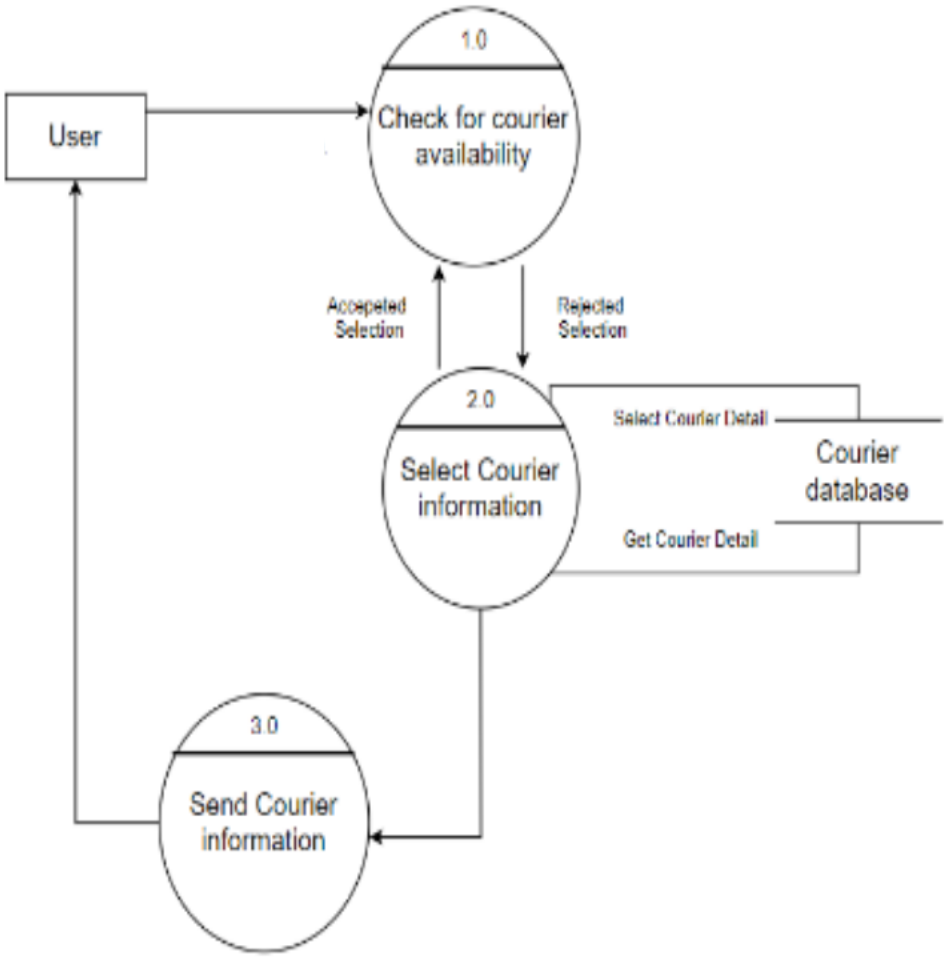


Figure: 3.2.3 Second Level DFD

Description:

In above diagram we shown that user request to website and website response it. User can perform activity such as searching the courier details, send courier information, courier weight etc…

3.2.4 E-R Diagram

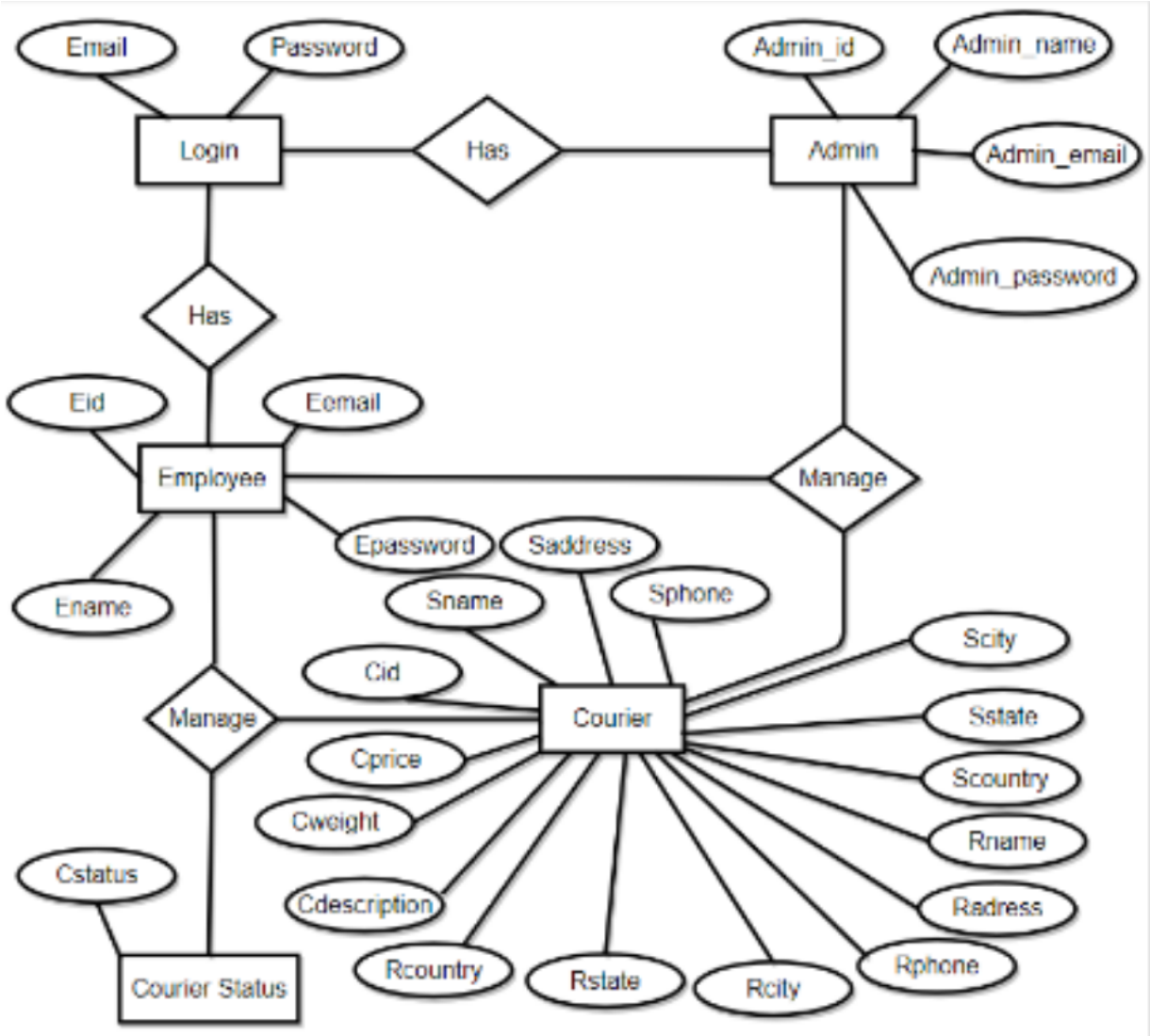


Figure: 3.2.4 E-R Diagram

Description:

In above diagram we shown the E-R Diagram of courier system. In this relationship between courierand registration. Employee must have register first.

3.2.5 Usecase Diagram(UML Diagram)

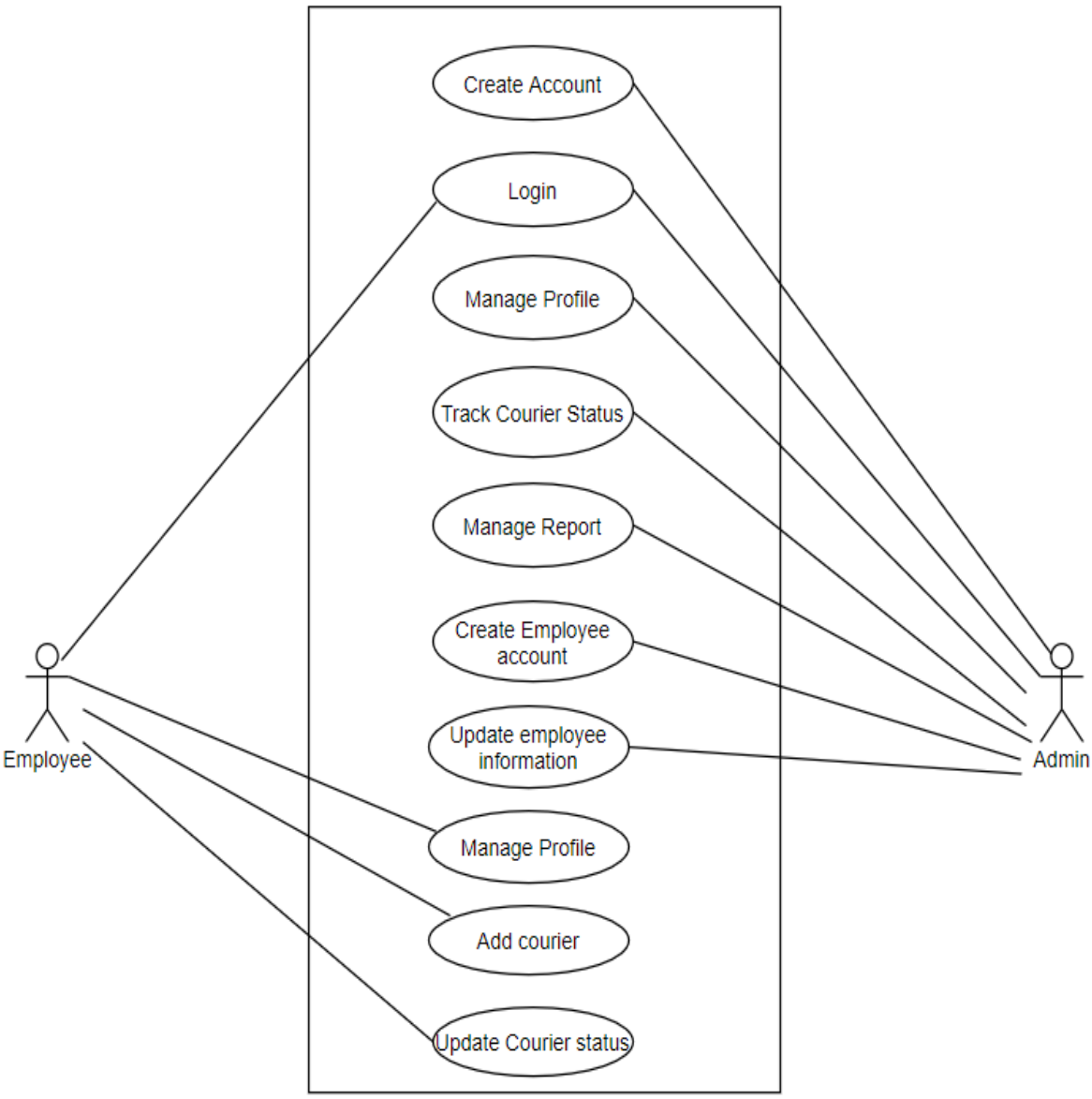


Figure: 3.2.5 UML Diagram

Description:

In above diagram we shown the UML diagram of courier system. Employee can

login of this system.

3.3 Data Dictionary

Data Dictionary is a store of information about the data in database. The dictionary defines the name, description, source of data users of data, and keyword in data, formula to derive the data, specification and such other details. Data dictionary brings common understanding of the data in the organization. RDBMS provides software to create the dictionary the organization. RDBMS provides software to create the dictionary.

Use of data dictionary enforces the standards of processing, usages application and documentation in the organization.

Data Dictionaries are an integral component of structured analysis, since data flow diagram by them do not fully describe the information about the system. The data dictionary provides additional information about the system.

Figure: 3.3.1 Admin Table

Attributes	Data Type	Size	Constraints
Admin_Id	int	-	Primary key
Admin_Name	varchar	50	Not null
Admin_email	varchar	50	Not null
Admin_password	varchar	20	Not null

Description:

This table are use into the admin table This is the table which provides information about the user. In which user can register themselves by filling this required field and aligible.

Figure: 3.3.2 Employee Table

Attributes	Data Type	Size	Constraints
Eid	int	-	Primary key
Ename	varchar	50	Not null
Eemail	varchar	50	Not null
Epassword	varchar	20	Not null

Description:

This table can use the employee has id, password, name or email can

use.

Figure: 3.3.3 Courier Table

Attributes	Data Type	Size	Constraints
Cid	int	-	Primary key
S name	varchar	50	Not null
S phone	varchar	20	Not null
S address	varchar	50	Not null
S city	varchar	50	Not null
S state	varchar	50	Not null

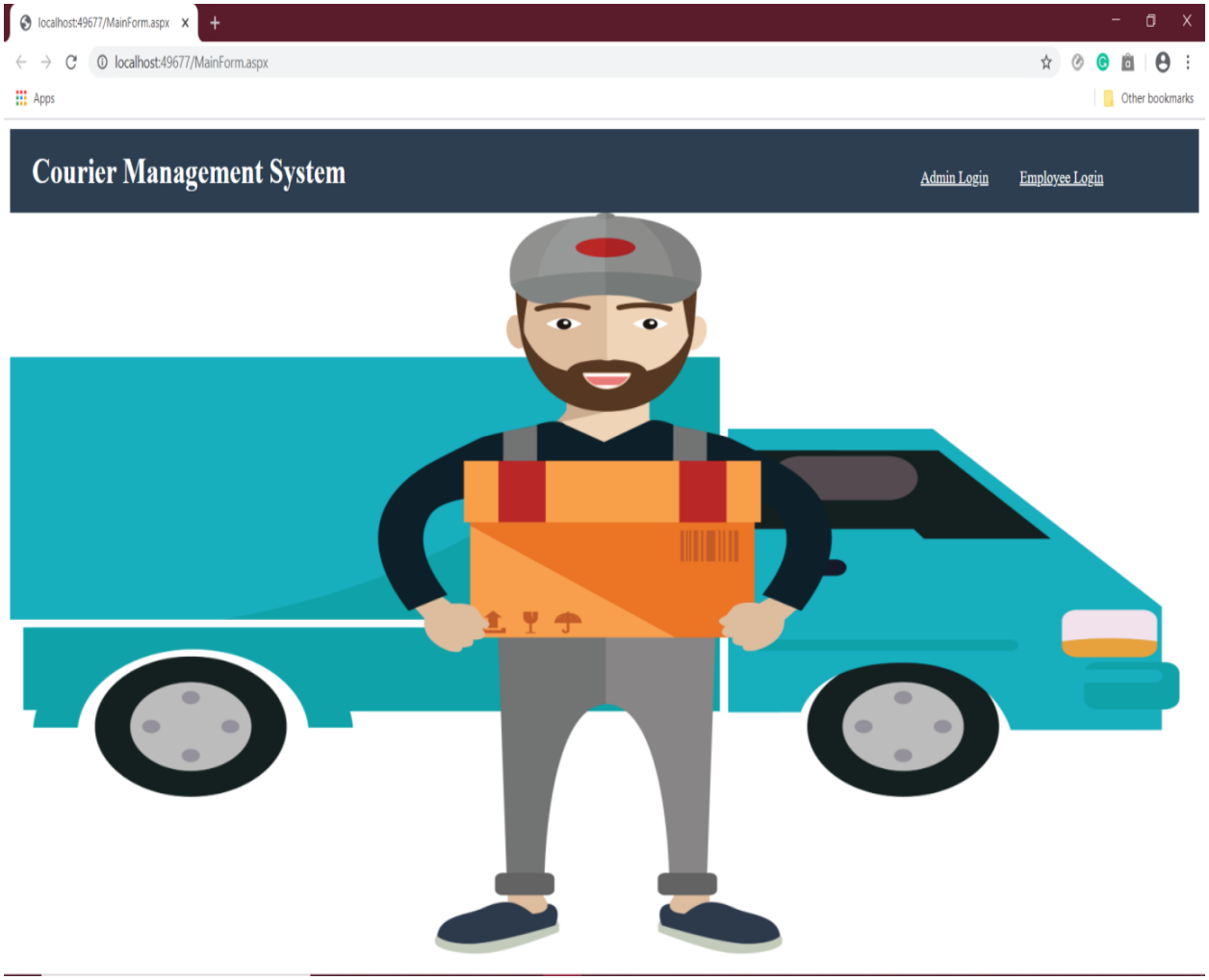
S country	varchar	50	Not null
R name	varchar	50	Not null
R phone	varchar	20	Not null
R address	varchar	50	Not null
R city	varchar	50	Not null
R state	varchar	50	Not null
R country	varchar	50	Not null
C description	varchar	Max	Not null
C weight	Float	-	Not null
C price	int	-	Not null
C status	varchar	50	Not null

Description:

This table cane use of the sender id, receiver name ,mobile no, courier weight, price, city, address, description etc..

3.4 Input and Output Design (Screen Layout)

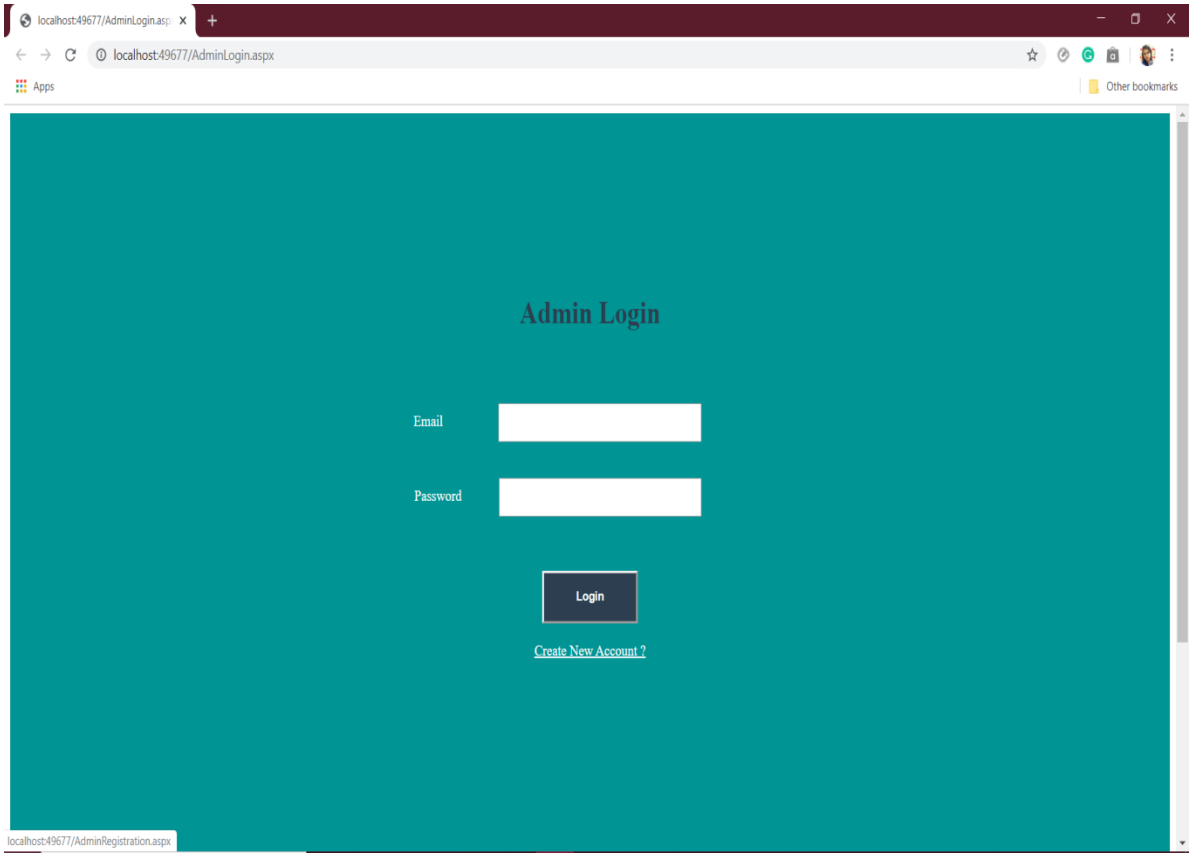
Figure: 3.4.1 Home Page



Description:

This is the main page of our system. Here,user can view Home page, They can also see the buttons for login and registration in which they can create their new account the user must have to register themselves for login and they will be able to see our website.

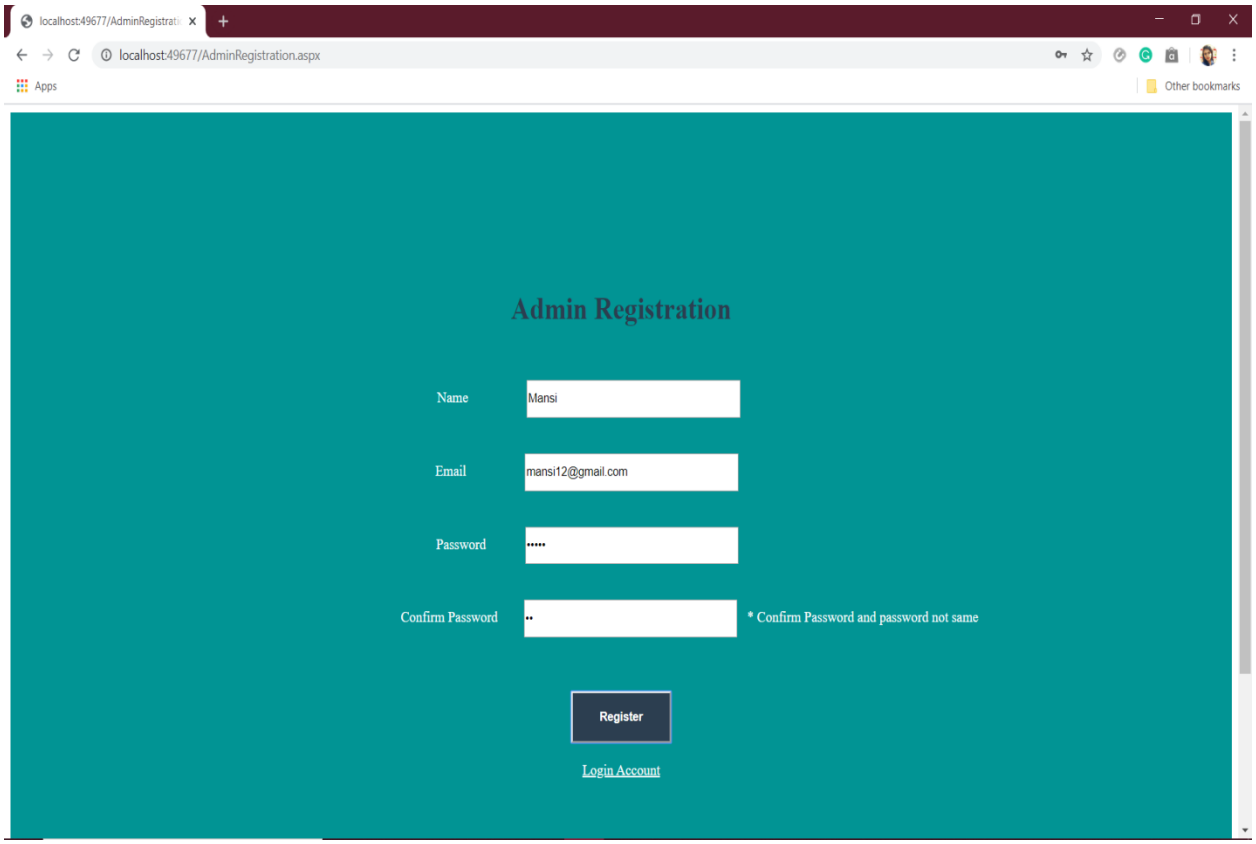
Figure: 3.4.2 Login Page of Admin



Description:

This is admin registration page which is used for creating new account in which admin must have to fill every field and register themselves.So,you create new account by easy steps.

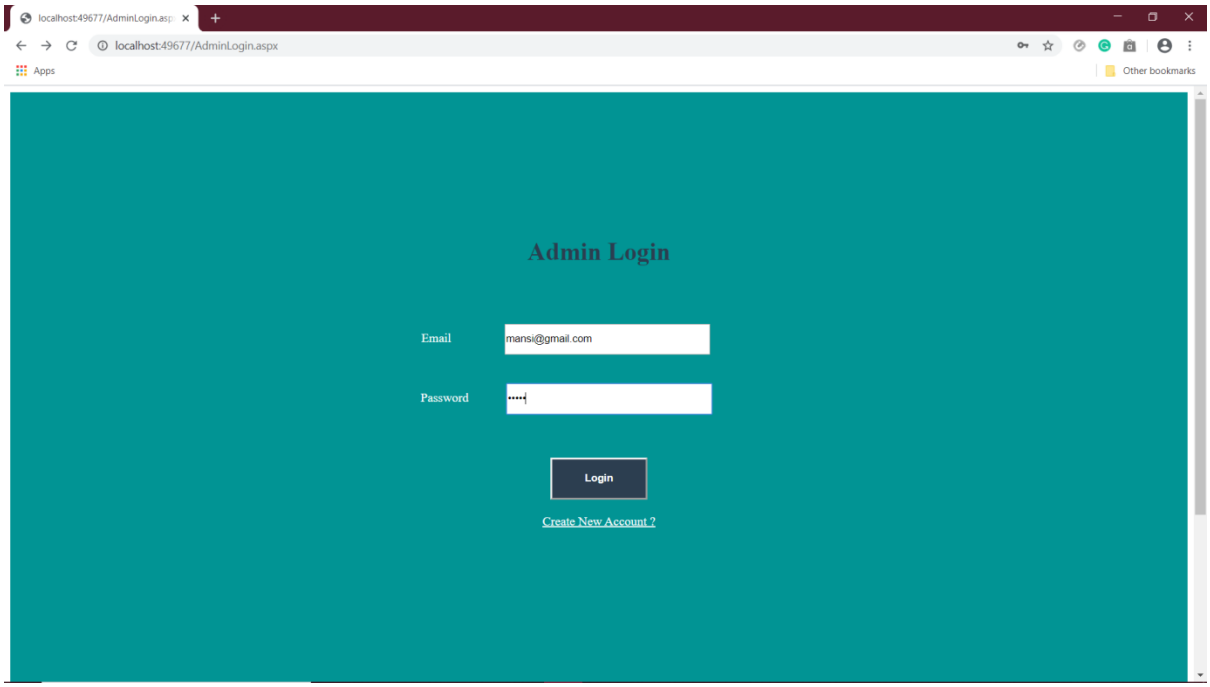
Figure: 3.4.3 Admin registration page



Description:

Use can admin register and email id. It can use of the enter your password and confirm password.

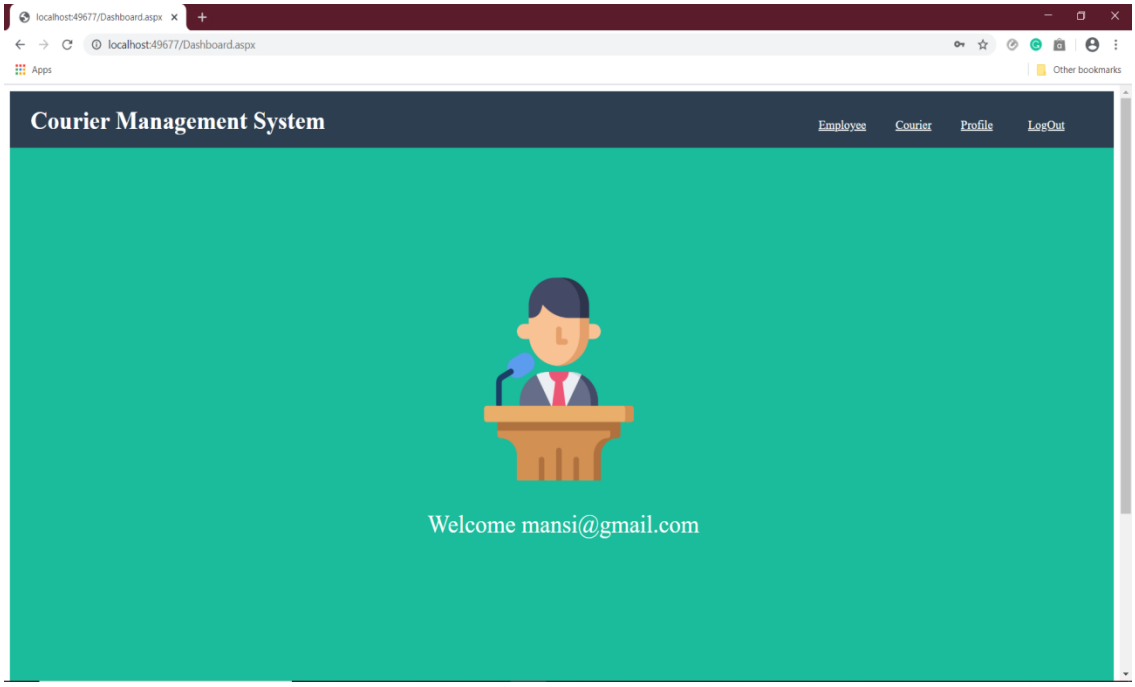
Figure: 3.4.4 Admin Login Page



Description:

This is login screen for user.It will check username and password is correct or not. If password is correct then successfully login otherwise you cannot login and user get invaild username or password message.

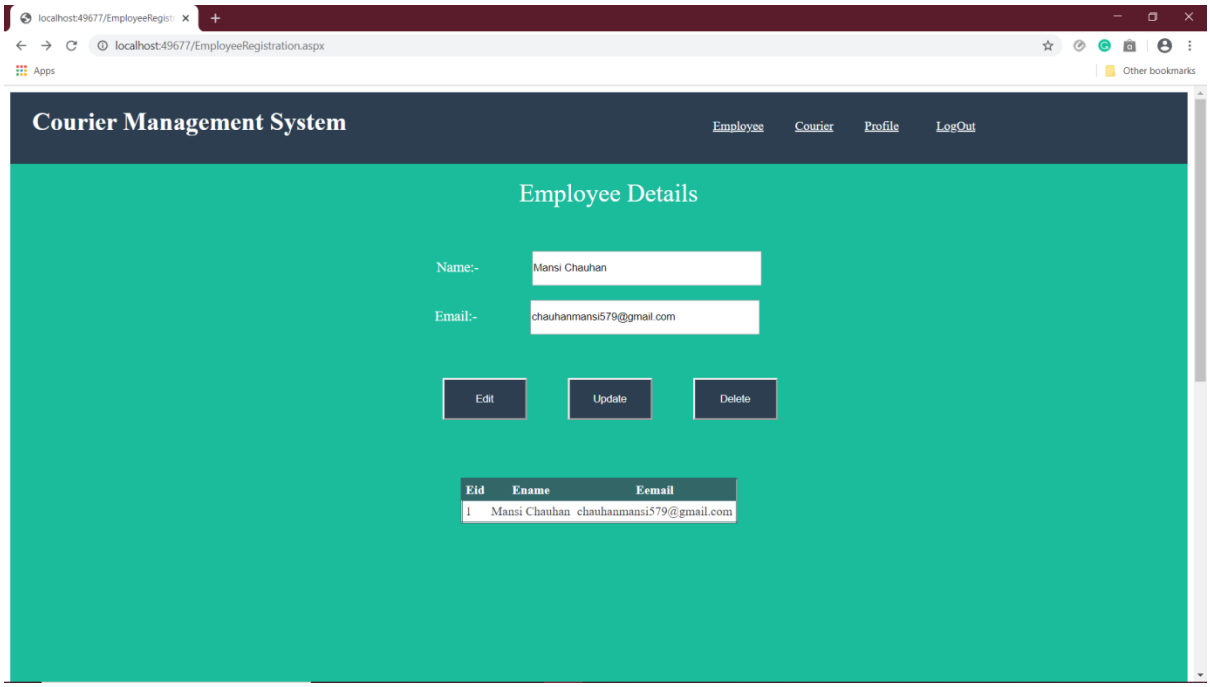
Figure: 3.4.5 Admin Dashboard



Description:

Admin can login and show this dashboard. It can admin has login to the successfully.

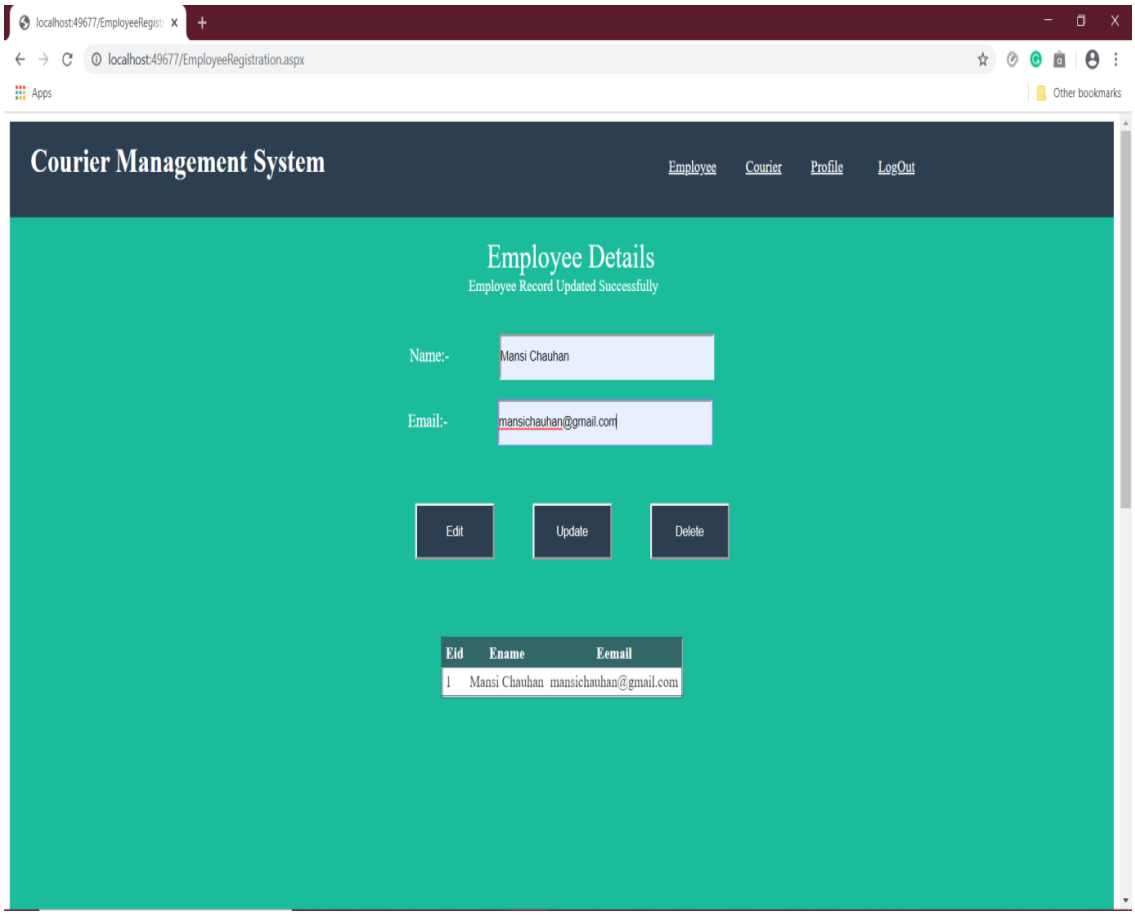
Figure: 3.4.6 Employee Details page



Description:

Admin Add Employee then Employee email id to get mail in the employee to them gmailaccount.

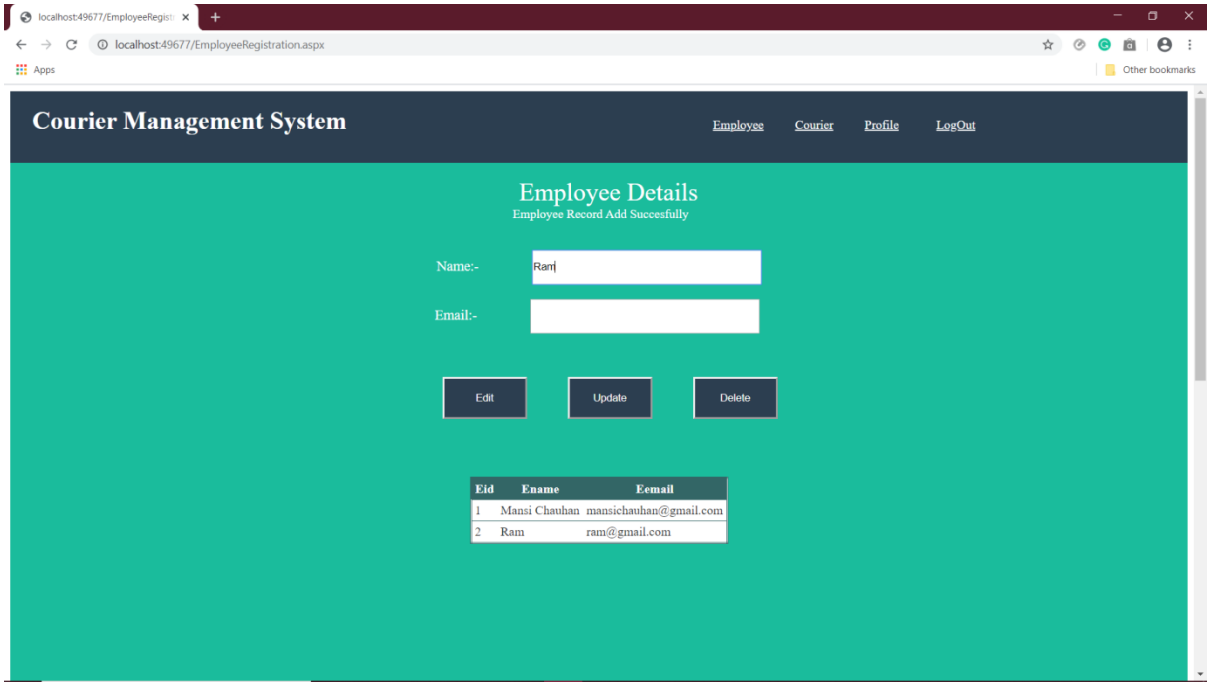
Figure: 3.4.7 Admin Update Employee Record Page



Description:

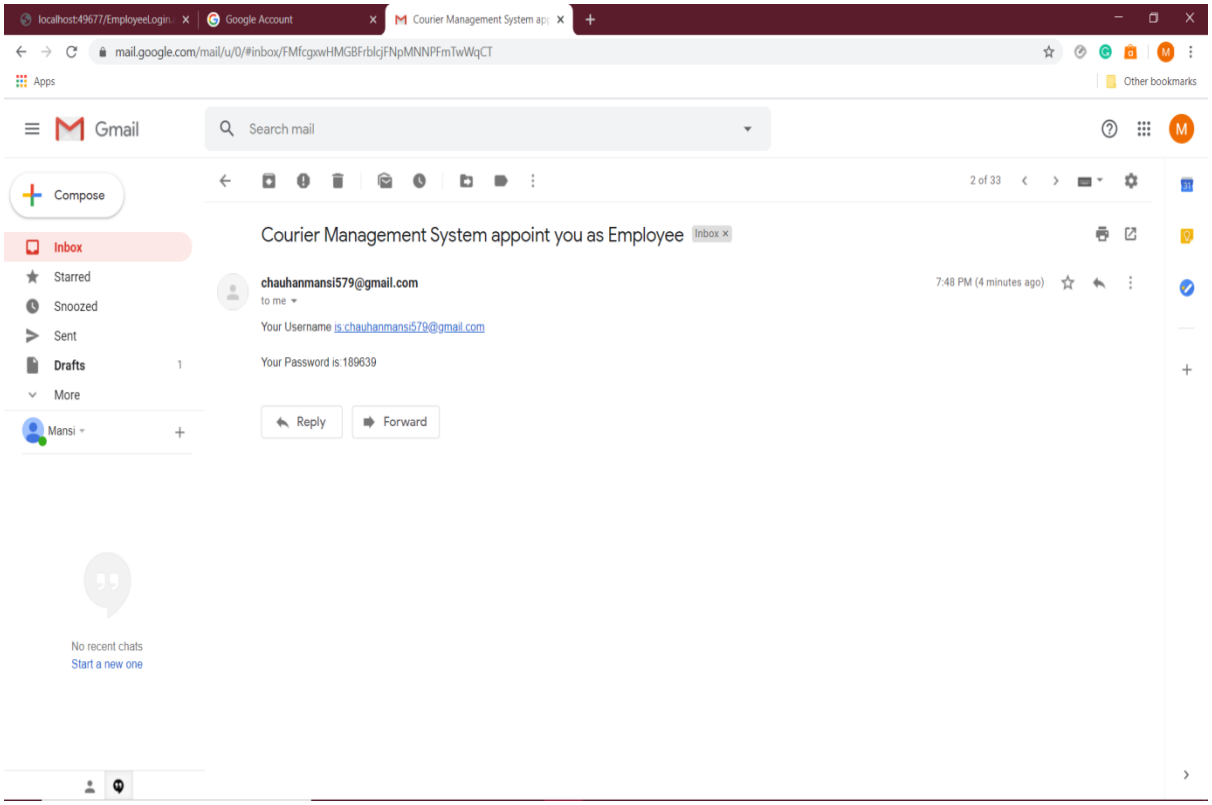
This page are use of the admin can employee record has been update to the all details.

Figure: 3.4.8 Admin Delete Employee Page



Description:

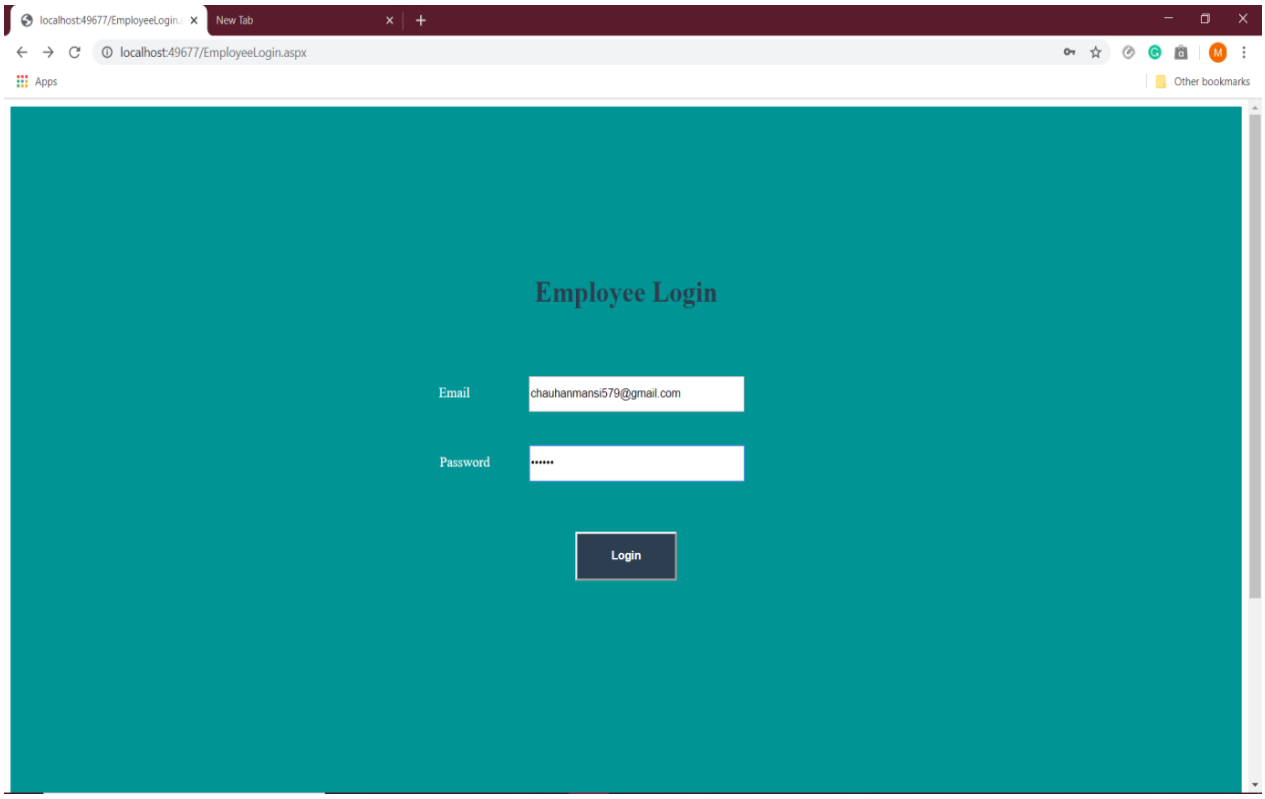
Employees get mail on them having email id and random password.



Description:

Employees get mail on them having email id and random password.

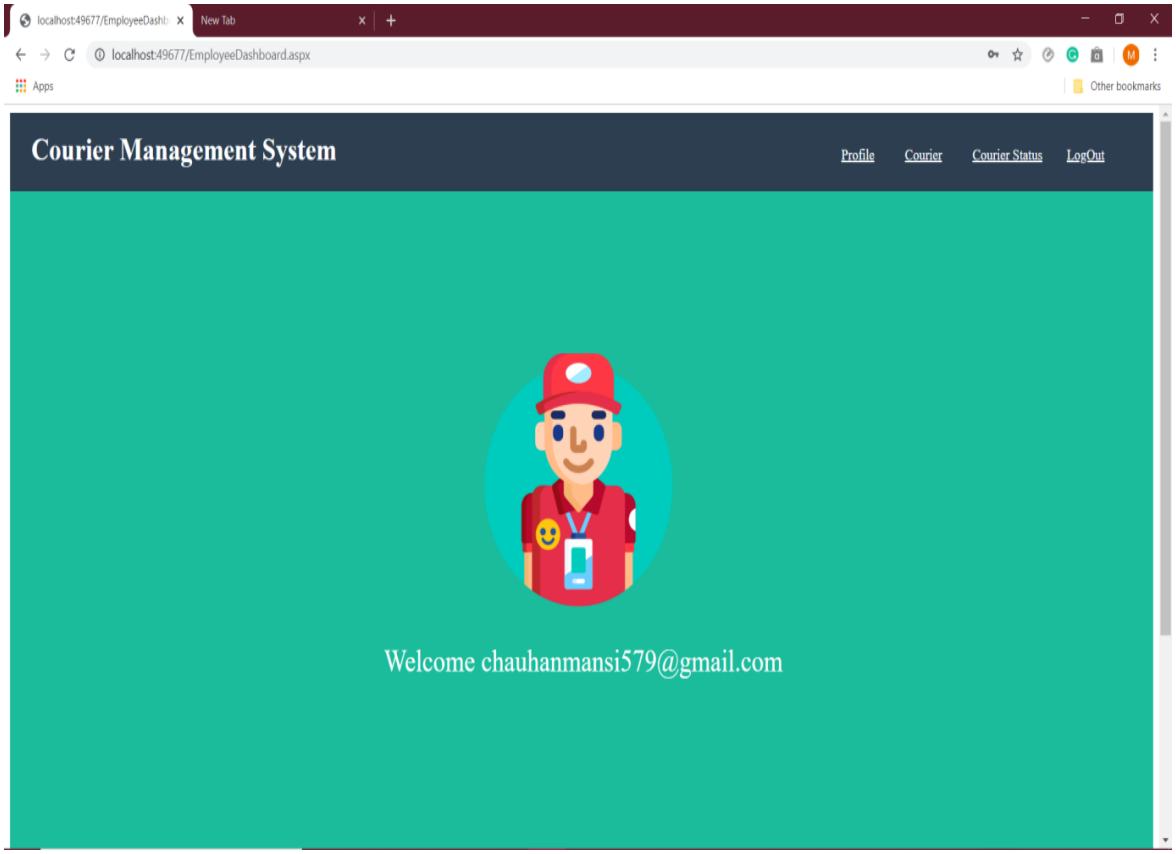
Figure: 3.4.9 Employee Login Page



Description:

Using the email id and password employee can login in this system

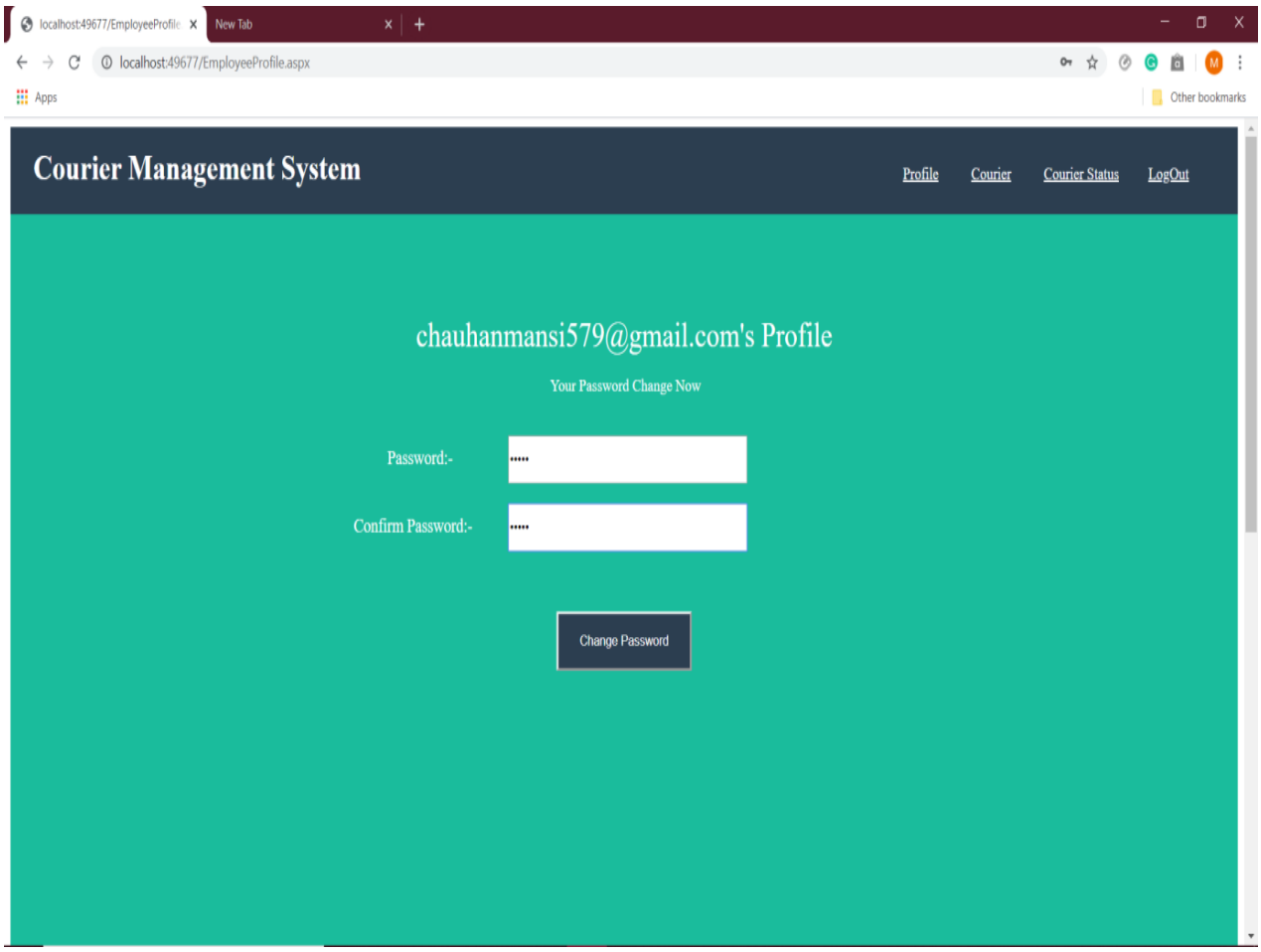
Figure: 3.4.10 Employee Dashboard:-



Description:

This page are use to the employee dashboard and login can successfully to the employee.

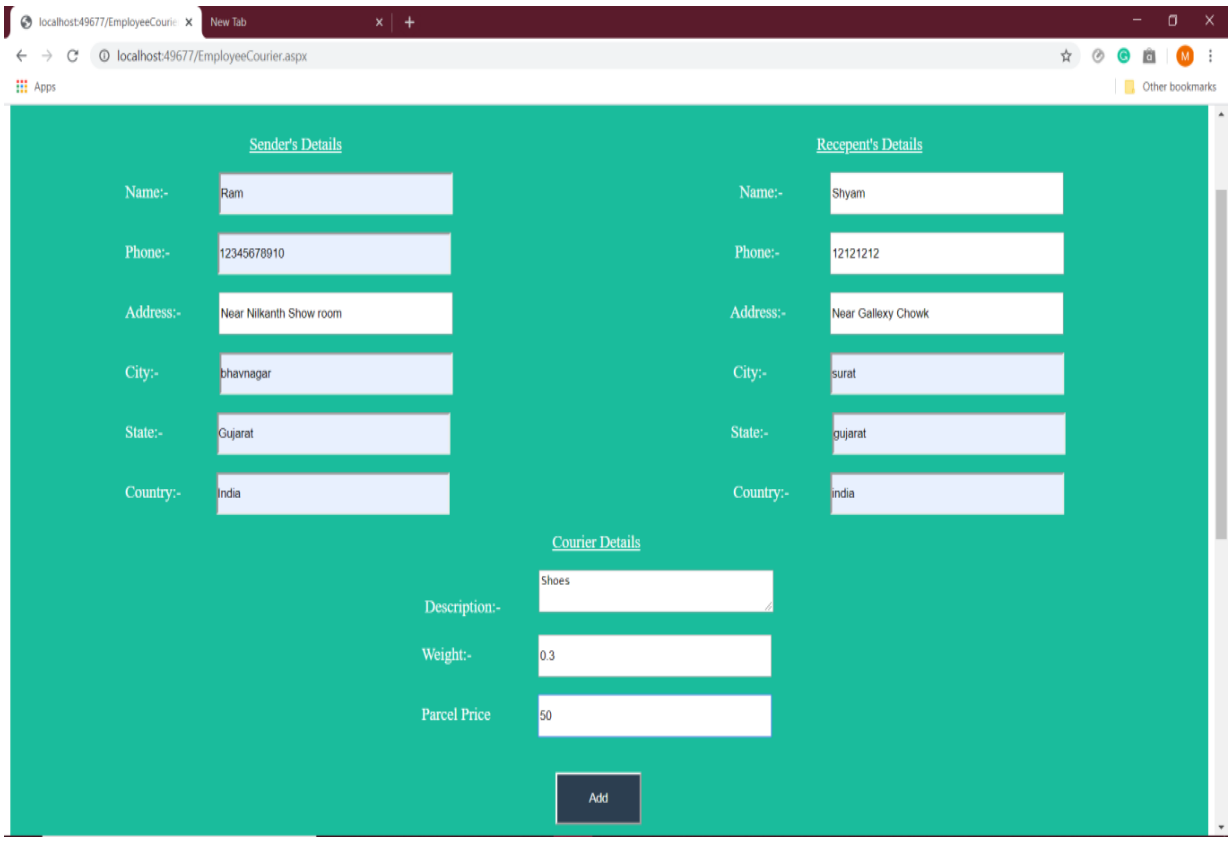
Figure: 3.4.11 Employee change password in them profile page



Description:

This page are use to the employee can change the password into the profile.

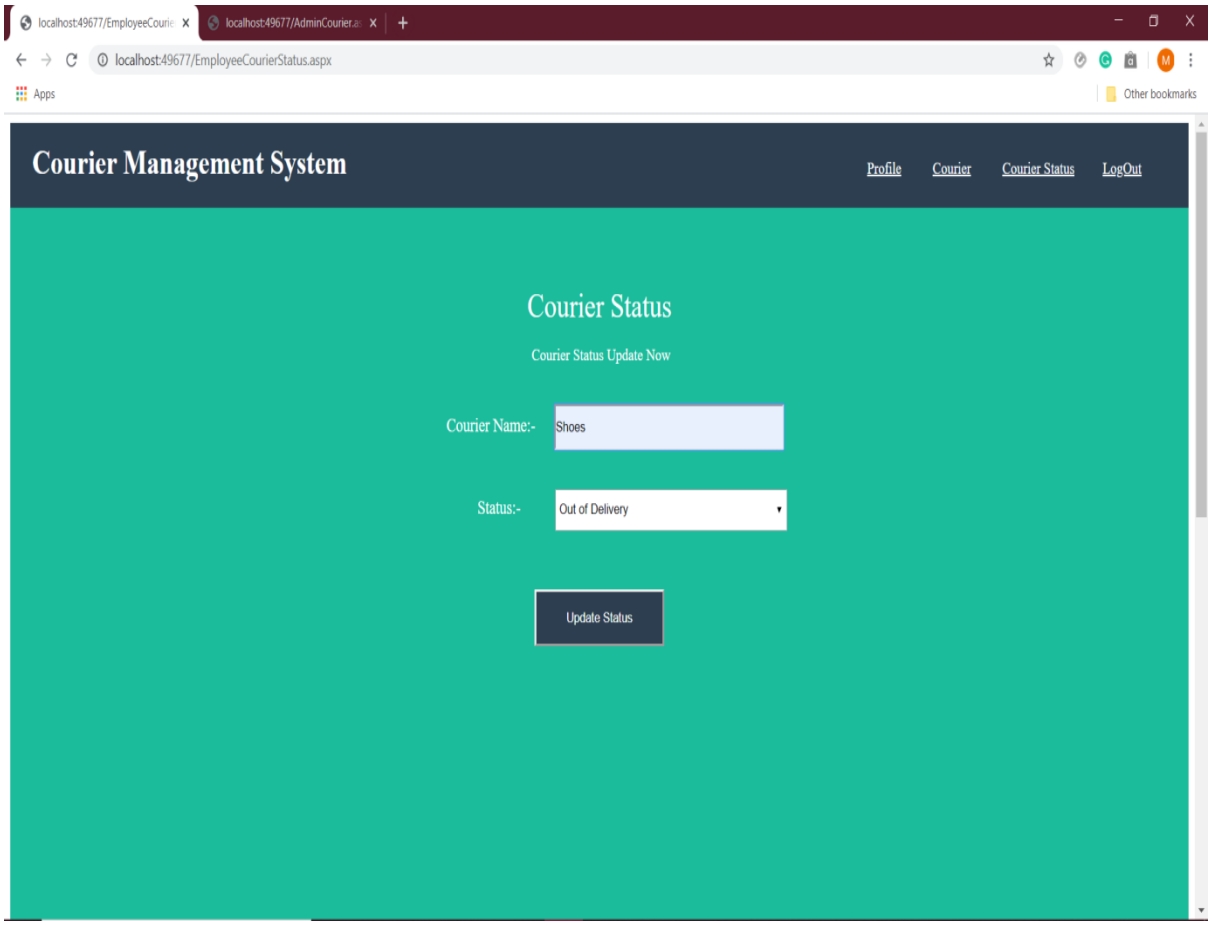
Figure: 3.4.12 Employee add Courier Details Page



Description:

This page are use to the employee can add to the courier details has add and check the sender details and receiver details.

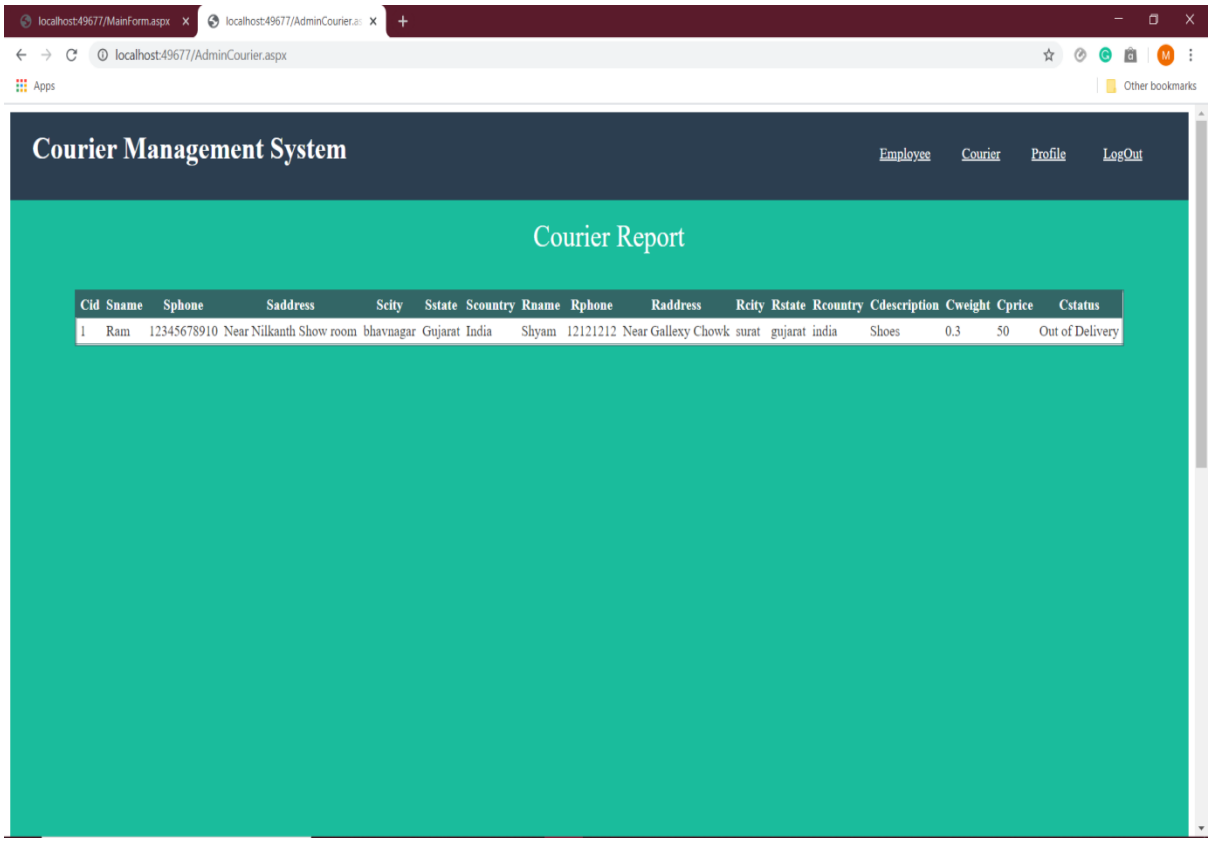
Figure: 3.4.13 Courier Status Page



Description:

Employee add Courier Status Update according to action perform in courier management system.

Figure: 3.4 14 Courier Report Page

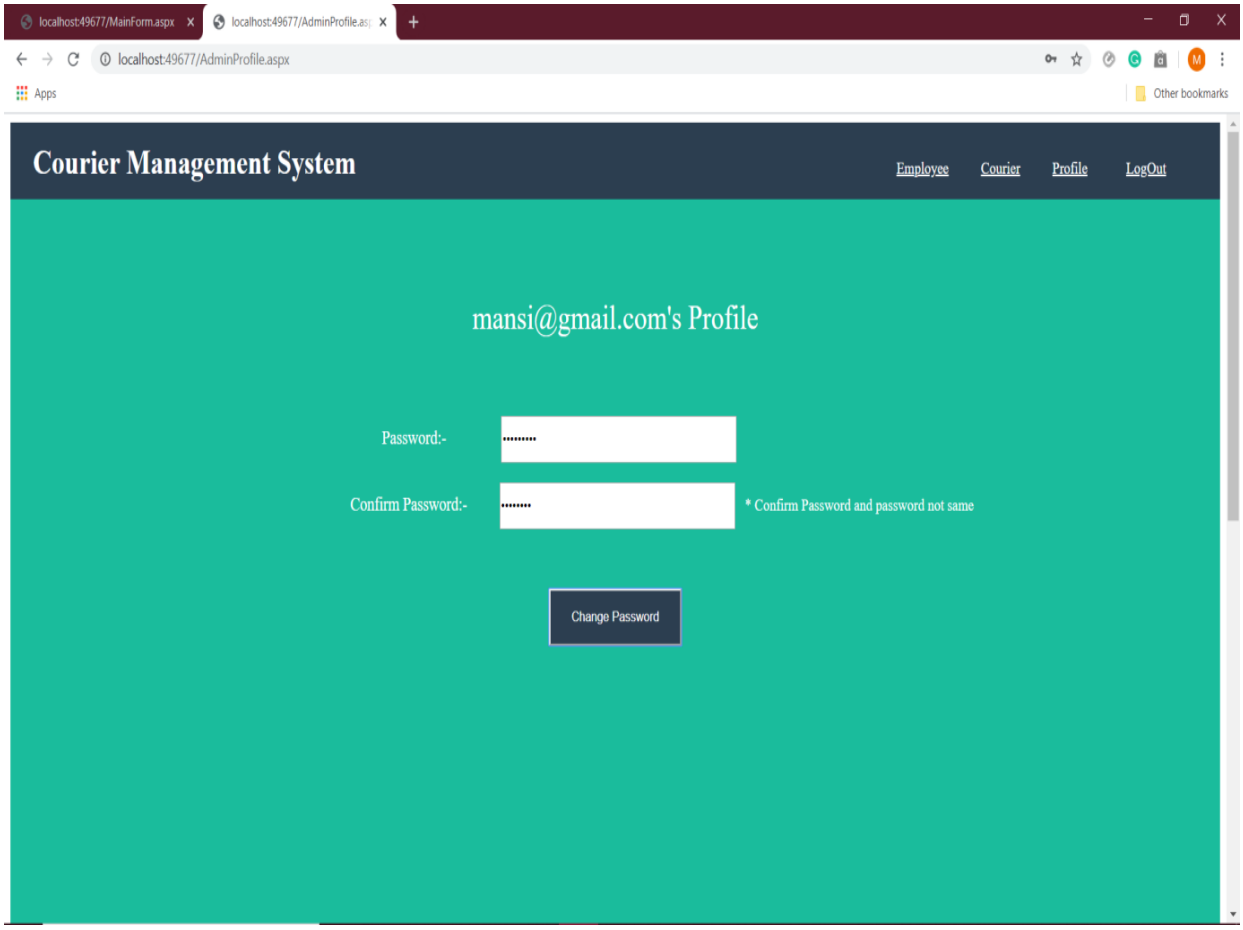


Description:

Admin show the courier details which are added by employees. And check the all

Details.

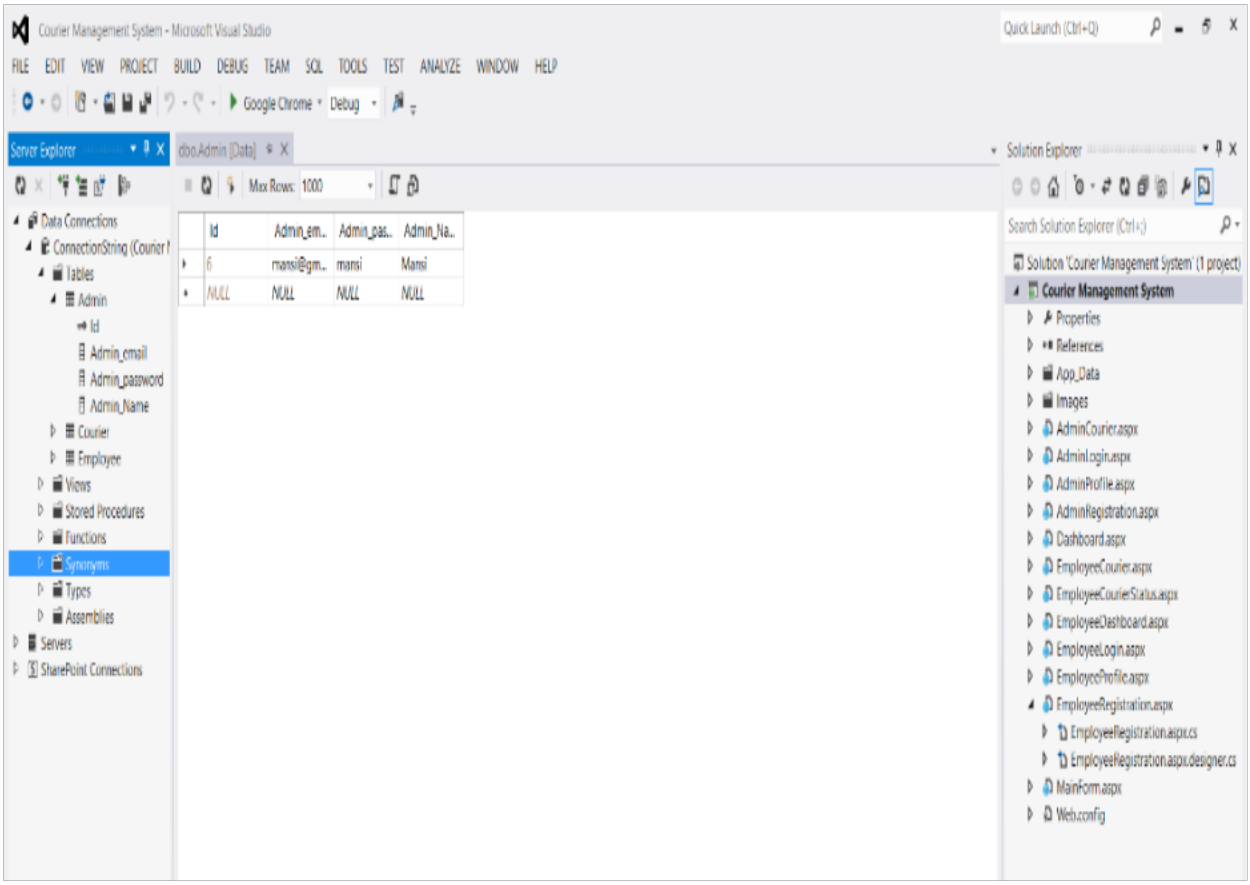
Figure: 3.4.15 Admin change password in profile page



Description:

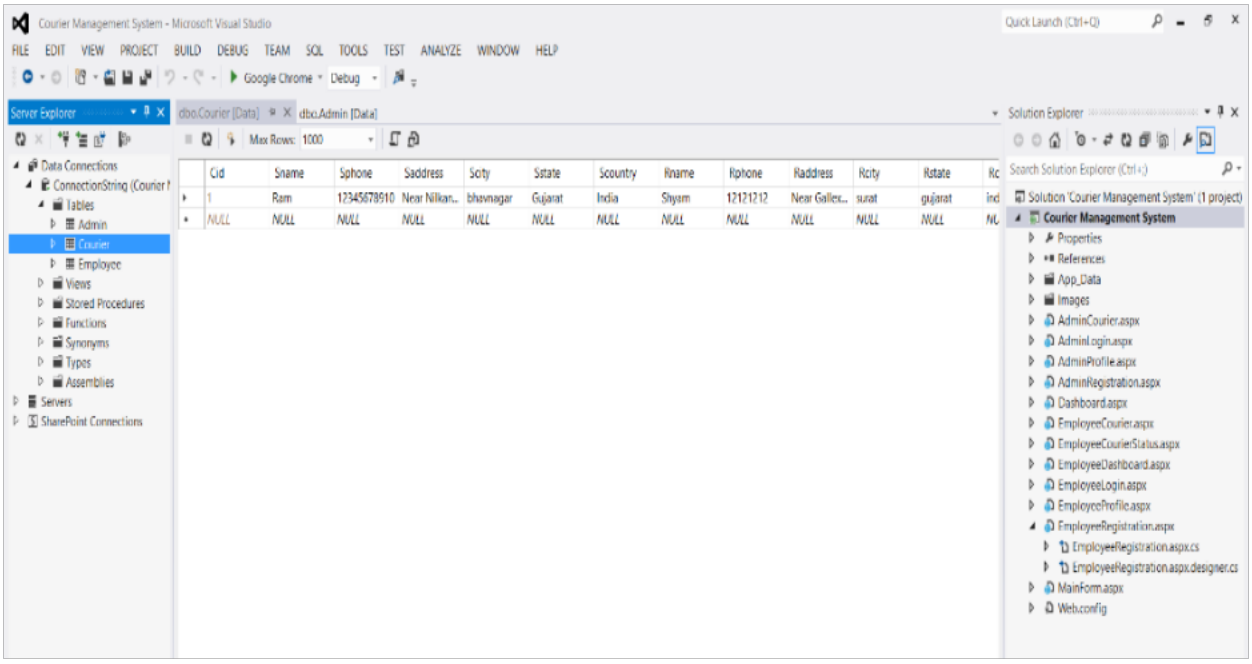
This page are use can admin can password has to the change in the profile page.

Figure: 3.4.16 Database record add Page



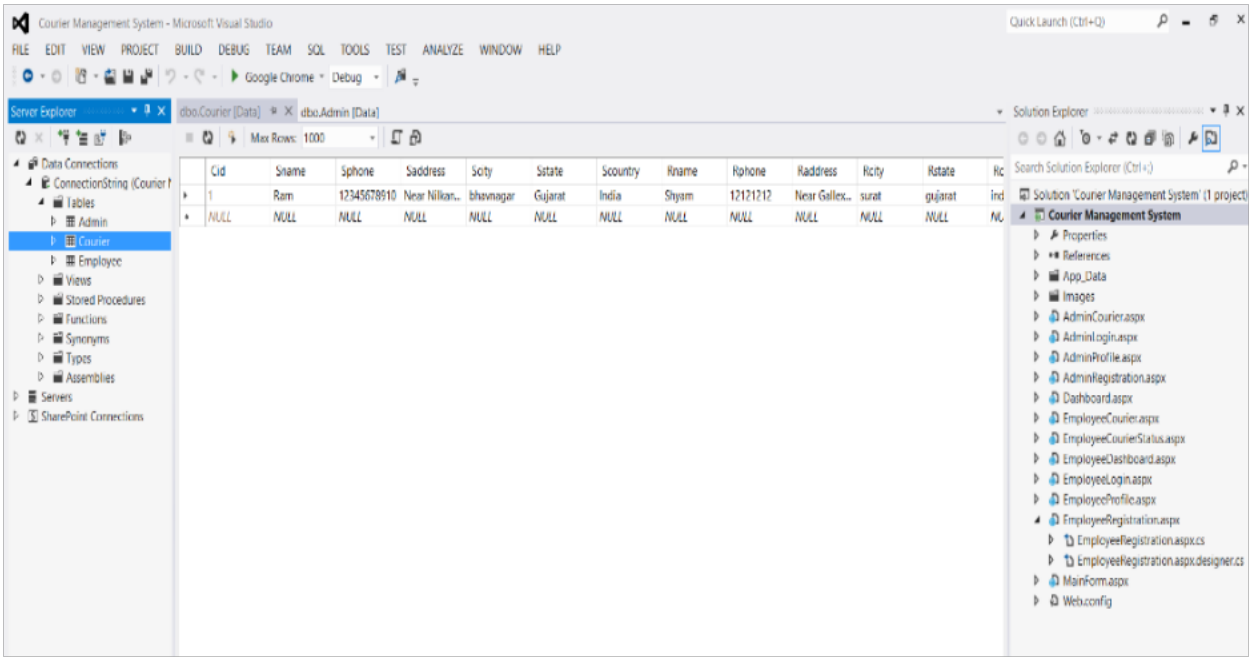
Description:

This page can show to the database record has been add.



Description:

This page are use to the database record has been show on the all information to the user.


Courier Management System - Microsoft Visual Studio
FILE EDIT VIEW PROJECT BUILD DEBUG TEAM SQL TOOLS TEST ANALYZE WINDOW HELP
Google Chrome Debug
Server Explorer
dbo.Courier [Data]
dbo.Admin [Data]
Max Rows: 1000
Cid Sname Sphone Saddress Scity Sstate Scountry Rname Rphone Raddress Rcity Rstate
1 Ram 12345678910 Near Nilkan... bhavnagar Gujarat India Shyam 12121212 Near Gallex... surat gujarat
NULL NULL NULL NULL NULL NULL NULL NULL NULL NULL NULL NULL
Data Connections
ConnectionString (Courier
Tables
Admin
Courier
Employee
Views
Stored Procedures
Functions
Synonyms
Types
Assemblies
Servers
SharePoint Connections
Solution Explorer
Search Solution Explorer (Ctrl+;)
Solution 'Courier Management System' (1 project)
Courier Management System
Properties
References
App_Data
Images
AdminCourier.aspx
AdminLogin.aspx
AdminProfile.aspx
AdminRegistration.aspx
Dashboard.aspx
EmployeeCourier.aspx
EmployeeCourierStatus.aspx
EmployeeDashboard.aspx
EmployeeLogin.aspx
EmployeeProfile.aspx
EmployeeRegistration.aspx
EmployeeRegistration.aspx.cs
EmployeeRegistration.aspx.designer.cs
MainForm.aspx
Web.config

CHAPTER-4

TESTING AND IMPLIMENTATION

- Testing Approach Used
- Test Cases
- Implementation Approaches

4.1 Testing Approached used

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

Generally, it has been specified thought for the Testing that:

"Testing is the critical element of any software quality assurance & represents the ultimate review of specification, design & code generation."

Software Testing has a dual function; it is used to establish the presence of defects in program and it is used to help judge whether or not the program is usable in practice. Thus, software testing is used for validation and verification, which ensure that software conforms to its specification and meets the need of the software customer.

The goal of testing is to find errors and that a good test is one that has high probability to finding an error. Therefore, a software engineer should design and implement a computer-based system or a product with "testability" in mind. The tests must exhibit a set of characteristics that achieve the goal of finding the most errors with a minimum of effort.

The project scientist will look over the program and give suggestions and ideas to improve or to correct the design. They also report and give ideas to get rid of around any major problems. There is bound to be a number of bugs after a program have been created.

A. **Testing Plan**

The aim of the testing process is to identify all defects existing in software Product. However, for most practical systems, even after satisfactorily carrying out the testing phase, it is not possible to guarantee that the software is error free. This is because of the fact that the input data domain of most software products is very large.

It is not practical to test the software exhaustively with respect to each value that the input data may assume. Even with this practical limitation of the testing process, the importance of testing should not be underestimated. It must be remembered that testing does expose many defects existing in a Software product. Thus, testing provides a practical way of reducing defects in a System and increasing the users' confidence in a developed system.

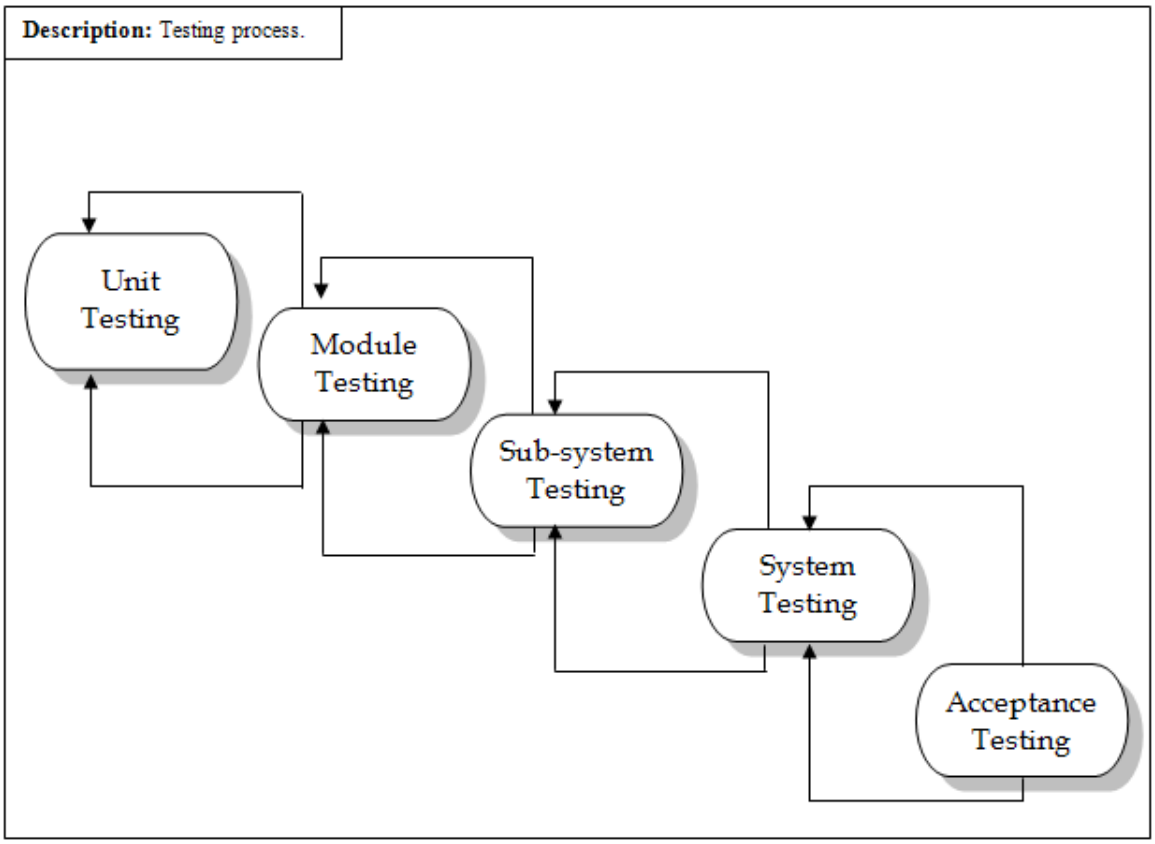


Figure :4.1 Testing Process

The Testing Process:

Developer tests the software process activities such as Design, Implementation, and Requirement of system. Because, designing errors are very costly to repair once system has been started to operate. Therefore, it is quite obvious to repair them at early stage of the system. So, analysis is the most important process of any project.

B. Testing Strategy

Testing is a set of activities that can be planned in advanced and conducted systematically. A strategy for software testing must accommodation low-level tests that are necessary to verify that a small source code segment has been correctly implemented as well as high-level tests that validate major system functions against customer requirements

There are three types of testing strategies:

1. Unit test
2. Integration test
3. Performance test

1. Unit Testing

Unit testing focuses verification efforts on the smallest unit of software design module. The unit test is always white box oriented. The tests that occur as part of unit testing are testing the module interface, examining the local data structures, testing the boundary conditions, execution all the independent paths and testing error-handling paths.

2. Integration Testing

Integration testing is a systematic technique or construction the program structure while at the same time conducting tests to uncover errors associated with interfacing. Scope of testing summarizes the specific functional, performance, and

internal design characteristics that are to be tested. It employs top-down testing and bottom-up testing methods for this case

3. Performance Testing:

Timing for both read and update transactions should be gathered to determine whether system functions are being performed in an acceptable timeframe.

i. Purpose:

The purpose of the test cases is to test the various input and see the output produce any error or not. There are different test cases according to the system. It is tested with different types of value like single value multiple value and see it can generate expected output.

ii. Testing principles:

- All tests should be traceable to consumer requirements.
- Test should be planned long before testing begins.
- Testing should begin in small and progress toward testing in large.
- Exhaustive testing is not possible.
- To be most effective an independent third party should conduct testing.

iii. Test characteristics:

- A good test has a high probability of finding an error.
- A good test is not redundant.
- A good test should be “best of breed”.
- A good test should be neither too simple nor too complex.

Our tested items are like:

- Properly added details to the database.
- Proper execution of application in between web pages.
- Users can feedback send to admin successfully.
- Validations work properly.

4.2 Test cases

Test cases are the methods in which specific inputgiven to functions and resulted outputs are checked against expected outputs. If they are same, then case successes.

During making this project module, we had tested our output numerous times and compared with ETVX (Entry Task Verification and Exit)And many times we found that our output was not as desired. So, we tried to correct it and most of time we got success.

These were the testing Methods and cases for the project application and their results. According to them project is fulfilling all the functions and non-functional requirements of customer.

Test Case: 1

Test Case No.	Test Data	Expected Result	Actual Result	Result	Test Type
1.	Check admin, password or email id is wrong then not be able to login.	login will be failed	Login denied	Pass	Unit Testing
2.	Check if Admin email id and password both are right.	Login will be pass	Login Success	Pass	Unit Testing
3.	Admin can view personal Dashboard	View personal Details	View Successfully	Pass	Database Testing
4.	Admin can add, update, delete Employee	Manage Employee Record	Manage record successfully	Pass	Database Testing
5.	Admin can change its password	Change Password	Password update successfully	Pass	Database Testing
6.	Admin can view courier details	View Courier Details	View Successfully	Pass	Database Testing
7.	Admin can Logout	Logout and redirect to main form	View main page	Pass	Unit Testing

Figure: 4.2.1 Test case

Test Case: 2

Test Case No.	Test Data	Expected Result	Actual Result	Result	Test Type
1.	When Admin add employee then send email	Get mail its contents like password	Send Successfully	Pass	Unit Testing
2.	Check employee, password or email id is wrong then not be able to login.	login will be failed	Login denied	Pass	Unit Testing
3.	Employee can view personal Dashboard	View personal Details	View Successfully	Pass	Database Testing
4.	Employee can add Courier All Information	Courier Record will be add	Adding record successfully	Pass	Database Testing
5.	Employee can change its password	Change Password	Password update successfully	Pass	Database Testing
6.	Employee can modify courier status	Courier Status will be changed	Updating Courier Status Successfully	Pass	Database Testing

Figure: 4.2.1 Test case

4.3 Implementation Approaches:

In this project the implementation environment is Multi-User Environmental the developers of the project are working on Team Explorer. The latest version of the project can be accessed by any developer at any time. The environment is GUI-based as the project is developed in ASP.NET.

Implementation includes all those activities that take place to convert from the old system to the new. The old system consists of manual operations, which is operated in a very different manner from the proposed new system.

4.3.1 Implementation Planning:

Implementation phase requires precise planning and monitoring mechanism in order to ensure schedule and completeness. We developed the software in various sub phases in Implementation Phase. These steps are as follows:

- **Database Implementation:**

This phase involved creation of database table and specifying relationships among them in SQL Server.

- **Core Class Implementation:**

First, we decided to implement the core system classes which will facilitate the further implementation.

- **User Components Implementation:**

Motive behind this separate phase is to focus on the Reusability. In these phases we have tried to developed reusable user interface components.

- **Administration Module Implementation:**

This Subsystem involves various configuration parameters and other administration specific services like giving rights to admin etc.

CHAPTER-5

CONCLUSION

- Conclusion
- Limitation of System
- Future Enhancement
- Bibliography

5.1 Conclusion

The project titled 'Courier Management Service' was developed to the courier services and direction and with their help. The system was tested and the performance of the system was found to be acceptable.

All the necessary output was created. The system was found to be user-friendly with help message for the customer. The menu Driven Architecture of the system provide an easy to use environment for the users.

The system was implemented successfully. The manpower and working hours needed to operate the system was less and it was seen to be more secure. Thus, the Project was completed successfully.

1. The courier services are automated as hand written documentation is minimized to a bare minimum the software is fully implemented.
2. The data can be easily backed up onto a reliable media so that no or minimal data lass is there in case of system crash.

This project has made us require a professional outlook towards problem statement and solving it to the best.

5.2 Limitation of System

From the client site, the entire work was achieved manually and they manage all their billing and services manually. Because of the manual system there are so many problems occurred in the existing system.

- It involves managing a huge number of data each having separate data items.
- All the work is done at a very large volume, so we have a possibility of loosing the data.
- To look for a particular problem the entire system is searched, so the process becomes more time consuming.

5.3 Future Enhancement Of System

It is still mature and fully enthusiastically. Any requirements, this project is completed but still, they want to update and modify some modules.We are always thinking about association requirements also growing day by day.

We always want to implement something more. This project is completed when you watch, but we want to implement more things.

Courier management computerization is “the incorporate of appropriate technology to help administrator manage information. Technology is considered appropriate, when it utilizes the most abundant domestic res ources and conserves capital and skilled personnel”.The main aim of this project is to computerize the maintenance of courier management

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