WEB BASED NEWS CHANNEL (E-NEWS CHANNEL) NEWS PORTAL



Thesis submitted to the Institute of Information Technology, Quaid-i-Azam University, Islamabad, for the partial fulfillment of the degree of Master of Science in Information Technology.

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INSTITUTE OF INFORMATION TECHNOLOGY

QUAID-I-AZAM UNIVERSITY

ISLAMABAD

2021

DEDICATION

Every challenging work needs self-efforts as well as the guidance and support of the elders especially the ones who are close to our hearts.

My humble efforts are dedicated

ТО

My parents who support me financially and give me courage.

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ACKNOWLEDGEMENT

Foremost, I am grateful to the Allah for the good health and well-being that were necessary to complete this project. I am taking the opportunity to express my sincere gratitude to my supervisor Prof. Dr Khurram Gulzar Rana for the continuous support of my master's study and Project, for his patience, motivation, enthusiasm, and immense knowledge. His guidance helped me in all the time of my project and writhing this thesis. The door to his office was always open whenever I got into a trouble or had questions about my project. I could not have imagined having a better supervisor and mentor for my final year project. This project could not have been accomplished without his support and guidance.

I also place on record, my gratitude to all of those who directly or indirectly supported me throughout my education career and on this project. Last but not the least, I must express my deepest gratitude to my parents and my family members for providing me with unfailing support and encouragement throughout my years of study and supporting me spiritually throughout my life. This accomplishment would not have been possible without them. Thank you.

Aqeel Hussain

ABSTRACT

The Digital Research News E-News Channel belongs to the class of online web intended for storage and management of information obtained in the course of work. The e-news are used to get information and update the world and main benefit of e-news is any time you read and listen the news.

An e-news is the online version of a newspaper, either as a stand-alone publication or as the online version of a printed periodical.Going online created more opportunities for newspapers, such as competing with broadcast journalism in presenting breaking news in a more timely manner. The credibility and strong brand recognition of well established newspapers, and the close relationships they have with advertisers, are also seen by many in the newspaper industry as strengthening their chances of survival.The movement away from the printing process can also help decrease costs.

People tend to read multiple news articles on a certain news topic since a single news article may not contain all the important information. A summary of all the articles related to the topic will save the time and energy when referring to a certain news topic. Text summarization is a way of minimizing a textual document to a meaningful summary by preserving its information content and the overall meaning.

This project is a web based application and maintains a centralized repository of all related information. The objective of this project is to develop a e-news system that provide a good content and informatics videos and also 24/7 updated news like Pakistani, International, middle east, Sports, Showbiz, Business, Sci-tech, Food, Entertainment, Lifestyle, Health, Digital currency etc. The purpose of designing an e-news web-based system is that you can watch and read any news at any time.

It is very easy to get this web channel and also create your account and send your news. We show your news in this website. We will create according to your demand. Using all the work included in e-news and very easy to handle.

PROJECT IN BRIEF

Project title:	Web Based News Channel (E-News)
Undertaken by:	Aqeel Hussain
Session:	2019-21
Internal supervisor:	Dr. Khurram Gulzar Rana
Technologies :	PHP,SQL
Tool:	XAMP Local Server, Sublime Text Editor
Documentation:	word office 2007
Operating System:	Windows 10pro
System Used:	Dell core i7, 4 th Gen

CHAPTER 1

1.1 INTRODUCTION

The online news channel e-news and the website domain name is digital research news is basically a website and there have a lots of news like Pakistani, International, middle east, Sports, Showbiz, Business, Sci-tech, Food, Entertainment, Lifestyle, Health, Digital currency etc. The main idea of the website is that you watch and read the news anywhere. e-news channels broadcast news content 24 hours a day. The advent of the internet has allowed the regular 24-hour-a-day presentation of many video and audio news reports, which are updated when additional information becomes available.

1.1 Purpose

The web based news channel is built for the purpose of effective and clear news and data saving and manipulating. The e-news channel project highly minimize time and resource by which, searching the authentic news and data you can get the data in quickest time. And almost the resources are wise used since most actions are done on web based news channel. The feature use to storing news data in a secure way.

1.2 Scope

The web application can be used anywhere in the world so you can easily preview the website. The scope of e-news is that now everyone has a busy schedule and they don't watch and read the news at the right time so the scope of e-news is that you can easily access e-news website at any time can access. There are many modules available in this web application system and you will not find anywhere else only because of the lead features and modules like digital currency news and e commerce news is the top one modules. Those News that does not cover the mainstream media is also available on this website. This is our first priority.

1.3 Objectives

It is the user friendly application which reduces the burden and helps to manage all sections of news like national and international etc. which improve the processing efficiency. It deals with the automating tasks of maintaining of news, it is the key process. Including safe data store about all individual person who send data to our news channel as well as fast searching, delete and update of news. The e-news system is easy for use so the user can do actions without ambiguities. The main Objectives of designing this website is to facilitate those people who are busy in their daily routine. Improve user accessibility and time flexibility and computerized by creating neat work through minimizing or eliminating wasting of time as well as removing the resources such as papers for data saving since knows a days is paper based.

1.4 Definitions, Acronyms and abbreviation

1.4.1 User Friendly

It is the user friendly application which reduces the burden and helps to manage all sections of news like national and international etc. which improve the processing efficiency. It deals with the automating tasks of maintaining of news, it is the key process.

1.4.2 Automation Based System

This is where web automation comes, the data entry is mostly we were and other work like screen scraping, data extraction and transfer between applications, website testing and periodical report generation are major common tasks that can readily benefit from web automation.

1.4.3 Web Based News Channel

The Digital Research News E-News Channel belongs to the class of online web intended for storage and management of information obtained in the course of work. The e-news are used to get information and update the world and main benefit of enews is any time you read and listen the news.

1.4.4 Management System

All the system manages by Admin panel.

1.4.5 WBNCS

Web based news channel system

1.4.7 PHP

Technology use for coding.

1.4.8 My SQL

Technology use for Data Base.

Overview

The WBNCS is built in order to web based system. If you want to access the website you will create your account through your mail. This software we will create a form and you write your news, also upload your video and audio and send to admin and admin upload your news and video to this website according to your demand, it is very easy to use and handle all the work this management software is actually digital e-news system, just get this web access and upload your news.

News in The Past

In a past day people are waiting news paper and news time follow on the television there are huge paper need to the newspaper and high printing press machine but now a day all these thing is slowly reduce.

CHAPTER 2

REQUIREMENT ANALYSIS

2.1 INTRODUCTION

The software requirement analysis determines user expectations for the product being developed. It is also called requirement engineering. The requirements must be relevant, detailed and quantifiable. These requirements are called functional specifications. It captures complete descriptions about how the system is expected to perform. In the requirement analysis complete information about the system that what end user wants is described like the system inputs and the expected output from the system. Software requirements analysis is an important aspect of the project. Requirements analysis involves frequent communication with system users to determine specific feature expectations, resolution of conflict or ambiguity in requirements as demanded by the various users or groups of users, avoidance of feature creep and documentation of all aspects of the project development process from start to finish. All efforts are put to conform that the final product is up to the client's expectations. Software requirement is a functional or non-functional need to be implemented in the system.

Objective

The main goal of requirement analysis and gathering is to clear the ambiguity of requirements of the system how the system should behave what the system should do and what the system should not do. Another thing is to clarify the requirements and analyse them that how the requirements would help in the implementation of the project with the actual expectations of the ends user.

2.2 Requirement Elicitation:

It consists of collection of information, understanding the stakeholder needs. It includes interviews, questionnaires, user observations, workshops, brain storming, use case and prototyping.

2.3 Requirement Analysis:

The analysis activity examines the high level requirements and determines if they are clear complete and free of contradictions, and then define the strategy to address these issues. The main goal of requirement analysis and gathering is to clear the ambiguity of requirements of the system how the system should behave what the system should do and what the system should not do.

2.4 Requirement Specification:

A specification is a document that specifies, in a complete, verifiable manner, the requirements, design, behavior, other characteristics of the system and often the procedure for determining whether these provisions have been satisfied.

2.5 Requirement Validation:

Requirement Validation is the process of confirming the completeness of the user requirements.

- \checkmark Achieved stated business objective.
- \checkmark Meet the need of stakeholders.
- \checkmark Clear and understood by the developers.

Validation is important to identification of missing requirements meet certain quality characteristics.

Requirements are the description of services which software will provide to the end user.

Types of Software Requirements

- **1.** Functional Requirements
- 2. Non-Functional Requirements

2.5 Functional Requirements

Functional is actually what a system do. These requirements are related to the function of the system. So functional requirements are the description of services which as software provides to the end user. So the functional requirements are the operations of the software does.

Following are the functional requirements of this project.

1. Login In

To perform all the operations Admin.

2. Add Data

After successful log in to the system the admin can successfully add data.

3. Add Contents

After add data admin can add new content.

4. Add Videos

After adding data admin can upload video.

5. Add Audio

After adding video admin can upload audio.

6. Modify Information

Only admin can modify the information. Registered holder can only submit news to the admin

2.6 Non-Functional Requirement:

Non-functional requirements are the behaviour of the software while performing the operations. Like how the system should behave while performing the operations. These requirements are not related to the functional aspect of the software. Non-functional requirements are how the system will do something not what the system will do.

Non Functional requirements are the behavior of the software while performing the operations. Like how the system should behave while performing the operations. These requirements are not related to the functional aspect of the software. Nonfunctional requirements are how the system will do something not what the system will do. They describe the overall quality and attributes of the proposed system. These requirements place restrictions on the product being developed. Nonfunctional requirements include safety, security, usability, reliability and performance requirements.

1. Usability

Any familiar in using web operation can operate the system since it have user friendly user interface. Which have the instruction menu's how to use it which self-directive application then can be used the system without ambiguity.

2. User Interface

The user interface is friendly which is easy to use. And having attractive frame structure which is prepared in assumption with other related systems.

3. Operation

The web based system is operated and controlled only admin then lab safe work.

4. Support-ability

This web based e-news channel operates in any version of windows operating system. And use any web tool such as Google chrome, Opera, etc. The system can be easily maintained by admin. Other ways it is maintained by the system developers.

2.7 System Requirements:

2.7.1 User Interface Requirements:

 \checkmark GUI (Graphic User Interface) along with meaningful frames and interfaces.

 \checkmark Reports will be generated as per requirements.

2.7.2 Software Requirements:

User side requirement:

- Operating System: Windows/other compatible OS
- Web Browser: Mozilla Firefox, Google Chrome/other compatible browser.

Server side requirement:

- Front End: PHP 5.3.0
- Back End: MYSQL 5.1.36
- Web Server: XAMPP 3.2.2
- Web Server: APACHE
- **Tool**: Sublime Text 3

Tools/Platform:

- HTML5 (For the front end).
- CSS3 (Cascading style for all page).
- JAVASCRIPT
- PHP (For Back end programming)
- MYSQL (For Database Storage as Back end)
- TWITTER BOOTSTARP
- JQuary

2.8 Hardware Requirements

Recommended computer hardware requirements:

- ✓ 2.2 GHz or higher CPU
- ✓ 4 GB or more RAM
- ✓ 1280x1024 of Display

CHAPTER 3

ANALYSIS AND DESIGN

3.1 System Design Overview:

In describing the system design, diagrams will be sketched to make clear on how the project is carried out. The diagrams included are use-case diagram, activityflow diagram, class diagram, entity relationship diagram etc.

System design is the process of defining the architecture, components, modules, interfaces and data for a system to satisfy specified requirements through system modeling.

3.2 Analysis of Existing System:

Before we analyses the design of the proposed system, we need to carefully highlight the problems of the existing system so as to avoid recurrence. Every day, millions people search authentic news but they don't fine authentic news because of huge and fake websites.

- Every day, millions of people search authentic news but they don't fine authentic news because of huge and fake websites.
- Now a day electronic media save huge amount of paper.
- Reducing the employee's workload.

3.3 Use Case Model:

This Use Case Diagram is a graphic depiction of the interactions among the elements of News Portal System. It represents the methodology used in system analysis to identify, clarify, and organize system requirements of News Portal System. The main actors of News Portal System in this Use Case Diagram are: Super Admin, System User, Author, User, who perform the different type of use cases such as Manage News, Manage Types, Manage Contents, Manage Media, Manage Advertisement, Manage Latest Posts, Manage Users and Full News Portal System Operations. Major elements of the UML use case diagram of News Portal System are shown on the picture below.

The use case diagram has four parts:

1. Actors, actor in a use case perform certain functions in the system. It interacts with the use cases.

2. Boundary, the boundary defines the scope of the system. It limitizes the system.

3. The relationship among the actors and the use cases is actually dependency among them.

Relationship types are: Extend, Generalization and Include etc.

4. The use cases, in a use case diagram are visual representation of different functionalities.

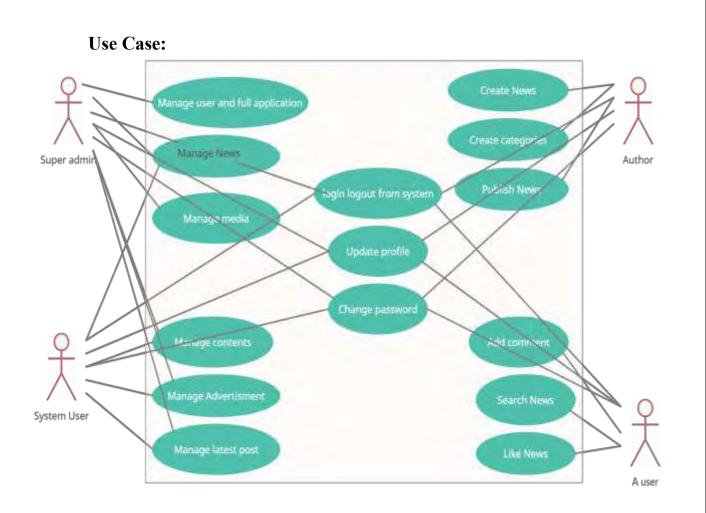


Figure 3.1 Use Case Diagrams

Actors:

Super admin, System user, User, Author

Flow of Event:

The relationships between and among the actors and the use cases of News Portal System:

- Super Admin Entity: Use cases of Super Admin are Manage News, Manage Types, Manage Contents, Manage Media, Manage Advertisement, Manage Latest Posts, Manage Users and Full News Portal System Operations
- **System User Entity:** Use cases of System User are Manage News, Manage Types, Manage Contents, Manage Media, Manage Advertisement, Manage Latest Posts

- Author Entity: Use cases of Author are Create News, Create Categories, Publish News, Upload Images, Upload Picture
- User Entity: Use cases of User are Search News, Filter News, Like News, Add Comments

3.2 Activity Diagrams

This is the Activity UML diagram of News Portal System which shows the flows between the activity of Types, Contents, Advertisement, Latest Posts, News. The main activity involved in this UML Activity Diagram of News Portal System are as follows:

- Types Activity
- Contents Activity
- Advertisement Activity
- Latest Posts Activity
- News Activity

Features Of The Activity UML Diagram Of News Portal System

- Admin User can search Types, view description of a selected Types, add Types, update Types and delete Types.
- Its shows the activity flow of editing, adding and updating of Contents
- User will be able to search and generate report of Advertisement, Latest Posts, News
- All objects such as (Types, Contents, News) are interlinked
- Its shows the full description and flow of Types, Latest Posts, News, Advertisement, Contents

Activity Diagrams describe the dynamic aspects of the system. It graphically represents the flow from one activity to another activity, it is basically a flowchart. These activities which are shown in graphical flow are the basic operation of the system.

Following are the notations which are used for the creation of activity diagrams:

✓ Activity:

The rounded rectangle represents the activity.

✓ Initial Node:

The filled in circles is the starting point of the diagram.

✓ Final Node:

The circle which is filled and having border around is the ending point of the activities.

✓ Fork:

A black bar with one flow going into it and several leaving it.

✓ Join:

A black bar with many entering in it and one leaving it.

✓ Decision:

A diamond with one flow entering and several leaving.

✓ Merge:

A diamond with several flows entering it and one leaving it.

✓ Flow Final:

The circle with the X through it. This indicates that the pro cess stops at this point.

Activity Diagram:

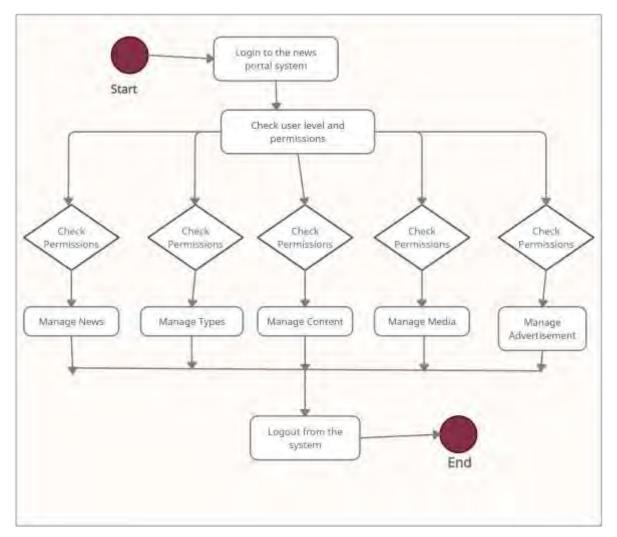


Figure 3.2 Activity Diagram

3.3 Sequence Diagram

This is the UML sequence diagram of News Portal System which shows the interaction between the objects of News, Types, Contents, Latest Posts, Media. The instance of class objects involved in this UML Sequence Diagram of News Portal System are as follows:

- News Object
- Types Object
- Contents Object
- Latest Posts Object
- Media Object

This is the Login Sequence Diagram of News Portal System, where admin will be able to login in their account using their credentials. After login user can manage all the operations on Contents, News, Types, Media, Latest Posts. All the pages such as Types, Media, Latest Posts are secure and user can access these page after login. The diagram below helps demonstrate how the login page works in a News Portal System. The various objects in the Media, Contents, News, Types, and Latest Posts page—interact over the course of the sequence, and user will not be able to access this page without verifying their identity.

A sequence diagram shows object interactions arranged in time sequence. It depicts the objects and classes involved in the scenario and the sequence of messages exchanged between the objects needed to carry out the functionality of the scenario.

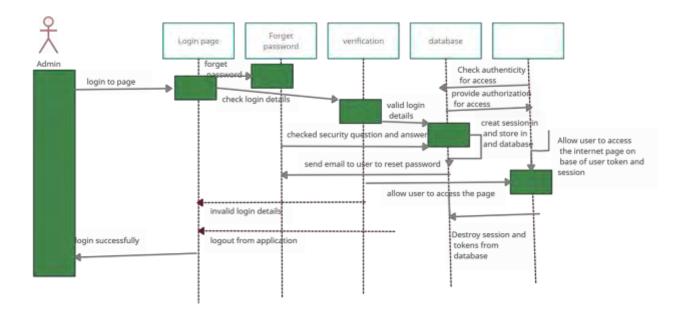


Figure 3.3 Sequence Diagram

This is the UML sequence diagram of News Portal System which shows the interaction between the objects of News, Types, Contents, Latest Posts, Media. The instance of class objects involved in this UML Sequence Diagram of News Portal System are as follows:

News Object Types Object Contents Object Latest Posts Object Media Object

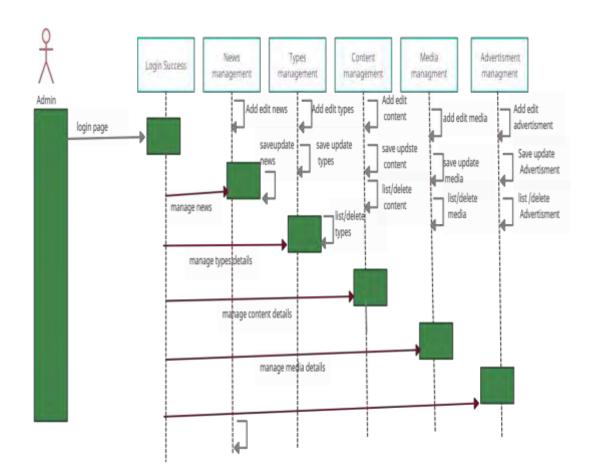


Figure 3.4 Sequence Diagra

3.4 Class Diagram

A class diagram describes the structure of a system by showing the system's classes, their attributes, operations, and the relationships among objects.

Classes of News Portal System Class Diagram:

News Class: Manage all the operations of News

Contents Class: Manage all the operations of Contents

Media Class: Manage all the operations of Media

Advertisement Class: Manage all the operations of Advertisement

Latest Posts Class: Manage all the operations of Latest Posts

News Tupe Class: Manage all the operations of News Tupe

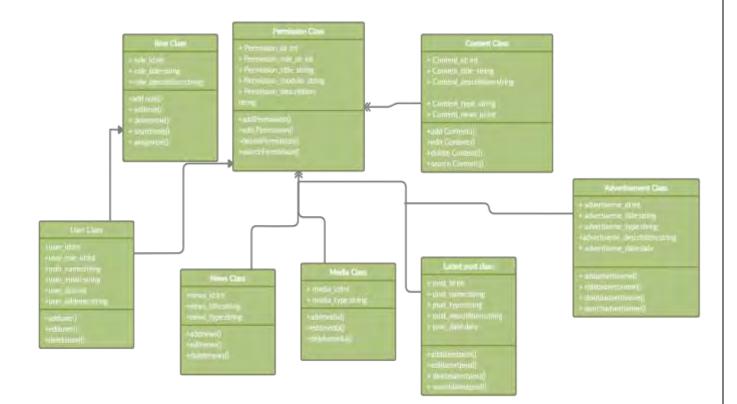


Figure 3.5 Class Diagram

3.5 Entity Relationship Diagram

Database is the integral part of the software system. To fully utilize ER Diagram in database engineering guarantees you to produce high quality database design to use in database creation, management, and maintenance. An ER model also provides a mean of communication.

- News Entity
- Contents Entity
- Media Advertisement
- Latest Posts Entity
- News Tupe Entity

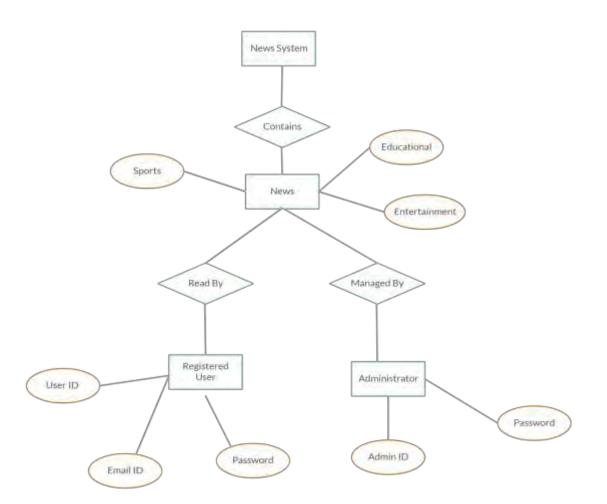


Figure 3.6 ER Diagra

CHAPTER 4

TOOLS AND TECHNOLOGIES

4.1 INTRODUCTION

The title of the project is –ĐEVELOPMENT OF ONLINE NEWS PORTAL SYS-TEM". This project will handle whole the activities of a news portal system. The development of a portal for web based newspaper generally means creating a website in which the management of all news item is done by the admin where all people (viewers) can view and know all the relevant information about the knowledge which they seek. This project is about the designing of a newspaper which displays the news which a normal person want to show. This portal provides dynamic news for all the viewers. All the news regarded to the category will be updated regularly by admin. The portal system has basically three user parts where one is registered user (authentication required) who can view, add comment and can have a general discussion with another user and another is admin (has an authentication) who will manage or control the website and another is unregistered user (no authentication required) can only view and search. The project is developed by using PHP (core) with sublime text 3 and MySQL on the back end. For the front end, I use HTML5, twitter bootstrap 4, JSES6 and CSS. And the important thing is the server we use XAMPP.

4.1.1 Sublime Text

Sublime Text is a shareware cross-platform source code editor with a Python application programming interface (API). It natively supports many programming languages and markup languages, and functions can be added by users with plugins, typically community-built and maintained under free-software licenses.

4.1.2 PHP

PHP (Hypertext Preprocessor)is a scripting language that helps people make web pages more interactive by allowing them to do more intelligent, complex things. PHP code is run on the web server. It was originally created by Danish-Canadian programmer Rasmus Lerdorf in 1994. There are different versions of PHP are evolved with the passage of time. The standard PHP interpreter, powered by the Get started with Bootstrap, the world's most popular framework for building responsive, mobile-first sites, with Bootstraps and a template starter page. Bootstrap is a free and open-source CSS framework directed at responsive, mobile-first front-end web development. It contains CSS- and (optionally) JavaScript-based design templates for typography, forms, buttons, navigation, and other interface components. On January 31, 2012, Bootstrap 2 was released, which added built-in support for Glyph icons, several

new components, as well as changes to many of the existing components. This version supports responsive web design, meaning the layout of web pages adjusts dynamically, considering the characteristics of the device used (whether desktop, tablet, or mobile phone).

4.1.3 XAMPP

XAMPP is an abbreviation for cross-platform, Apache, MySQL, PHP and Perl, and it allows you to build WordPress site offline, on a local web server on your computer. This simple and lightweight solution works on Windows, Linux, and Mac – hence the –eross-platform" part.Since WordPress isn't a stand-alone application, XAMPP provides two essential components for its installation – Apache, which is used to create the local server, and MySQL which you can use as a database for your website.You may be wondering why and how developers are using WordPress local server. The answer is simple – it allows them to create a local copy of the site in which they can try out new plugin updates before implementing them on its live version.This way they can prevent and spot potential errors and issues that might occur.Now it's time to dive deeper into this XAMPP tutorial and learn how to locally host a website on Windows, Mac, or Linux.

4.1.4 MySQL

MySQL, the most popular Open-Source SQL database management system, is developed, distributed, and supported by Oracle Corporation. The original website provides the latest information about MySQL software.

• MySQL is a database management system.

A database is a structured collection of data. It may be anything from a simple shopping list to a picture gallery or the vast amounts of information in a corporate network. To add, access, and process data stored in a computer database, you need a database management system such as MySQL Server. Since computers are very good at handling large amounts of data, database management systems play a central role in computing, as standalone utilities, or as parts of other applications

• MySQL database are relational.

A relational database stores data in separate tables rather than putting all the data in one big storeroom. The database structures are organized into physical files optimized for speed. The logical model, with objects such as databases, tables, views, rows, and columns, offers a flexible programming environment. You set up rules governing the relationships between different data fields, such as one-to-one, one-to-many, unique, required or optional, and -pointers" between different tables. The database enforces these rules, so that with a well-designed database, your application never sees inconsistent, duplicate, orphan, out of date, or missing data.

• MySQL software is Open Source.

Open-Source means that it is possible for anyone to use and modify the software. Anybody can download the MySQL software from the Internet and use it without paying anything. If you wish, you may study the source code and change it to suit your needs. The MySQL software uses the GPL (GNU General Public License), http://www.fsf.org/licenses/, to define what you may and may not do with the software in different situations. If you feel uncomfortable with the GPL or need to embed MySQL code into a commercial application, you can buy a commercially licensed version from us.

• The MySQL database server is very fast, reliable, scalable, and easy to use.

If that is what you are looking for, you should give it a try. MySQL Server can run comfortably on a desktop or laptop, alongside your other applications, web servers, and so on, requiring little or no attention. If you dedicate an entire machine to MySQL, you can adjust the settings to take advantage of all the memory, CPU power, and I/O capacity available. MySQL can also scale up to clusters of machines, networked together.

• MySQL server works in client/ server or embedded systems.

The MySQL Database Software is a client/server system that consists of a multithreaded SQL server that supports different back ends, several different client programs and libraries, administrative tools, and a wide range of application programming interfaces (APIs).

4.1.5 Ajax

JAX is an acronym that stands for Asynchronous JavaScript and XML, and it describes a set of development techniques used for building websites and web applications. According to web developer and Skill crush WordPress instructor Ann Cascara no, the best way to understand AJAX is to start with identifying its specific purpose in the web development process. AJAX's core function is to update web content asynchronously (the –A" of AJAX), meaning a user's web browser does not need to reload an entire web page when only a small portion of content on the page needs to change. One of the most ubiquitous examples of asynchronous updating is –Google Suggest" feature.

4.1.6 **JSON**

JSON (JavaScript Object Notation) is a lightweight data-interchange format. It is easy for humans to read and write. It is easy for machines to parse and generate. It is based on a subset of the JavaScript Programming Language Standard ECMA-262 3rd Edition - December 1999. JSON is a text format that is completely language independent but uses conventions that are familiar to programmers of the C-family of languages, including C, C++, C#, Java, JavaScript, Perl, Python, and many others. These properties make JSON an ideal data-interchange language

4.1.7 HTML5

HTML5 is the latest version of Hypertext Markup Language, the code that describes web pages. It's actually three kinds of code: HTML, which provides the structure; Cascading Style Sheets (CSS), which take care of presentation; and JavaScript, which makes things happen.HTML5 is the latest evolution of the standard that defines HTML. The term represents two different concepts. It is a new version of the language HTML, with new elements, attributes, and behaviors, and a larger set of technologies that allows the building of more diverse and powerful Web sites and applications. This set is sometimes called HTML5 & friends and often shortened to just HTML5. HTML5 is a programming language whose acronym stands for Hyper Text Markup Language. It is a system that allows the modification of the appearance of web pages, as well as adjusting their appearance. It also used to structure and present content for the web. With HTML5, browsers like Firefox, Chrome, Explorer, Safari and more, can know how to display a particular web page, know where the elements are, where to put the images and where to place the text. Apart from HTML5, there are other languages that are necessary to give format and interactivity to a site, but the basic structure of any page is first defined in the HTML5 language.

4.1.8 CSS (Cascading style sheet)

CSS stands for Cascading Style Sheets with an emphasis placed on –Style." While HTML is used to structure a web document (defining things like headlines and paragraphs, and allowing you to embed images, video, and other media), CSS comes through and specifies your document's style—page layouts, colors, and fonts are all determined with CSS. Think of HTML as the foundation (every house has one), and CSS as the aesthetic choices (there's a big difference between a Victorian mansion and a mid-century modern home). You might be wondering how this CSS code is applied to HTML content, though. Much like HTML, CSS is written in simple, plain text through a text editor or word processor on your computer, and there are three main ways to add that CSS code to your HTML pages. CSS code (CSS stands for Cascading Style Sheets with an emphasis placed on –Style." While HTML is used to structure a web document (defining things like headlines and paragraphs, and allowing you to embed images, video, and other media), CSS comes through and specifies your document's style—page layouts, colors, and fonts are all determined with CSS. Think of HTML as the foundation (every house has one), and CSS as the aesthetic choices (there's a big difference between a Victorian mansion and a mid-century modern home). You might be wondering how this CSS code is applied to HTML content, though. Much like HTML, CSS is written in simple, plain text through a text editor or word processor on your computer, and there are three main ways to add that CSS code to your HTML pages. CSS code (or style sheets) can be external, internal, or inline. External style sheets are saved as .CSS files and can be used to determine the appearance of an entire website through one file (rather than adding individual instances of CSS code to every HTML element you want to adjust).

4.1.9 Bootstrap 4

Get started with Bootstrap, the world's most popular framework for building responsive, mobile-first sites, with Bootstraps and a template starter page. Bootstrap is a free and open-source CSS framework directed at responsive, mobile-first front-end web development. It contains CSS and (optionally) JavaScript-based design templates for typography, forms, buttons, navigation, and other interface components. On January 31, 2012, Bootstrap 2 was released, which added built-in support for Glyph icons, several new components, as well as changes to many of the existing components. This version supports responsive web design, meaning the layout of web pages adjusts dynamically, considering the characteristics of the device used (whether desktop, tablet, or mobile phone).

4.1.10 JavaScript ES6

ECMAScript 6, also known as ECMAScript 2015, is a significant update to the language, and the first update to the language since ES5 was standardized in 2009. Implementation of these features in major JavaScript engines is underway now [1]. There are many new and important features added to the language such as restructuring, arrow functions, let and cons, modules, classes which are a syntactical sugar for prototypal inheritance in JavaScript and other features which we used extensively throughout our project. However, ES6 JavaScript code still cannot run on all browsers therefore it needs to be converted to ES5 and it is done through a transpolar. I used Next.js which uses Babel-core and Web pack to convert ES6 code to ES5 code. We do not need to do it ourselves Next.js or CRA (create-react-app, though I did not use it in my project) do it for us out of the box.

4.1.11 jQuery

jQuery is a fast, small, and feature-rich JavaScript library. It makes things like HTML document traversal and manipulation, event handling, animation, and Ajax much simpler with an easy-to-use API that works across a multitude of browsers. With a combination of

4.1.12 Git hub

GitHub is a web-based Git repository hosting service. It offers all of the distributed version control and source code management (SCM) functionality of Git as well as adding its own features. It provides access control and several collaboration features such as bug tracking, feature requests, task management, and wikis for every project.

CHPATER 5

INTERFACES AND DESIGN

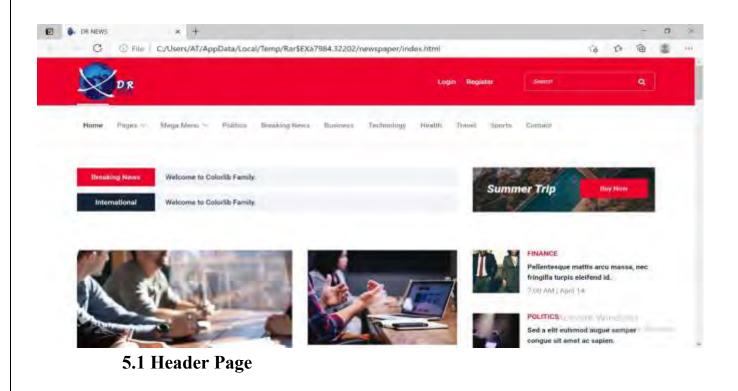


Figure 5.1

5.2 Video Section

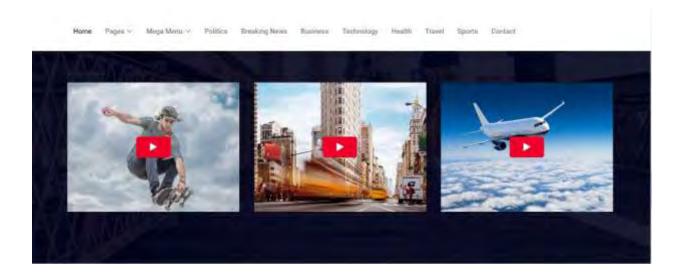
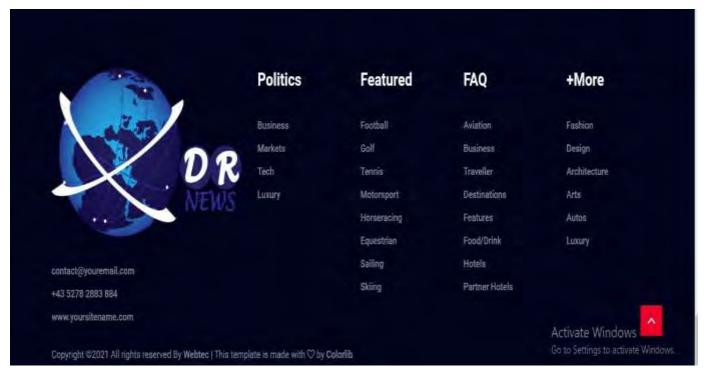


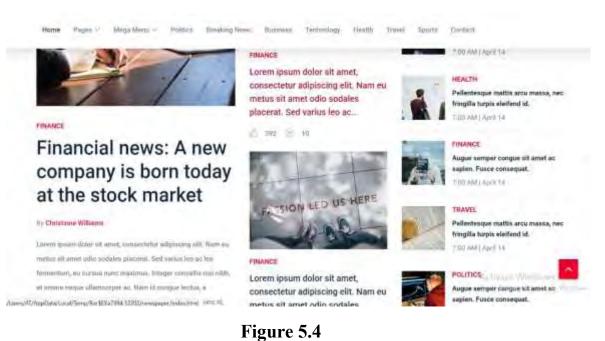
Figure 5.2



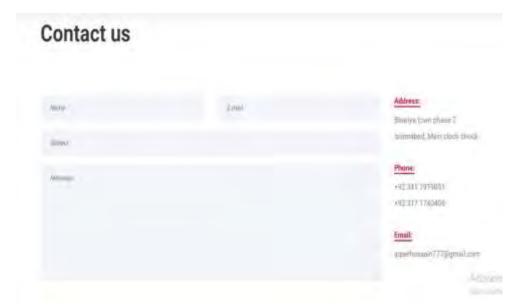
5.3 Footer Page:



5.4 Main Page view:



5.5 Contact page:





5.6 Login Page:

E-Mail	Enter your E-Mail Address
Password	password
	Login -A
	Login -14



5.7 Admin panel:

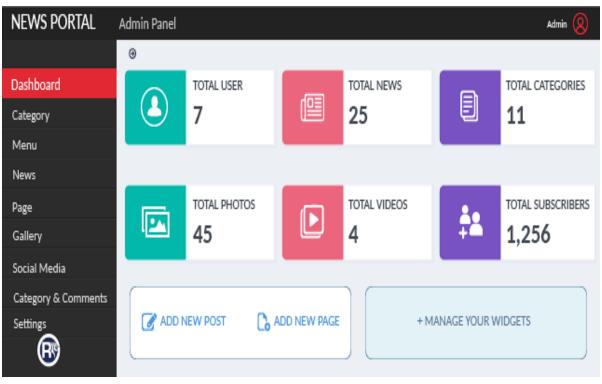


Figure 5.7

5.8 News panel:

Ant Distant Lines	10 · • 100	zugt bei belai	Search				
E Hanage Bangtadesh	News Id	News Title		News Image	Publication Status	Attions	
Salar manufactul trees		Country must provider if politicians uphold forwesty			Published	1 0 1	
Managi wamatista)	1	No Toreign force to pressurile govt over next polity		-	(Haroblithed	1 a 🚺	
Arhit Sports Inwey	4	President for all parties effective role in parliament		12	indiated		
E Manage Spotts News		Bangladezhi death toll in Saudi read crash noer 10		2	Publiched	000	
A Change (Factorial)	8	N Konse names detegates for inter Konsen talls		120	impublished		
B hange the		Kulttle med orech injures 15 cops			Published		
E Handpe Africa	1	Country keeps chowing in bitter cold			Unpublished	1 3 0	
E Act Brokingtonia		Doubling centres to be closed 3 days before SSC examp		130	Published	+ u =	
I Instage Stanling South	-10	Lafy diagnosis key to prevending Preumenia in children		1	Published		
Alexintens	TT.	10 Bangladeshi migrant, workers killind in Saudi Arabia mad accident		-	(solided		

Figure 5.8

5.9 Change Admin password Page:

Change Admin Password	
Old Password	
New Password	
Update Password	

Figure 5.9

5.10 Users panel Page:

L Manage Users							
10 🔻 records per page		Search:	Search:				
Full Name	User Name	Email	Activation Status	Actions			
Abdur Rahman	Rahman	rahman@gmail.com	Published	+			
First User Name	First User	user1@gmail.com	Published	+			
Fourth User Name	Fourth User	user4@gmail.com	Published	+			
Rajib Kumar Roy	Rajib Roy	rajib@gmail.com	Published	+ =			
Sagor Kumar Das	Sagor Das	sagor@gmail.com	Published	+			
Sajib Kumar Roy	Sajib Roy	sajīb@gmail.com	Unpublished	+			
Second User Name	Second User	user2@gmail.com	Published	+ 🖮			
Sohel Gazi	Sohel	sohel_gazi@gmail.com	Published	+			
Third User Name	Third User	user3@gmail.com	Published				

5.10 Database Table layout:

M Structure SQL	Search	Query	💀 Exp	ort	Import	<i>у</i> Ор	erations	E Priv	rileges	Ro	outines	S Events
Table 🔺	Action						Rows	Туре	Collation	1	Size	Overhead
📄 tbl_admin	🚖 📃 Browse	Je Structure	👒 Search	3 insert	👷 Empty	😂 Drop		InnoDB	utf8_gene	eral_ci	16 KiB	-
tbl_bangladesh_news	🚖 📄 Browse	Je Structure	🛓 Search	3 i Insert	👷 Empty	🔵 Drop	1	InnoDB	utf8_gene	eral_ci	48 KiB	-
tbl_bd_category	🚖 🗐 Browse	Structure	Search	a Insert	层 Empty	C Drop	. 1	InnoDB	utf8_gene	eral_ci	16 KiB	-
tbl_bd_comments	🚖 🔄 Browse	Je Structure	Rearch	∃é Insert	Empty) Drop	. 3	7 InnoDB	utf8_gene	eral_ci	16 KiB	-
tbl_breaking_news	🙀 🔄 Browse	M Structure	Rearch	3 insert	🚍 Empty	😂 Drop		InnoDB	utf8_gene	eral_ci	16 KiB	-
tbl_editor	📩 📃 Browse	Je Structure	🤹 Search	Sé Insert	Here Empty	🔵 Drop	1	5 InnoDB	utf8_gene	eral_ci	16 KiB	-
tbl_international_news	🛊 😭 Browse	M Structure	Search	3 i Insert	📻 Empty	Drop	1 4	InnoDB	utf8_gene	eral_ci	16 KiB	
tbl_in_comments	👷 🔄 Browse	Je Structure	😽 Search	3 insert	HE Empty	C Drop		InnoDB	utf8_gene	eral_ci	16 KiB	-
tbl_sports_news	🐈 📑 Browse	Je Structure	🔹 Search	St Insert	HE Empty	🥥 Drop	. 9	InnoDB	utf8_gene	eral_ci	45 KiB	-
🔲 tbl_user	🚖 📃 Browse	Je Structure	🔹 Search	3 insert	🚍 Empty	🔵 Drop		InnoDB	utf8_gene	eral_ci	16 KiB	-
10 tables	Sum						75	InnoDB	utf8 gen	eral ci	224 KiB	0 B

Figure 5.10

5.11 Database Table layout:

	🗊 Server: 127 0 0 1 » 👩 Data	base: db_onlir	ne_news » 🔝 Ti	able: ibl_bd_c	comm	ents		1.0.0			
	Browse 🥻 Structure	SQL	Search	lnsert	1	Export	import 🛃	Privileges	🎤 Operatio	ns 🧕	Tracking
	# Name	Туре	Collation	Attributes	Null	Default		Extra	Action		
	1 comments_bd_id	int(5)			No	None		AUTO_INCREME	NT 🥜 Chang	je 🥥 Dro	p 🔊 Primary
0	2 bangladesh_news_id	int(5)			No	None			🥜 Chang	je 🥥 Dro	p 🄑 Primary
0	3 comments_author_name	varchar(50)	utf8_general_c	ci	No	None			🖉 Chang	je 🥥 Dro	p 👂 Primary
Ē	4 comments_author_email	varchar(100)	utf8_general_o	zi -	No	None			🥜 Chang	je 🥥 Dro	p 🤌 Primary
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Figure 5.11

5.12 backend coding:

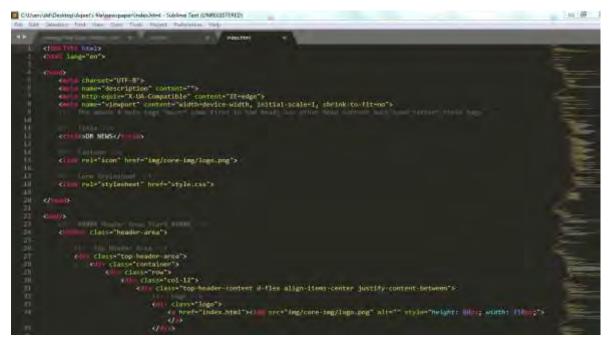


Figure 5.12

5.13 backend coding:

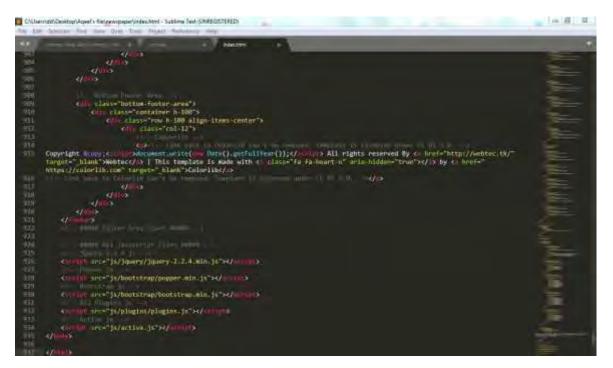


Figure 5.13

IMPLEMENTATION

6.1 INTRODUCTION

When the design of the system is completed then the development phase of the system begins to transfer the system design into an executable form. As this project is a web and mobile application based so it is important to specify that how they are implemented what tools and technologies are used to implement them. The system implementation and system deployment are the part in which the system is implemented and deployed into real world to be used. This chapter is about the step by step process to implement the system.

When all the necessary stuffs, tools installation is done then the next step is the configuration and creation of the table entities of the database. The database is created on the bases of the system design to store the data. The development of the system is begun with creation to user pictorial interfaces.

6.2 Language Selection:

The selection to language to develop an application is always been a critical job. A good language and tool support helps to avoid upcoming difficulties as we move forward in the development phase. Language use to develop this project is Simple php core. This project is based on Php language and for data base we use xamp server. SQL queries is used to connect database.

6.3 Web based implementation:

The Web based is developed in php. An application that runs stand-alone in laptop computer.

- Windows File Explorer.
- Microsoft Office applications.
- Web browsers (Chrome, Firefox)
- Adobe Photoshop.

6.4 Three Tier Architecture:

I will use three tier architecture in my development. In this architecture there are three layers.

User interface:

Presentation layer shows at the side of client

Logic:

Server contains logic

Architecture Layers:

There are three layers in architecture.

- ✓ Presentation tier
- \checkmark Application tier
- ✓ Data tier

Presentation tier:

This is the most visible part of the application which is visible to the user the user interacts through this with the application. It provides interface to the user to input data and there is no logic required. It is dependent on the platform like web application, windows application or android application etc.

Application tier:

It is the middle layer of three tier architecture. This tier perform calculations and operations between I/O requirements. This layer also known as application server. This layer responds to all queries and requests from the user and respond sent through the presentation tier.

Data tier:

The last layer of three tier architecture. It ensures all operations with data, i.e. database management system and basic database operations for functional storage, selection, processing, storage and integrity. All database and tables are stored in this tier.

6.5 Software Process Model

Software process models represent the activities of software development that in which order they are undertaken. It describes the sequence in which the phases of the software lifecycle will be performed. Software process models are used to develop software in a systematic way.

Different software models are used in different scenarios. There are a lot of different software developments process models that developers are using every day fit into a handful of process models: waterfall, spiral, iterative, Prototyping, incremental development etc. but for the development of this system the agile software development is used.

6.5.1 Agile Software Development

Agile is the ability to create and respond to change. It is a way of dealing with, and ultimately succeeding in, an uncertain and turbulent environment. Agile software development is an umbrella term for a set of frameworks and practices based on the values and principles expressed in the Manifesto for agile software development.

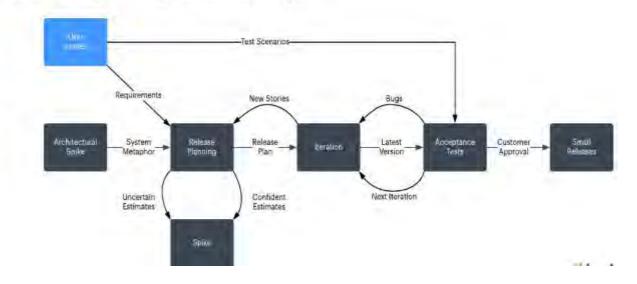
6.5.2 Why Agile?

Agile is an iterative approach features are delivered incrementally and the product is continuously developed. It is used to develop software very quickly. It has the ability to create and respond to change.

Agile Process Models

- ✓ Adaptive Software Development (ASD)
- ✓ Dynamic Systems Development Method (DSDM)
- ✓ Scrum.
- \checkmark Crystal.
- ✓ Feature Driven Development (FDD)
- ✓ Agile Modeling (AM)

These models have their own advantages based on different scenarios. The chosen approach for this project is Extreme Programming (XP).



Extreme Programming (XP) Methodology

Figure 6.1

Key activities:

- ✓ Planning
- ✓ Design
- ✓ Coding
- ✓ Testing

TESTING AND DEBUGGING

7.1 INTRODUCTION:

Testing is aimed at finding errors in the test object and giving confidence in its correct behavior by executing the test object with selected input values. After the development of the system the process of system testing must be performed in order to test if the system is free of bugs. In the system testing behavior of whole system is tested as defined by the scope of the development project or product. It may include tests based on the risks, requirement specifications, business process, use cases, or other high level description of the system behavior, interactions with the operating systems and system resources. Software testing can also provide an objective, independent view of the software to allow the business to appreciate and understand the risks of software implementation. System testing should investigate both functional and non-functional requirements of the testing. System testing is most often the final test to verify that the system to be delivered meets the specification and its purpose. During the system testing, if bugs or errors are detected, they should be corrected immediately.

There are few types of testing that must be carried out:

- Unit testing
- Integration testing
- System testing
- Acceptance testing.

7.2 Software Testing:

Software testing is the process of ensuring the good quality of the software. Testing is an evaluating process which is conducted by the testing team which evaluates whether it meets their requirements or not. It verifies and validates the software to avoid any problems in future.

7.3 Verification:

Verification is the process of evaluating products of a development phase to find out whether they meet the specified requirements

7.4 Validation:

Validation is the process of evaluating software at the end of the development process to determine whether software meets the customer expectations and requirements.

Goals:

Software testing is the process of knowing the expected results and finding out the Bugs and errors. It is the most important part of the project. It is done to ensure that the software is always bug free and easily maintainable. Its basic purpose is to make sure that it is up to the end users expectations? It ensures that we are building the right product which meets the requirements gathered during the requirement elicitation. If a bug stays undetected for a long time after deployment it will eventually show itself after harming the system. It basically covers all the aspects for which we are testing the system before deployment. System testing is most important part of the project. Without this we cannot get confidence to fully deploy it.

The main goals are:

 \checkmark To identifying the bugs as early as possible.

- \checkmark To find defects in the system.
- \checkmark To prevent defects in the system.

 \checkmark To make sure that the end results meet the given requirements and specifications.

To gain the confidence of the customer to provide best product.

Testing Levels:

 \checkmark

Testing levels are done to find out missing areas and to prevent overlapping and repetition between the development life cycle phases. There are different levels of testing which are carried out during system testing:

- \checkmark Unit testing
- ✓ Component testing
- \checkmark Integration testing
- ✓ Component integration testing
- ✓ System integration testing
- ✓ System testing
- \checkmark Acceptance testing
- \checkmark Alpha testing

✓ Beta Testing

1. Unit Testing:

This is done by developers/individuals person to make insure that their code is working fine and their output. In which function, procedure, and classes checks.

2. Component Testing:

The main difference between the unit testing and the component testing is that, in unit testing the developer test their piece of code and in component testing the whole component is tested.

3. Integration Testing:

System testing is done when two modules are integrated. There are few integration testing.

- \checkmark Big bang integration testing or top down.
- ✓ Bottom up.
- ✓ Functional incremented.

4. Component Integration Testing:

When modules and components are integrated this testing is called component integration testing.

5. System Testing:

In this the tester basically test compatibility of the application with the system.

6. Acceptance Testing:

Acceptance testing is done and give the results whether the system meets the requirements or not.

7. Alpha testing:

It is done at the developer side. It is done at the end of development process.

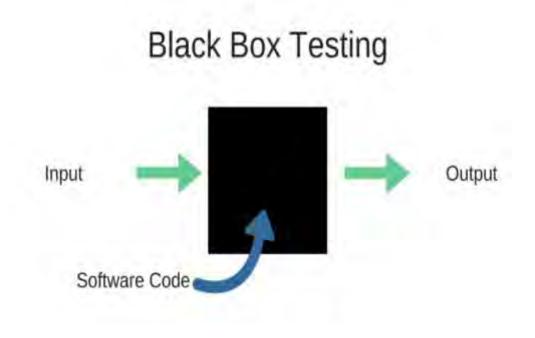
7.5 Testing techniques:

There are some testing techniques are used to test the system. Which are as follows.

- \checkmark Black box testing.
- $\checkmark \qquad \text{White box testing.}$
- \checkmark Gray box testing.

7.5.1 Black box testing.

In black box testing we do not test data structure and variables. We just give input to the system and checks its output if the output is similar to the expected results then the test is successful. Otherwise unsuccessful. In black box testing we discover interface errors and termination errors. In this, tester does not have access to the source code.





Advantages

 \checkmark Well suited and efficient for large code segments.

 \checkmark Code access is not required.

 \checkmark Large number of moderately skilled testers can test the application with no knowledge of implementation, programming language, or operating systems.

Disadvantages

 \checkmark Inefficient testing, due to the fact that the tester only has limited knowledge about an application.

 \checkmark Limited coverage, since only a selected number of test scenarios are actually performed.

 \checkmark Blind coverage, since the tester cannot target specific code segments or error-prone areas.

7.5.2 White box testing

White box testing is the detail investigation of internal structure code and logic. White box testing is also called glass testing or open box testing. In this, the tester have to access to the internal structure of the system.

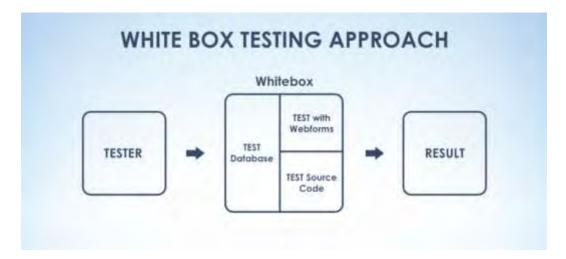
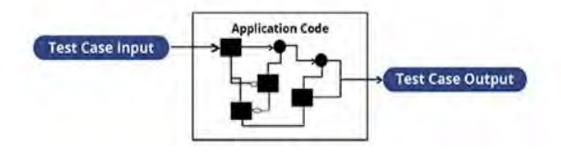


Figure 7.2

WHITE BOX TESTING APPROACH





Advantages:

 \checkmark It helps in optimizing the code.

 \checkmark Extra lines of code can be removed which can bring in hidden defects.

 \checkmark As the tester has knowledge of the source code, it become very easy to find out which type of data can help in testing the application.

Disadvantages

 \checkmark Sometimes it is impossible to look into every corner to find out hidden errors that may create problems, as many paths will go untested.

 \checkmark It is difficult to maintain white-box testing, as it requires specialized tools like code analyzers and debugging tools.

7.6 Gray box testing

Gray box testing is a technique to test the application with having a limited knowledge of the internal workings of an applications. Gray-box testing is a combination of white-box testing and black-box testing. The aim of this testing is to search for the defects if any due to improper structure or improper usage of applications.





a. Test Cases

Test cases are described in tabular form. A test case is a set of conditions or variables on the basis of which a tester determines that the requirements on an application is fully satisfied or not. A test has components that describe an input, action or event and an expected response to determine if a feature of an application is working correctly.

FUNCTIONS TO BE TESTED:

- ✓ Login
- ✓ Add Receptionist
- ✓ Add Tests

- ✓ Add Patient
- ✓ Generate Report
- ✓ Generate Monthly Report
- ✓ Print Report

Test Cases of Application

Test no.	Function to Test	Testing approach/White Box
1	Login	Black box testing/White Box
2	Add Admin	Black box testing/White Box
3	Add User	Black box testing/White Box
4	Add client	Black box testing/White Box
5	Unregistered user	Black box testing/White Box

Table 1: Test Plan

Table 2: Test case for Login

Test case ID	01
Tester	Aqeel Hussain
Test type	Black box testing/White Box
Test case name	Login
Description	Validation of username and password.
Expected result	If valid username/password address than user will be logged in.
Actual result	Error showed if not a valid username or password.
Status	Successful.

Table 2: Test Plan

Table 3: Test case for Add Admin panel

Test case ID	02
Tester	Aqeel Hussain
Test type	Black box testing/White Box
Test case name	Add Admin panel
Descrip- tion	Admin can be added by admin.
Proce- dure	Admin Detail will be provided.
Expected result	Successfully Added.
Actual result	Error if information is not provided.
Status	Successful.

Table 3: Test Plan

Table 4: Test case for Add New Tests

Test	03
	05
case ID	
Tester	Aqeel Hussain
103001	Aquel Hussam
Test	Black box testing/White Box
type	
· 7 F ·	
Test	Add New Tests
case name	
Descrip-	Add Tests has been done by the Admin
tion	
Proce-	Admin should add new tests that is provided.
dure	
	a
Ex-	Successfully done
pected result	
Actual	False Values
result	
Status	Successful.

Table 4: Test Plan

FUNCTIONALITY AND COMMANDS

8.1 FUNCTIONALITES:

The program should firstly be started on the Web based Systems; the initial mode of the program is Login since this program aims at making a secure assistant program. After the program has been started, the admin should add generate news page. The main work will done by the admin and he/she will add news, maintain rec-ord.

8.1.1 Select news page

The admin can select page test and generate news form.

8.1.1 Upload news

Super Admin and Admin only upload news.

8.1.3 Date and Time

Current date and time are available on admin dashboard.

8.2 Maintenance

After the program is completed, the program still needs long term maintenance to make it available and stable to execute. The program will be test after a certain period of time and debug each of the function and possible bugs, whenever a potential bug is detected; the program needs to be refined to a better design.

Meanwhile, there will update and add more data to the database to increase the database capacity. Depending on the new keywords, responses, relevant data found that could be applied in this program; the database will always be improved and can handle more and more cases.

8.3 System Documentation

System documentation is a crucial aspect of implementation process. It describes the working of components and serves as a method of communication between application developers and users. It also helps future analysis of application either by the same or different system analysts and developers.

8.4 Over View

The Web based news portal system provides functions on identify all those expect which we want timely availability news you also registred client also add news.

8.5 Data Base Specification

A database is a single file which consists of structured data and records which are stored in minimum or no duplication of data. It is therefore a constructed, consistent and controlled pool of data. A good database must be common to all users and independent of the programs which use it to generate output.

However, My SQL was used as the database application tool for designing the database management system. The database management system is limited only to database administrator (Management). While the system designer / developer / programmer is responsible for maintaining and upgrading of the database and the whole software.

CONCLUSION AND FUTURE WORK

My Dream.

"Inshallha my future dream is that this news channel growth internationally and Pakistan no.1 news channel"

In this thesis, The portal system has basically three user parts where one is registered user (authentication required) who can view, add comment and can have a general discussion with another user and another is admin (has an authentication) who will manage or control the website and another is unregistered user (no authentication required) can only view and search.

Due to lack of time many things have been left for future. The project will be enhanced with the passage of time and according to the needs.

More things to add in future:

- 1. Doctor panel you may concern country top doctor.
- 2. Live program
- 3. In future we can make further changes to the interface.

""We are stuck with technology when what we really want is just stuff that works."

- Douglas Adams, The Salmon of Doubt

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- 4. <u>www.codeigniter.com/user_guide/</u>
- 5. https://www.uml-diagrams.org/
- 6. https://www.creately.com/

Important web link:

Website Name: Digital Research News Domain Name: <u>www.drnews.com</u> FB: <u>https://www.facebook.com/DinRatNews.TV</u> Instagram: <u>https://www.instagram.com/digital_research_news.tv</u>