

NEWSBUZZ



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By

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Thank You So much!

Asma Azhar

DEDICATION

I would like to dedicate this thesis to my Parents, my respected teacher **Madam Robina Rashid** and my Friends due to their backing and courage; I'm able to complete this perplexing task.

DECLARATION

I Asma Azhar Reg No. 01161911007 Student of Master of Information Technology; Department of Information Technology, Quaid-I-Azam university Islamabad, solemnly declare that the data quoted in this project title “NewsBuzz” is based on my original work and has not yet been submitted or published elsewhere.

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I certify that the mentioned above Student of Master of Information Technology; Department of Information Technology, Quaid-I-Azam university Islamabad, worked under my supervision and the above stated declaration is true to the best of my knowledge.

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Abstract

The purpose of this project is to display news from different sources i.e., websites and newspapers make them available to user 24/7. It will provide quick access to the interest related news, Ads, and posts anytime by typing a single keyword in search engine and after reviewing the post they can also comment on it. like if user want to search for the sports then all news about the sports part will be made available to user and this is done by using different searching techniques. This will help user to read news according to their interest without wasting their time in reading irrelevant news. Another choice to the user visiting the website is that they can search about other news from multiple sources like Jang news, DAWN, BBC news, times of India, the next web, USA today etc. and can also filter news from one of the specified sources and specified categories. Users can also register themselves by providing login details and after becoming a registered user they can also add posts and advertise their businesses free of cost. Admin authority is to add posts related to news updates about business, entertainment, sports, health, general etc. and can also post Job Ads, scholarship Ads, Food Festivals Events happening around you and much more what people demands. This website is developed using HTML, CSS, JavaScript, and PHP technologies and two APIs for fetching news from other news sites and MYSQL.

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Project in brief

Project Title:	NewsBuzz
System Used:	Intel(R) Core(TM) i7-4600U CPU.
Operating System:	Microsoft windows 10
Development Tool:	Visual Studio Code.
Language:	HTML, CSS, JavaScript and PHP
Start Date:	20th September 2020.
End Date:	30 th April 2021.

Chapter # 1
Introduction to NewsBuzz

1.1 Introduction

The purpose of this project **Newsbuzz** is to design a website for people where they can access the news from various authentic websites and newspapers and to make them available to user 24/7. Our website has a unique feature of searching the news using some keyword. This project enables the user to search for the news, Ads and posts of a specific categories i.e., Business, Entertainment, Health, Sports, General, Science and Technology. So, if user want to search for the sports then all news about the sports part will be made available to user this is done by using different searching techniques. This will help user to read news according to their interest without wasting their time in reading irrelevant news. Our system will also have an Admin Panel. The Admin Panel is the side of the system in which the admin user manages the news, categories, manage comments etc. It will also provide all the information about different types of admissions, scholarships and jobs offered by different universities and companies by posting Ads. Users will get regular updates about that scholarships and job offers. Also, many events are happening around, but peoples are un-aware of them. We are giving user the opportunity to have publicity of their event without any cost by first registering themselves by providing login details. This way, we are providing our services to the event heads to publicly advertise their events and the readers to get informed about the events happening around.

1.2 Background and History:

An early example of an "online-only" newspaper or magazine was “*(PLATO) News Report*”, an online newspaper created by Bruce Parrello in 1974 on the PLATO system at the University of Illinois. The first newspaper to go online was The Columbus Dispatch on July 1, 1980. Beginning in 1987, the Brazilian newspaper Jornaldodia ran on the state-owned Embratel network, moving to the Internet in the 1990s. By the late 1990s, hundreds of U.S. newspapers were publishing online versions in form of websites. One example is Britain's Weekend City Press Review, which provided a weekly news summary online beginning in 1995.

Today, online news has become a huge part of society which leads people to argue whether it is good for society or not.

The Guardian experimented with new media in 2005, offering a free twelve-part weekly podcast series by Ricky Gervais. Another UK daily to go online is “*The Daily Telegraph*”.

In Australia, most major newspapers offer an online version, with or without a paywalled subscription option. In Algeria, the number of daily visitors of news websites and online editions of newspapers surpasses the number of daily readers of print newspapers since the end of 2016.

People with portable devices, like tablets or smartphones, were significantly more likely to subscribe to digital news content. Additionally, younger people 25- to 34-year-olds are more willing to pay for digital news than older people across all countries.

1.3 Objective

Newsbuzz focuses on establishing a complete portal for providing news. The portal provides up to date news over the internet. It is user friendly, and the news is arranged in different categories. The reader could drop their reviews too. The main objective of an online news portal is to Publish news about town/city, state, national and international. The registered user could upload the and post ads and advertise their business free of cost, at any time. Provides all type of news from different sources to the user and they could read anytime.

1.4 Scope

With rapid and exceptional growth of technology around the globe, news industry has been undergone many changes. Most of the news agencies started online news portal services and introduced news websites. Since the number of people who are using Internet is quickly increasing day by day, the growth of online readership and online news portals will be in heights now a days.

Without going out and getting paper daily at home, people can directly access to the updated news 24/7. They don't need to buy a newspaper, they can read it online or can extract news from multiple sources at a time, which will save time and money both.

1.5 Modules

A module is a separate unit of any software or hardware who can manage, control and use the system. Modules of the proposed project are.

- **ADMIN**

Admin module is for the admins of the NewsBuzz site. They are the people who will update the news for their readers. They login from the backend and update the daily news, post Ads and approves or disapproves readers' comments.

- **GUEST USERS/READERS**

The guest user module is that module which is accessed by the readers of this website NewsBuzz. Via this module, a user can check the news, Ads as per his/her choice and can comment on them. This module is only for the readers.

- **REGISTERED USERS**

Registered users can log in to the system by providing login credentials and can post Ads or advertise their businesses free of cost.

- **NEWS FEED**

All the news by the admin is updated into this module. This news has many sections, and each section is specific to a particular domain. Admin can update the news into this module and thus viewers and readers can read the news from their feed.

- **SEARCH**

This module will fetch news from different authentic websites.

1.6 Limitations Current Manual System

It is a good habit to read newspapers physically but there are also some limitations about it, and these are.

- Physical copies of any data can easily be damaged or destroyed.
- Short shelf life, newspapers are read only once.
- Poorly print limits creativity, hence Minimal Interaction.
- Ad space may be expensive, Passive medium (people are not forced to see and read).
- No audio-video element
- Less up to-date in news coverage.
- They are expensive.
- It is difficult to share news with others.
- They will take more space in your cupboard.

1.7 Advantages of Online System over Physical System

- Consumes no costs for reading news.
- Multitasking.
- More news, advertisement and other choices.
- In-depth and background information availability.
- 24/7 updates, better news coverage,
- Customization.
- Ability to discuss and share the news with peers.
- Readers have choice to comment their viewpoint or read other viewpoints as well.
- The opportunity to “talk back to the media.”
- You don’t need to go out and you can easily read news which will save time and energy.
- Now newspapers didn’t take space physically.

1.8 Limitations of Proposed System

They are also few limitations of the current proposed system, these are.

- Require data/Wi-Fi to get online.
- While using internet there is a chance that virus and worms may affect our system badly.
- It's a good technique to provide news online but there is a chance that website got hacked by someone and will post and spread fake news.
- Companies not making as much money due to free reading for audiences.
- News spreads quicker online - people find out news before they should.
- Lose money - can't get people to pay for digital.
- Older audiences may not access digital platforms.
- Costly to maintain.
- Errors stay online FOREVER.
- Language change choice isn't implemented.

Chapter # 2

Requirements for NewsBuzz

2.1 Requirements:

A requirement is a specification or want that must be met or satisfied within a certain timeframe. The requirements for a system are the descriptions of the services that a system should provide; requirements reflect the needs of customers for a system that serves a certain purpose. Requirements are divided into different categories.

2.1.1 Requirements Elicitation:

Before requirements can be analyzed, modeled, or specified they must be gathered through an elicitation process. Requirement's elicitation is the practice of researching and discovering the requirements of a system from users, customers, and other stakeholders. The practice is also sometimes referred to as "requirement gathering". Requirement's elicitation involves meeting with stakeholders of different kinds to discover information about the proposed system.

2.1.2 Requirements Analysis

In requirements analysis we determine the needs or conditions to meet the new or altered product or project. The requirements should be documented, actionable, measurable, testable, related to identified needs or opportunities.

2.1.3 Requirements Specifications:

Requirement's specification is the process of writing down the user and system requirements in a requirements document. The user and system requirements should be clear, unambiguous, easy to understand, complete, and consistent. The user requirements for a system should describe the functional and nonfunctional requirements so that they are understandable by system users who don't have detailed technical knowledge.

2.1.4 Requirements Validations

Requirement's validation is the process of checking that requirements define the system that the customer really wants. It overlaps with elicitation and analysis, as it is concerned with finding problems with the requirements. During the requirements validation process, different types of checks should be carried out on the requirements in the requirements document. These checks include.

- Validity checks
- Consistency checks
- Completeness checks
- Realism check
- Verifiability

2.2 Functional Requirements:

Functional requirements are features or functions that developer must implement to enable the users to accomplish their tasks. Functional requirements describe what a system should do.

2.2.1 Users

They are the unregistered users called readers who can read news, search news according to their choices and comments on it.

2.2.2 User Registration

Registration is allowed to the users who are not registered yet (unregistered users) and after completion of this function they can also upload items, add posts and advertise their businesses and events.

2.2.3 Add

Admin can add categories, subcategories and posts that includes News headlines, Advertisement of events, businesses, scholarships and job offers as well.

2.2.4 Update

Admin can update categories, subcategories and posts.

2.2.5 Delete

Admin can delete categories, subcategories and posts.

2.2.6 Search

Search function does not require any authentication or registration from its user so any user can perform this function. If a user searches for a news item, then the news will be displayed on the screen.

2.2.7 Login

By providing login details admin and registered users can login to system according to their privileges.

2.2.8 Logout

After completing his/her task he/she will be log out from the system.

2.3 Non-Functional Requirements:

Non-functional requirements elaborate performance characteristics of a system. They are also known as quality attributes.

2.3.1 Reliability

The system should provide storage of all databases with automatic switchover. All information should be reach to admin without an error.

2.3.2 Implementation

Implementation of the system using different languages like HTML, CSS, JavaScript and PHP is used as a server-side scripting languages. MySQL is for data storage and connectivity.

2.3.3 Availability

The system will be available according to proposed schedule so the user can access it easily.

2.3.4 Portability

The end user is fully portable. The user can use this system on any OS using any web browser. The system will be able to run on any device.

2.3.5 Usability

The website is designed for user friendly environment and ease of use.

2.3.6 Security

The system's confidential information is accessed and managed only by authenticated administrators on server side.

2.4 Interface Requirements

It specifies hardware, software, or database elements with which a system or component must interface.

2.4.1 Graphical User Interface

- Login page
- Registration form.
- There will be screen displaying information about news updates and Advertisement of all categories.
- Search engine that searches using a single keyword and displays news and Ads from the posted data.
- If people, select ‘The other news’ option then another page with search engine and filter will appear that will extract the detail information about the concerned topic.

2.4.2 Hardware Interface

All hardware's that are required for system to connect to internet will be hardware interface like MODEM, WAN and LAN.

- 2.20GHz Processor
- 4Mbps or above internet speed.
- 8GB RAM
- 64-bit Operating System

2.4.3 Software Interface

- Any browser like Chrome, Mozilla, Firefox etc.
- Microsoft Visual Studio Code or Sublime text.
- Xampp Web server.
- Microsoft Visio diagramming tool.
- MYSQL is used to store all information in database.
- Queries are used to retrieve data from database.

Chapter # 3

System Analysis And Design

3.1 Introduction:

Systems development is systematic process deal with understanding of system and specifying in detail what system should do and how the components of the system will work together. It includes planning, analysis, design, deployment, and maintenance. Here, I will primarily focus on

- Analysis
- Design

3.1.1 Analysis:

Analysis is the process of breaking a complex topic or substance into smaller parts in order to gain a better understanding of it. Analysis specifies **what the system should do**.

It is conducted to study a system or its parts in order to identify its objectives. It is a problem-solving technique which is used to improve the system and ensures that all the components of the system work efficiently to accomplish their purpose.

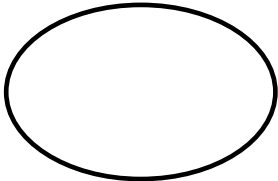



3.1.2 Design:

A design is a plan or specification for the construction of an object or system or specification in the form of a prototype, product or process. System Design focuses on how to accomplish the objective of the system.

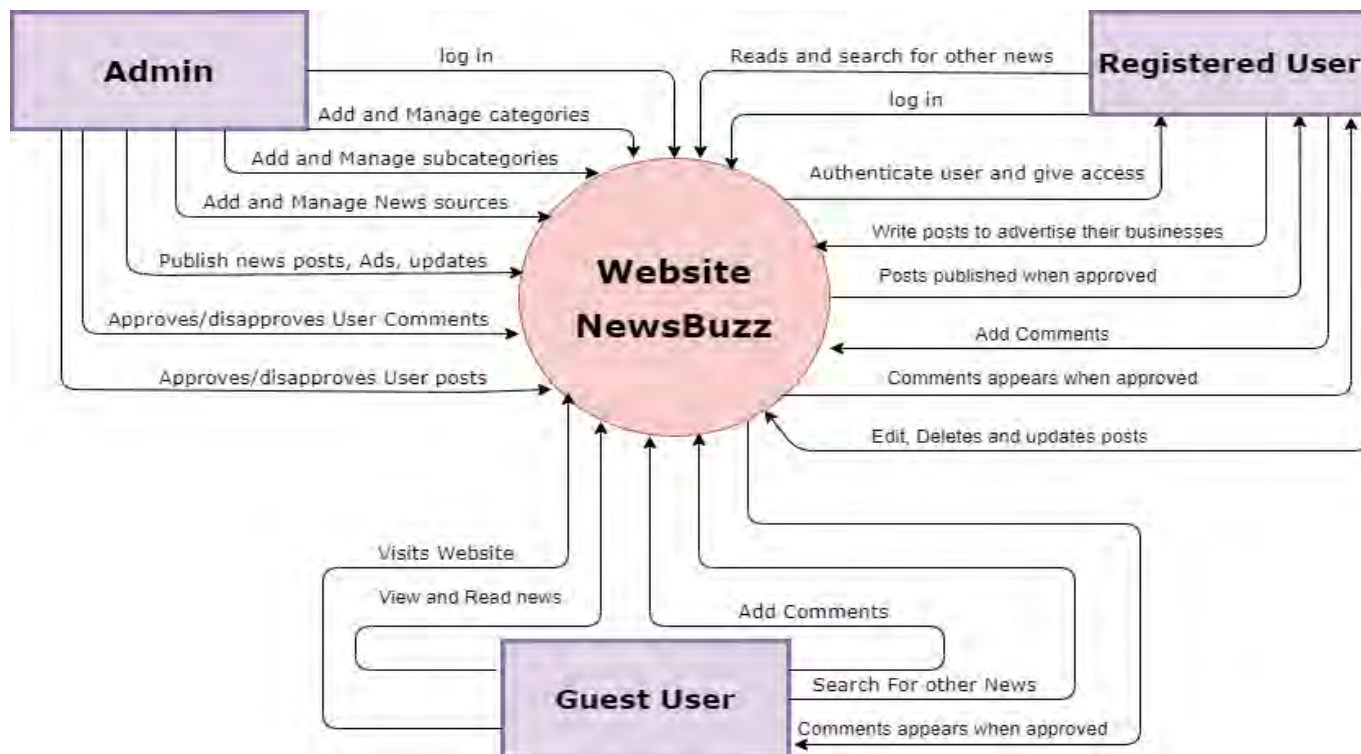
It is used to create a new business system or replacing an existing system by defining its components or modules to satisfy the specific requirements.

3.1.2.1 Data Flow Diagram:

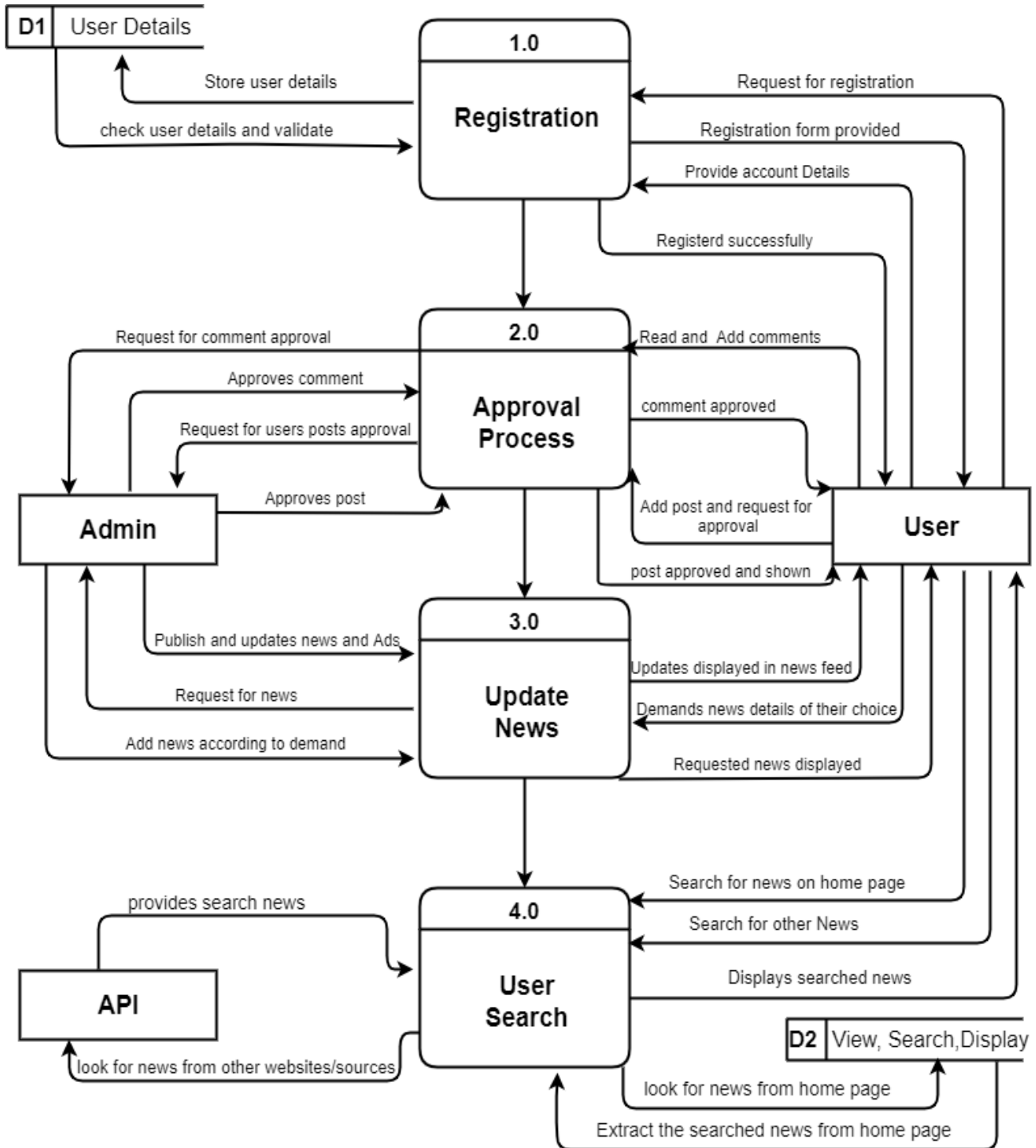
Data Flow diagram is a graphical representation of flow of data throughout the information system. Data flow diagrams illustrate how data is processed by a system in terms of inputs and outputs.

Name	Notation	Role
Process		Transforms incoming data flow to output data flow.
Data Store		Repositories of data in the system.
Dataflow		Data flow are pipelines through which packets of information flow.
External Entity		External entities are objects outside the system, with which the system communicates.

“Context level Data flow Diagram of NewsBuzz”



3.1.2.2 “Level 1 Data Flow Diagram of NewsBuzz”



3.2 Component Overview:

It is an online site for people where they can quickly access to their interest related news, Ads, and posts anytime by typing a single keyword in search engine and after reviewing the post they can also comment on it. It will help user to read news without wasting their time and saves their money as well. The main functionality of the system is described in following UML diagrams.

3.3 UML Diagram:

A UML diagram is a diagram based on the UML (**Unified Modeling Language**) with the purpose of visually representing a system along with its main actors, roles, actions, artifacts or classes, in order to better understand, alter, maintain, or document information about the system.

There are two types of UML diagrams.

- Behavioral Diagrams
- Structural Diagrams

3.3.1 Behavioral Diagrams:

It shows how the system behaves and interacts with itself and other entities (users, other systems). They show how data moves through the system and how objects communicate with each other.

3.3.1.1 Use Case Diagram:

Use cases are a set of actions, services, and functions that the system needs to perform. Use case diagrams model the functionality of a system using actors and use cases. A "system" is something being developed or operated, and "actors" are people or entities operating under defined roles within the system.

Use case Diagram Notations:

System:



It is a rectangular shape system boundary contains use cases in it and actors are place outside the system.

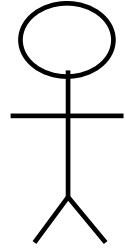
Use Case:



It is an oval shape which represents the functions of the system.

Actor:

Actors are the users of a system. They are represented with the actor stereotype.



Associations:

A line between actors and use cases. In complex diagrams, it is important to know which actors are associated with which use cases.



Generalization:

Generalization of an actor means that one actor can inherit the role of the other actor. The descendant inherits all the use cases of the ancestor. The descendant has one or more use cases that are specific to that role.



Stereo type Relationships:

<<include>>

It's an implicit function. It is used when base use case is incomplete without the included use case. The included use case is mandatory and not optional.

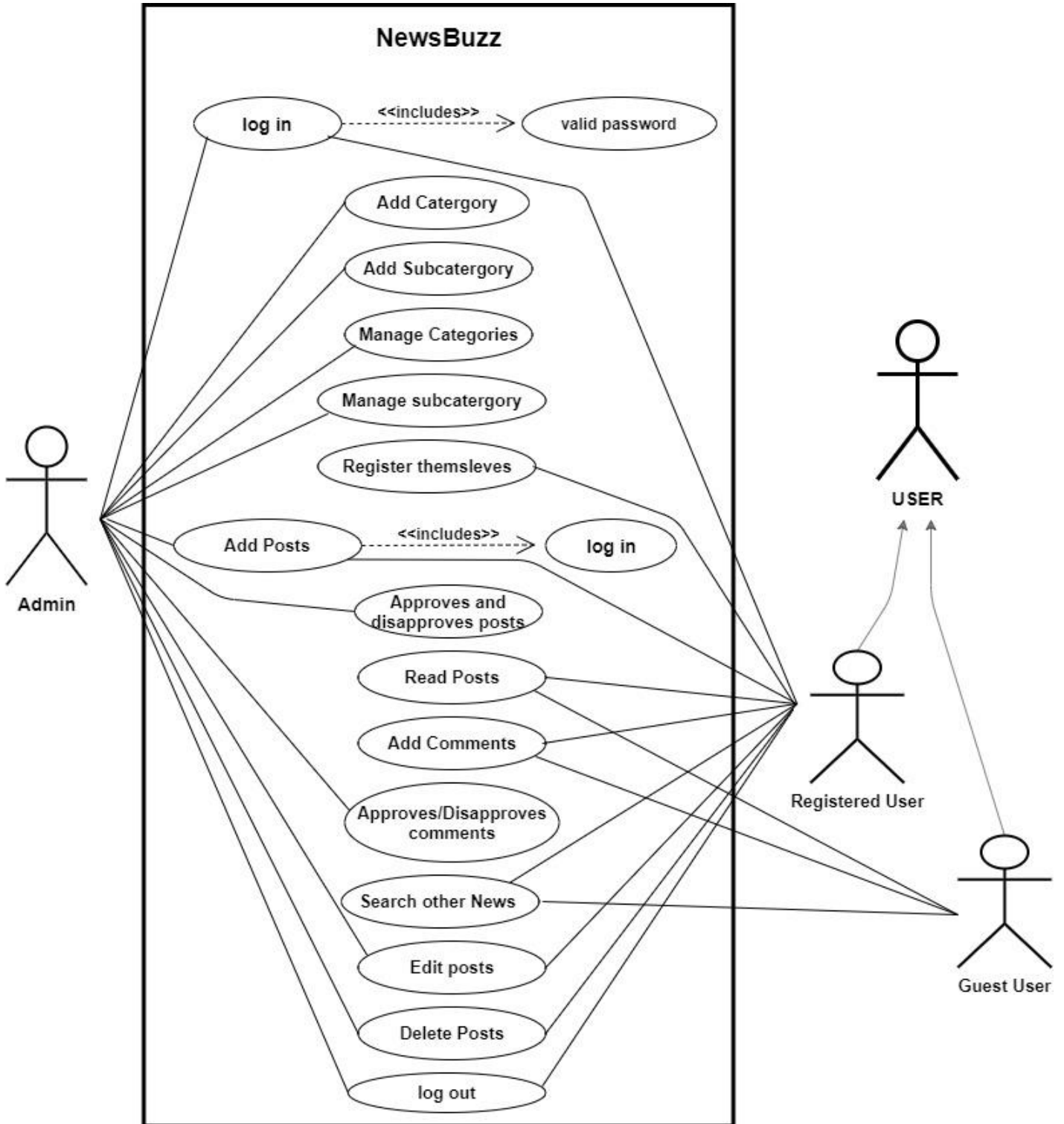


<<extend>>

It's an explicit function. As the name implies it extends the base use case and adds more functionality to the system. Sometimes used and called and sometimes not.



“Usecase diagram For NewsBuzz”



Use case ID	01
Use case Name	Log in
Actor	Admin, Registered user
Description	Login to his\her account by providing username and password.
Pre-condition	Users should have internet connection and must access the website to login.
Post-condition	User can access the account.
Basic Flow	User should access the website, click on log in then enter username, password then system validates username and password and then user logged into the system.
Exceptional Flow	User cannot log in to the system if invalid data is entered.

Use case ID	02
Use case Name	Manage Sources.
Actor	Admin
Description	Admin can Add, Edit and Delete sources.
Pre-condition	Successful login.
Post-condition	Successfully source created.
Basic Flow	After login admin is provided with option to click on sources and the add sources and by providing necessary details and clicking on ok button source will be created, admin can also edit and delete sources by clicking on manage sources.
Exceptional Flow	Unsuccessful operation.

Use case ID	03
Use case Name	Manage Categories.
Actor	Admin
Description	Admin can Add, Edit and Delete categories.
Pre-condition	Successful login.
Post-condition	Successfully categories created.
Basic Flow	After login admin is provided with option to click on add categories and by providing necessary details and clicking on ok button category will be created, admin can also edit and delete categories by clicking on manage categories.
Exceptional Flow	Unsuccessful operation.

Use case ID	04
Use case Name	Manage Subcategories.
Actor	Admin
Description	Admin can Add, Edit and Delete Subcategories.
Pre-condition	Successful login.
Post-condition	Successfully Subcategories created.
Basic Flow	After login admin is provided with option to click on add subcategories and by providing necessary details and clicking on ok button, subcategory will be created, admin can also edit and delete subcategories by clicking on manage subcategories.
Exceptional Flow	Unsuccessful operation.

Use case ID	05
Use case Name	Registration
Actor	User
Description	Users access the websites and register themselves in order to advertise their businesses.
Pre-condition	Users should have internet connection and must access the website.
Post-condition	User successfully registers.
Basic Flow	Users access the website, click on “sign up” option and provides required details to create an account.
Exceptional Flow	Registration unsuccessful because of invalid data entered.

Use case ID	06
Use case Name	Add posts
Actor	Admin, Registered User
Description	Admin and registered users can add posts about news, jobs and events advertisements and much more.
Pre-condition	Successful login to admin\user account.
Post-condition	Admin/user successfully Add posts.
Basic Flow	After login admin\user can click on posts option and then add posts and after providing complete details and clicking on save button, they can create or add posts.
Exceptional Flow	Unsuccessful operation.

Use case ID	07
Use case Name	Approval/Disapproval of posts.
Actor	Admin
Description	Admin can approves\disapproves the posts, posted by users, so that they are published on news feed.
Pre-condition	There must users posts, that are waiting for approval.
Post-condition	Successfully approved users posts .
Basic Flow	After login admin can visit Posts option and then waiting for approval option to approve or disapproves posts.
Exceptional Flow	Disapproval of posts or unsuccessful operation.

Use case ID	08
Use case Name	Read posts.
Actor	Users
Description	Users can read posts published on news feed.
Pre-condition	Admin\Users have posted the news, updates.
Post-condition	Users can view and read posts.
Basic Flow	After accessing website users can read news and advertisements posted on home page of website.
Exceptional Flow	Posts are not added by admin\users.

Use case ID	09
Use case Name	Add Comments.
Actor	Registered user, guest user
Description	Users can comment on posts that appear on home page by providing their name and email.
Pre-condition	Must provide valid email and name.
Post-condition	Comments appear successfully.
Basic Flow	After visiting website users can read posts and Add comments on posts they want.
Exceptional Flow	Unsuccessful operation.

Use case ID	10
Use case Name	Approval/Disapproval of Comments.
Actor	Admin
Description	Admin can approves/disapproves the comments, posted by users, so that they are published on regarding posts.
Pre-condition	There must users' comments, that are waiting for approval.
Post-condition	Successfully approved users' comments .
Basic Flow	After login admin can visit Comments option and then waiting for approval option to approve or disapproves users comments.
Exceptional Flow	Disapproval of comments or unsuccessful operation.

Use case ID	11
Use case Name	Search other News.
Actor	Admin, guest user, registered user.
Description	Users can search for other news from multiple sources.
Pre-condition	Users must access website and have internet connection to search news.
Post-condition	User can acquire relevant content as per the query.
Basic Flow	Users must access website and click on search other news button on home page, another page displayed to whom they can type the news for which they want to search for and also use filter to extract news for some specific category.
Exceptional Flow	Content not available.

Use case ID	12
Use case Name	Edit posts
Actor	Admin, Registered user.
Description	Admin\registered users can Edit\update posts.
Pre-condition	Admin\Users must have added posts.
Post-condition	Admin\Users successfully Edits the posts.
Basic Flow	After login Admin\Registered users can Edit posts by clicking on posts options and then on manage posts option, and then after making changes in post they can click on save button to save those changes.
Exceptional Flow	Posts not available or unsuccessful operation.

Use case ID	13
Use case Name	Delete posts.
Actor	Admin, Registered user.
Description	Admin\registered users can Delete posts.
Pre-condition	Admin\Users must have added posts.
Post-condition	Admin\Users successfully deletes the posts.
Basic Flow	After login Admin\Registered users can Deletes posts by clicking on posts options and then on manage posts option, and then after clicking bin icon post will be deleted.
Exceptional Flow	Posts not available or unsuccessful operation.

Use case ID	14
Use case Name	Log out
Actor	Admin, Registered user
Description	Log out from his\her account by clicking on log out button.
Pre-condition	Users must have logged in to the account.
Post-condition	Users destroy their session when they log out.
Basic Flow	User clicks on log out button.
Exceptional Flow	If user does not click on logout button, session will not be destroyed.

3.3.1.2 Activity Diagram:

We use Activity Diagrams to illustrate the flow of control in a system and refer to the steps involved in the execution of a use case.

Activity Diagram Notations:

Initial state or start point:

A small, filled circle followed by an arrow represents the initial action state or the start point.

Activity or Action State:

An action state represents the non-interruptible action of objects.

Action Flow:

Action flows, also called edges and paths, illustrate the transitions from one action state to another.

Decisions and Branching:

A diamond represents a decision with alternate paths.

Guards:

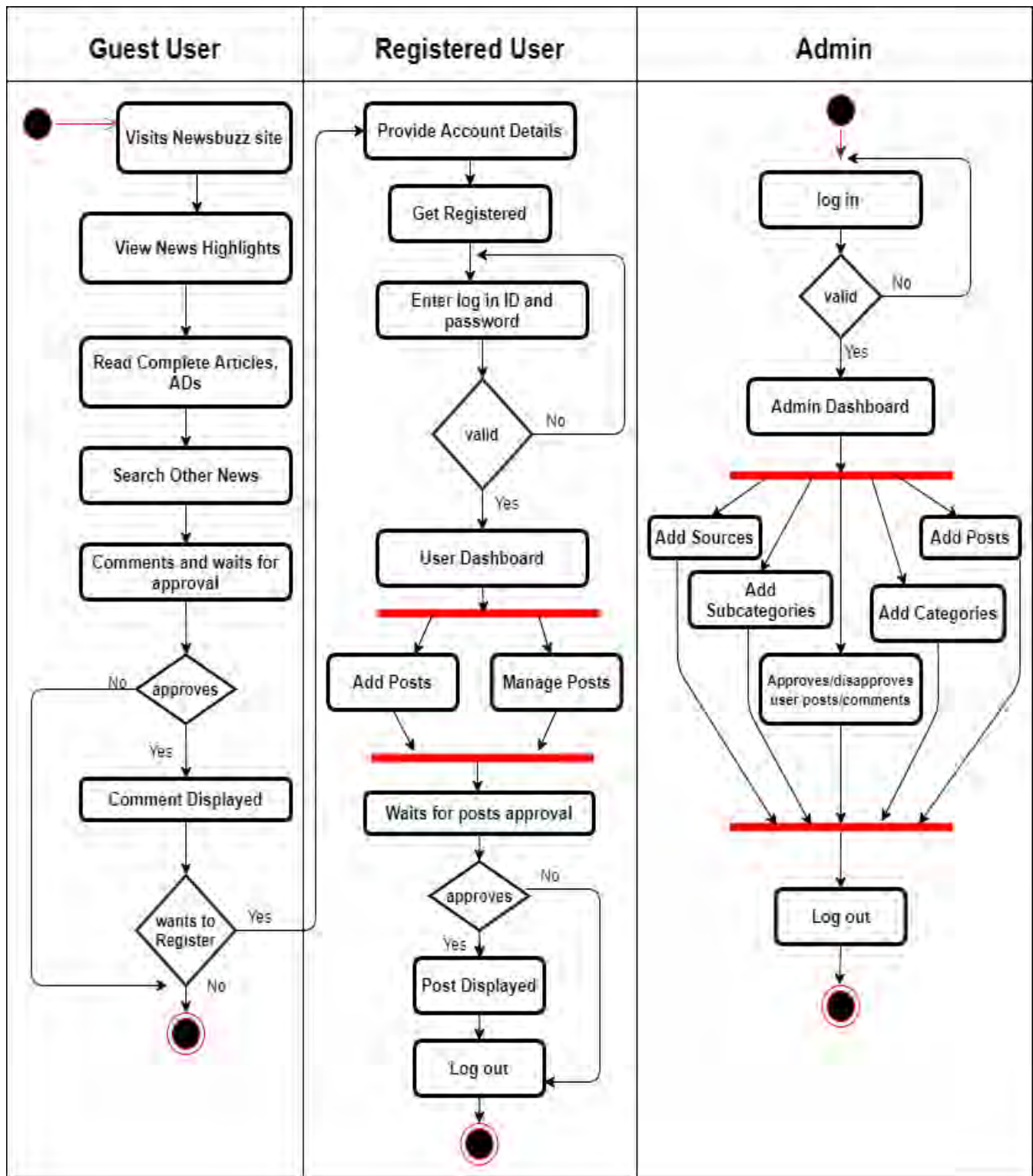
In UML, guards are a statement written next to a decision diamond that must be true before moving next to the next activity.

Synchronization:

A **fork node** is used to split a single incoming flow into multiple concurrent flows. It is represented as a straight, slightly thicker line in an activity diagram.

A **join node** joins multiple concurrent flows back into a single outgoing flow. A fork and join mode used together are often referred to as synchronization.

“Activity/Swimlane Diagram for NewsBuzz”



3.3.1.3 Sequence Diagram:

A sequence diagram simply depicts interaction between objects in a sequential order.

Sequence Diagram Notation:

Actor:

It is a type of role played by an entity that interacts with the subject.

Lifeline:

A lifeline represents an individual participant in the Interaction.

Activations:

A thin rectangle on a lifeline represents the period during which an element is performing an operation.

Call Message:

A message defines a particular communication between Lifelines of an Interaction.

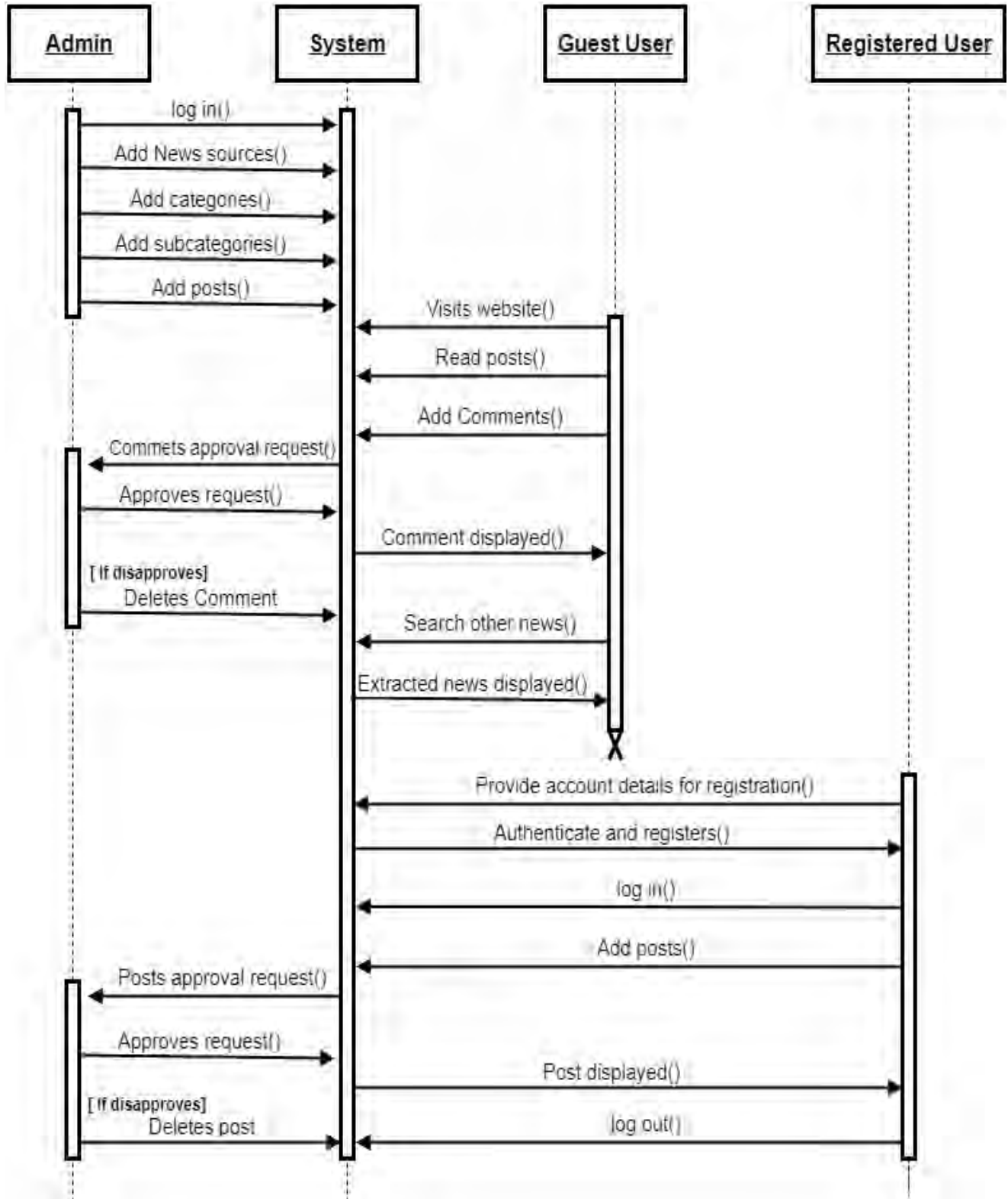
Return message:

Return message is a kind of message that represents the pass of information back to the caller of a corresponded former message.

Destroy message:

Destroy message is a kind of message that represents the request of destroying the lifecycle of target lifeline.

“Sequence Diagram for NewsBuzz”



3.3.2 Structural Diagrams:

It shows the things in the system classes, objects, packages or modules, physical nodes, components and interfaces.

3.3.1 Class Diagram:

It is a type of static structure diagram that describes the structure of a system by showing the system's classes, their attributes, operations or methods, and the relationships among objects.

Class Diagram Notation:

A class notation consists of three parts:

1. Class Name

- The name of the class appears in the first partition.

2. Class Attributes

- Attributes are shown in the second partition.
- Attributes are the characteristics of class.

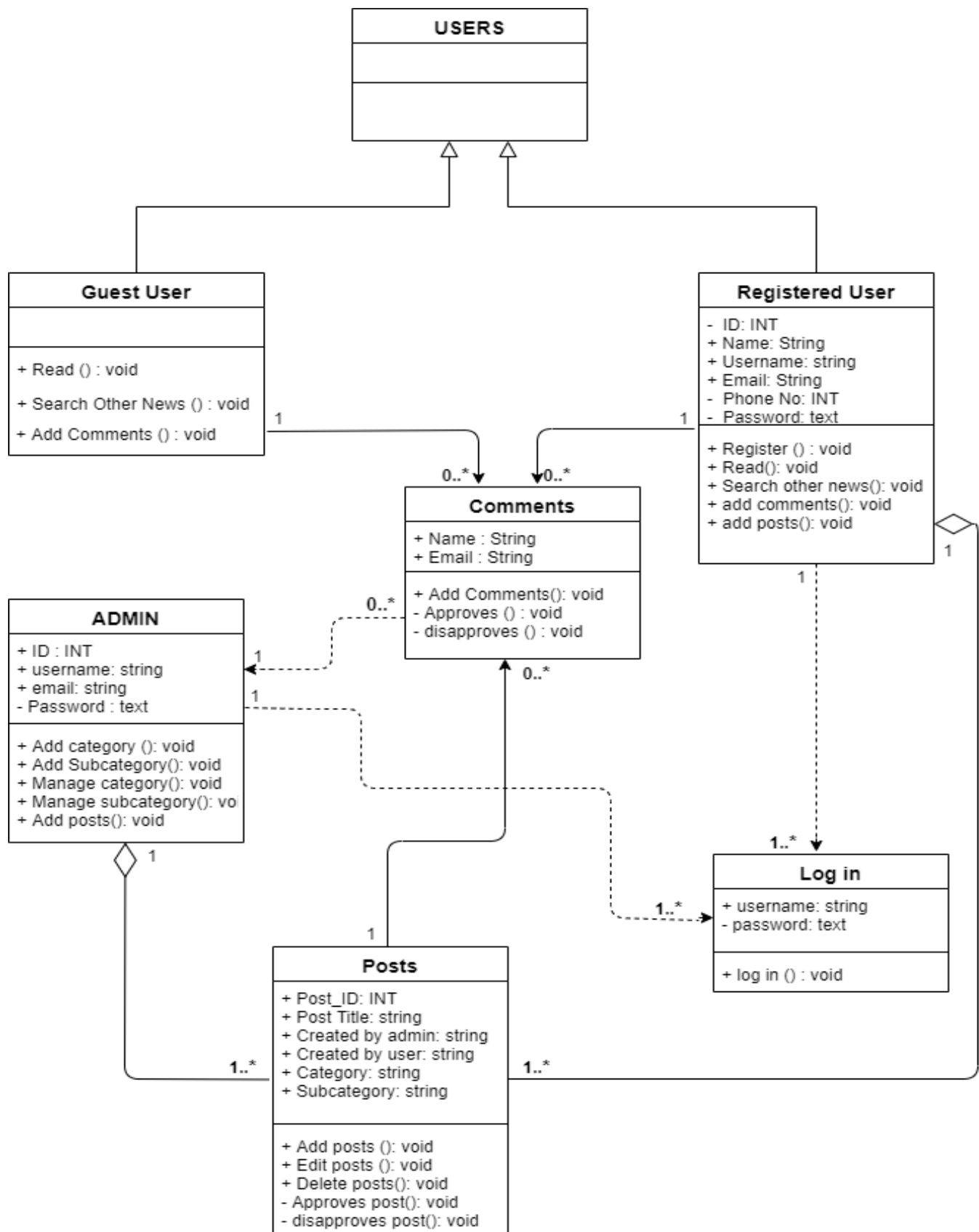
3. Class Operations (Methods)

- Operations are shown in the third partition. They are services the class provides.

Class Relationships:

- **Inheritance or Generalization**
- **Aggregation**
- **Simple Association**
- **Composition**
- **Dependency**

“Class Diagram of website NewsBuzz”



3.4 Relational Database Model:

The relational model represents the database as a collection of relations. A relation is nothing but a table of values. Tables consist of rows and columns.

3.4.1 Relational Model Concepts:

Attribute:

Attributes are the properties which define a relation. e.g., Student, Roll no, Name, etc.

Tables:

In the Relational model the relations are saved in the table format. It is stored along with its entities. A table has two properties rows and columns.

Tuple:

It is nothing but a single row of a table, which contains a single record.

Relation Schema:

A relation schema represents the name of the relation with its attributes.

Degree:

The total number of attributes which are in a relation is called the degree of the relation.

Cardinality:

Total number of rows present in the table Also cardinality in ER diagram refers to the maximum number of times an instance in one entity can relate to instances of another entity.

Column:

The column represents the set of values for a specific attribute.

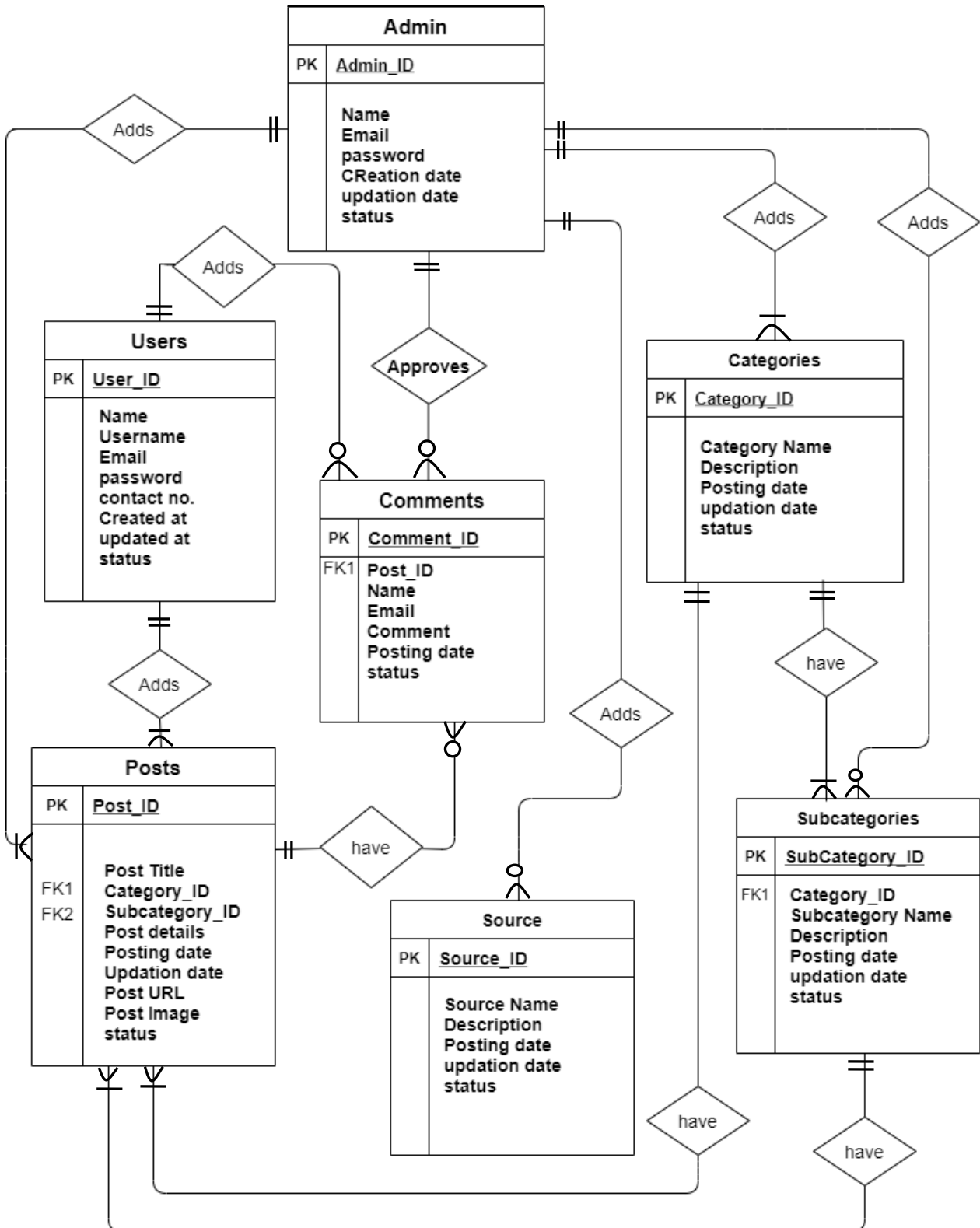
Relation instance:

Relation instance is a finite set of tuples in the RDBMS system. Relation instances never have duplicate tuples.

Relation key:

Every row has one, two or multiple attributes, which is called relation key.

“Entity Relationship Diagram for NewsBuzz”



Chapter # 4

Relational Schema

4.1 Introduction

A relational schema for a database is a framework of how data is structured. It can be a graphic illustration, or another kind of chart used by programmers to understand how each table is laid out, including the columns and the types of data they hold and how tables connect. A database schema usually specifies which columns are primary keys in tables and which other columns have special constraints such as being required to have unique values in each record. It also usually specifies which columns in which tables contain references to data in other tables, often by including primary keys from other table records so that rows can be easily joined.

Fig 4.1 Relational Schema

Table	Action	Rows	Type	Collation	Size	Overhead
<input type="checkbox"/> domain	★ Browse Structure Search Insert Empty Drop	4	InnoDB	utf8mb4_general_ci	16.0 KiB	-
<input type="checkbox"/> tbladmin	★ Browse Structure Search Insert Empty Drop	1	InnoDB	utf8mb4_general_ci	16.0 KiB	-
<input type="checkbox"/> tblcategory	★ Browse Structure Search Insert Empty Drop	7	InnoDB	utf8mb4_general_ci	16.0 KiB	-
<input type="checkbox"/> tblcomments	★ Browse Structure Search Insert Empty Drop	2	InnoDB	utf8mb4_general_ci	16.0 KiB	-
<input type="checkbox"/> tblpages	★ Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_general_ci	16.0 KiB	-
<input type="checkbox"/> tblposts	★ Browse Structure Search Insert Empty Drop	8	InnoDB	utf8mb4_general_ci	1.2 MiB	-
<input type="checkbox"/> tblsource	★ Browse Structure Search Insert Empty Drop	9	InnoDB	utf8mb4_general_ci	16.0 KiB	-
<input type="checkbox"/> tblsubcategory	★ Browse Structure Search Insert Empty Drop	16	InnoDB	utf8mb4_general_ci	16.0 KiB	-
<input type="checkbox"/> users	★ Browse Structure Search Insert Empty Drop	1	InnoDB	utf8mb4_general_ci	16.0 KiB	-
9 tables	Sum	48	InnoDB	utf8mb4_general_ci	1.3 MiB	0 B

Chapter # 5

Tools and Technologies.

5.1 Introduction

Subsequently completing the design stage, we step forward to implementation phase to transform our design into an executable and working product. Implementation is basically grasping the technical requirements of the system and then deploying them using various tools and technologies available at large extent in the world of internet.

As we know that this system is web based, so it is needed to decide which tools and technologies we have to opt for system development. In this chapter we will discuss about all possible options necessary for development and deployment of the system and which programming languages and tools we have used throughout the implementation phase.

5.2 Tool and Technologies

It may not be a tough task for an experienced developer to choose from a never-ending list of tools and technologies, but for a beginner having no experience in the field, surely it becomes a grim task. Having some knowledge and research about various technologies, we will now be using different kind of software's, languages, web browser, servers and database management tools for the development of this system.

Tool that I will be using for developing this system are Microsoft Visual Code 2019, tool through which our database is designed and managed is WAMP, Windows 2007 or above as operating system, WAMP as server and Microsoft Visio as diagramming tool. To make it compatible with environment in which it is running, accessible to all users, making fast load times, achieving Browser Consistency, Effective Navigation, user friendly interface, Good Error Handling, and user-friendly color contrasts; I have chosen distinguished languages of their time like PHP, HTML, JavaScript, Bootstrap, and SQL etc. This system will be used on laptops, desktops etc. having a good internet connection.

5.2.1 Microsoft Visual Studio Code

The Visual Studio Code is a source-code editor developed by Microsoft for Windows, Linux and macOS. It includes support for debugging, GitHub, syntax highlighting, intelligent code completion,

snippets, and code refactoring. It is highly customizable, allowing users to change the theme, keyboard shortcuts, preferences, and install extensions that add additional functionality.

In the Stack Overflow 2019 Developer Survey, Visual Studio Code was ranked the most widespread developer environment tool, with 50.7% of 87,317 respondents claiming to use it

5.2.2 XAMPP

XAMPP is a free and open-source cross-platform web server stack package developed by Apache Friends, consisting mainly of the Apache HTTP Server, MariaDB database, and interpreters for scripts written in the PHP and Perl programming languages. Since most actual web server deployments use the same components as XAMPP, it makes transitioning from a local test server to a live server possible.

5.2.3 Microsoft Visio

Microsoft Office Visio is a diagramming and vector graphics application and is part of the Microsoft Office family. It was initially hosted in 1992 by the Shapeware Corporation. Later on, it was developed by Microsoft in 2000.

Microsoft released their latest version v16.0; Standard and Professional in 2019.

5.2.4 PHP

It was originally created by Rasmus Lerdorf in 1994 and now it is produced by The PHP Group. PHP initially stood for Personal Home Page, but now it stands for the PHP: Hypertext Preprocessor.

It is a widely used open source general-purpose scripting language that is specifically apposite for web development and can be implanted into HTML.

5.2.5 HTML

HTML was developed by WHATWG in 1993. It is the standard markup language for making Web pages. It stands for Hyper Text Markup Language and styles the structure of a Web page which consists of a series of HTML elements.

These elements tell the browser how to display the content and are represented by different tags. These tags label pieces of content such as "heading", "paragraph", and "table. Browsers use these tags to render the content of the page.

5.2.6 MYSQL

MySQL is an open source relational database management system (RDBMS). Its name is a combination of "My", the name of co-founder Michael Widenius's daughter, and "SQL", the abbreviation for Structured Query Language. A relational database organizes data into one or more data tables in which data types may be related to each other; these relations help structure the data. SQL is used to converse with a database. SQL statements are used to carry out tasks such as update data on a database or retrieve data from a database. The standard SQL commands such as "Select", "Insert", "Update", "Delete", "Create", and "Drop" are mostly used to achieve nearly all tasks that one may need to do with a database.

5.2.7 JavaScript

It was designed by Brendan Eich and developed by Netscape Communications Corporation, Mozilla Foundation, Ecma International in December 4, 1995. It is frequently shortened as JS and it is a high level, interpreted programming language having curly-bracket syntax. Along with HTML and CSS, JavaScript is one of the essential technologies of the WWW. JavaScript empowers interactive web pages that's why it is an important part of web application. The enormous majority of websites use it and main web browsers have a dedicated JavaScript engine to execute it.

5.2.8 Bootstrap

Bootstrap is a free front-end framework for faster and less difficult web development which includes HTML and CSS based design templates for design, forms, buttons, tables, navigation, modals, image containers and many other, as well as optional JavaScript plugins.

Bootstrap additionally offers the ability to easily create responsive designs which is; creating those web sites that automatically adjust themselves to look good on all devices, from small phones to large desktops.

5.2.9 CSS

Cascading Style Sheets(CSS) is a style sheet language used for describing the appearance of a document written in a markup language like HTML. CSS is a bedrock technology of the World Wide Web, alongside HTML and JavaScript.

It was developed by World Wide Web in Consortium on December 17, 1996. CSS is designed to enable the parting of appearance and content, including layout, colors, and fonts.

Chapter # 6

Interfaces

6.1 Introduction:

User interface (UI) is everything designed into an information device with which a human being may interact -- including display screen, keyboard, mouse, light pen, the appearance of a desktop, illuminated characters, help messages, and how an application program or a Web site invites interaction and responds to it. In early computers, there was very little user interface except for a few buttons at an operator's console. The user interface was largely in the form of punched card input and report output.

Later, a user was provided the ability to interact with a computer online and the user interface was a nearly blank display screen with a command line, a keyboard, and a set of commands and computer responses that were exchanged. This command line interface led to one in which menus (list of choices written in text) predominated. And, finally, the graphical user interface (GUI) arrived, originating mainly in Xerox's Palo Alto Research Centre, adopted and enhanced by Apple Computer, and finally effectively standardized by Microsoft in its Windows operating systems. The user interface can arguably include the total "user experience," which may include the aesthetic appearance of the device, response time, and the content that is presented to the user within the context of the user interface.

For the website design purpose, the user interface's framework can be shown below:

Fig 6.1 Home Page:

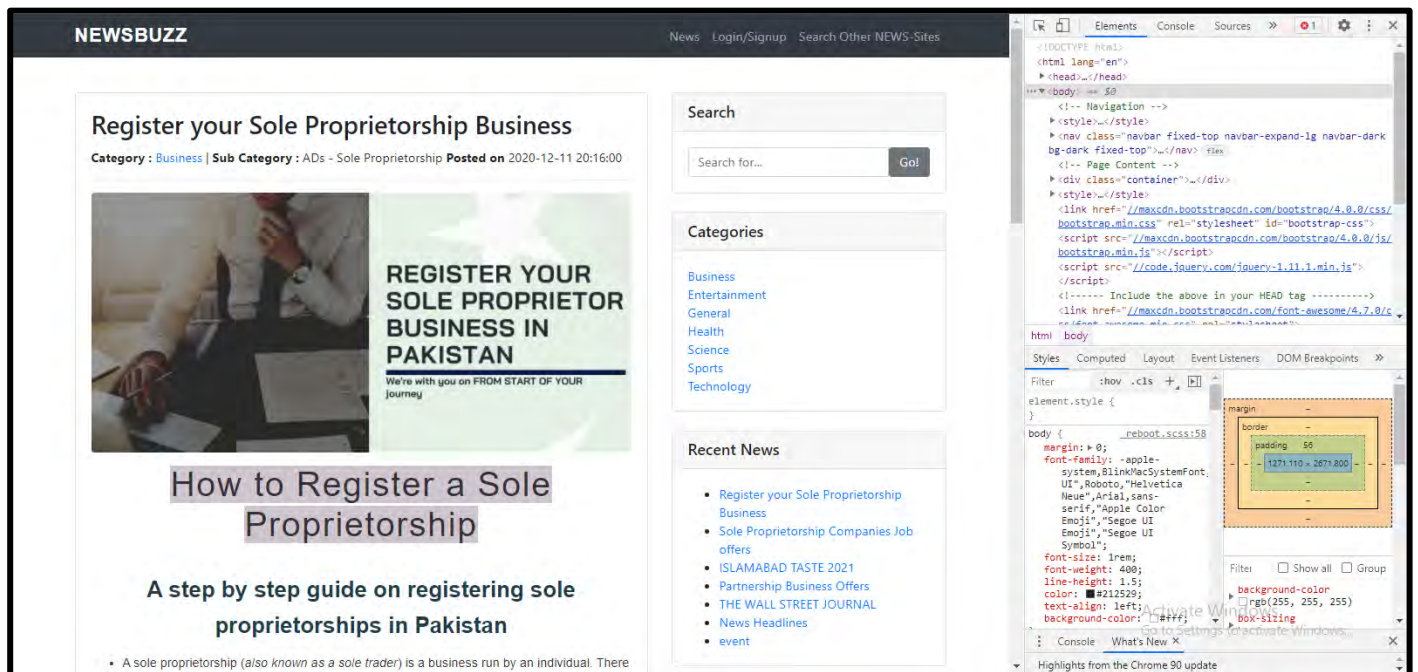
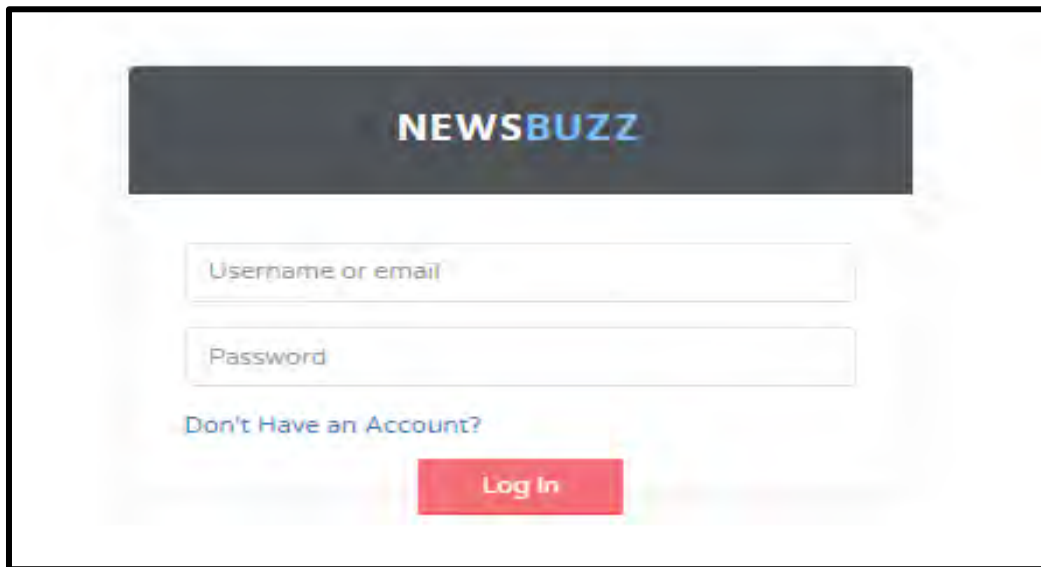
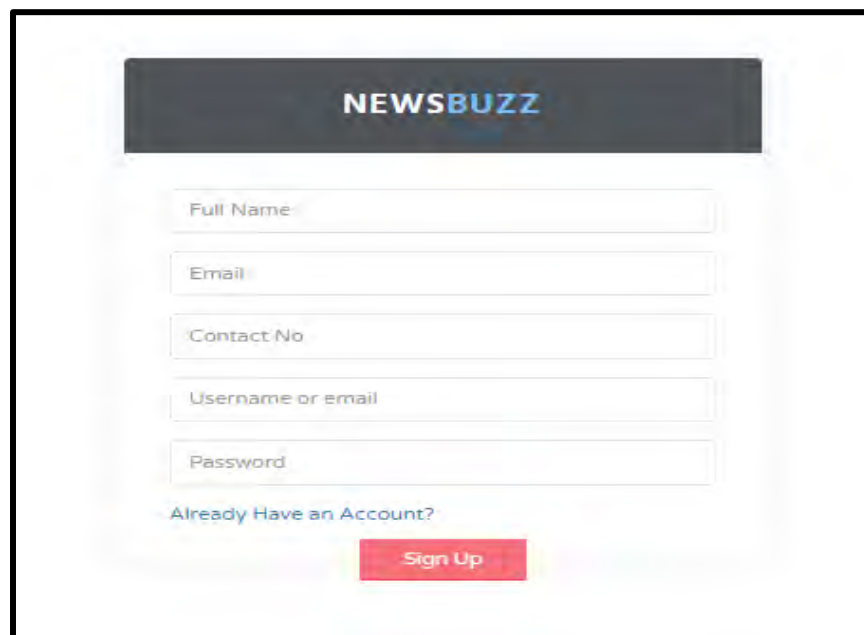


Fig 6.2 Login Page:



The screenshot shows the login page for NEWSBUZZ. At the top, there is a dark grey header with the word "NEWSBUZZ" in white, bold, uppercase letters. Below the header, there are two input fields: "Username or email" and "Password". Below these fields, there is a link that says "Don't Have an Account?". At the bottom of the form, there is a red button with the text "Log In" in white.

Fig 6.3 Sign up page:



The screenshot shows the sign up page for NEWSBUZZ. At the top, there is a dark grey header with the word "NEWSBUZZ" in white, bold, uppercase letters. Below the header, there are five input fields: "Full Name", "Email", "Contact No", "Username or email", and "Password". Below these fields, there is a link that says "Already Have an Account?". At the bottom of the form, there is a red button with the text "Sign Up" in white.

Fig 6.4 Search Other News page:

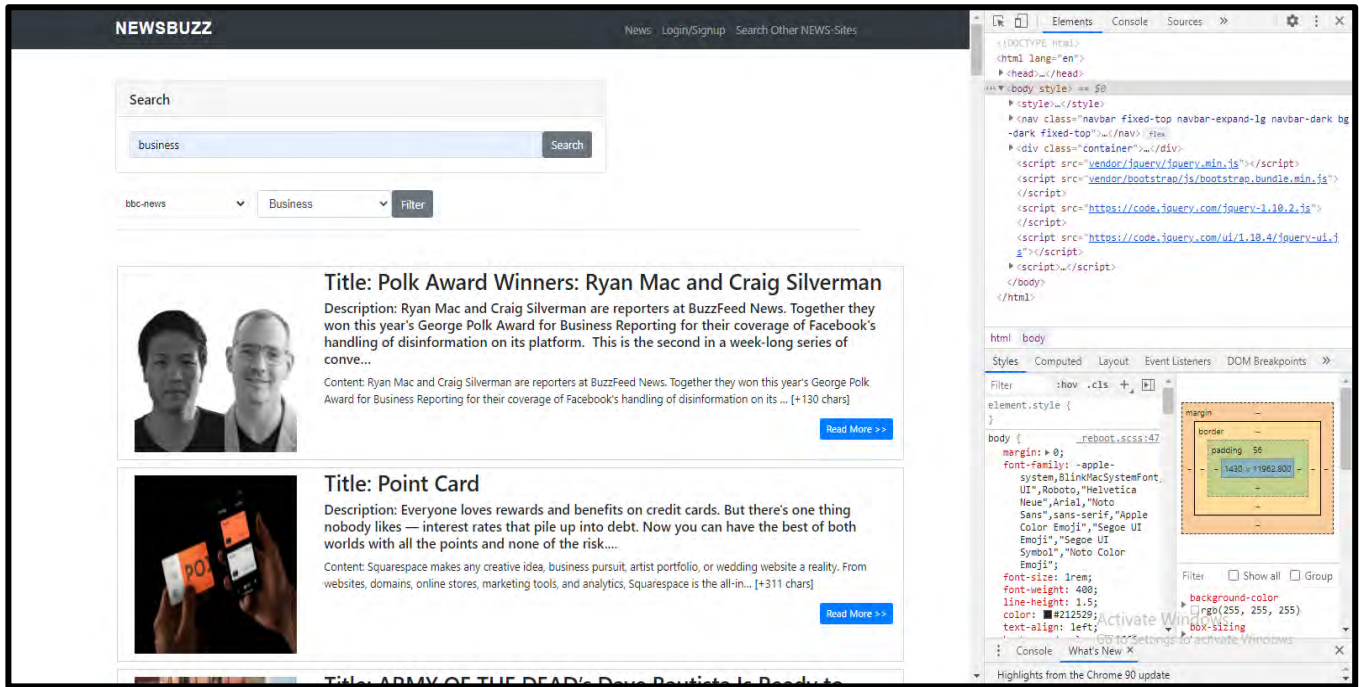


Fig 6.5 Admin Dashboard:

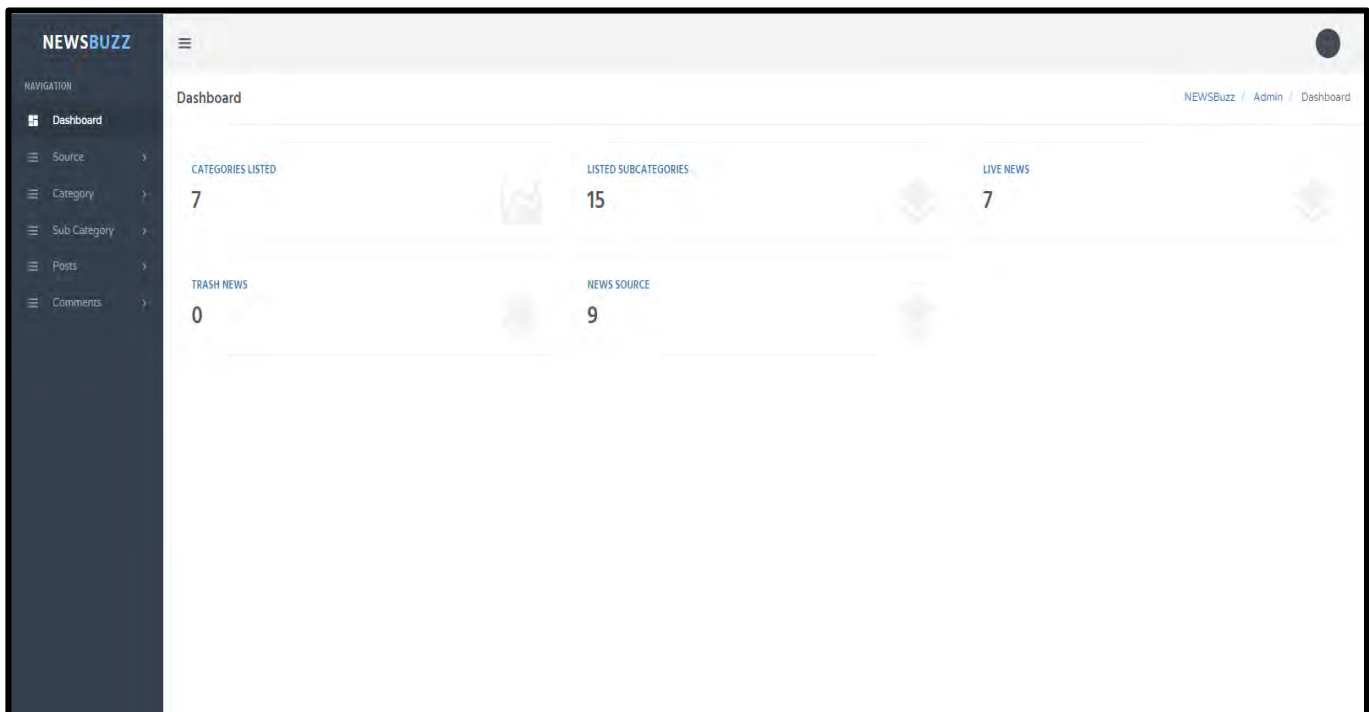


Fig 6.6 Add Category:

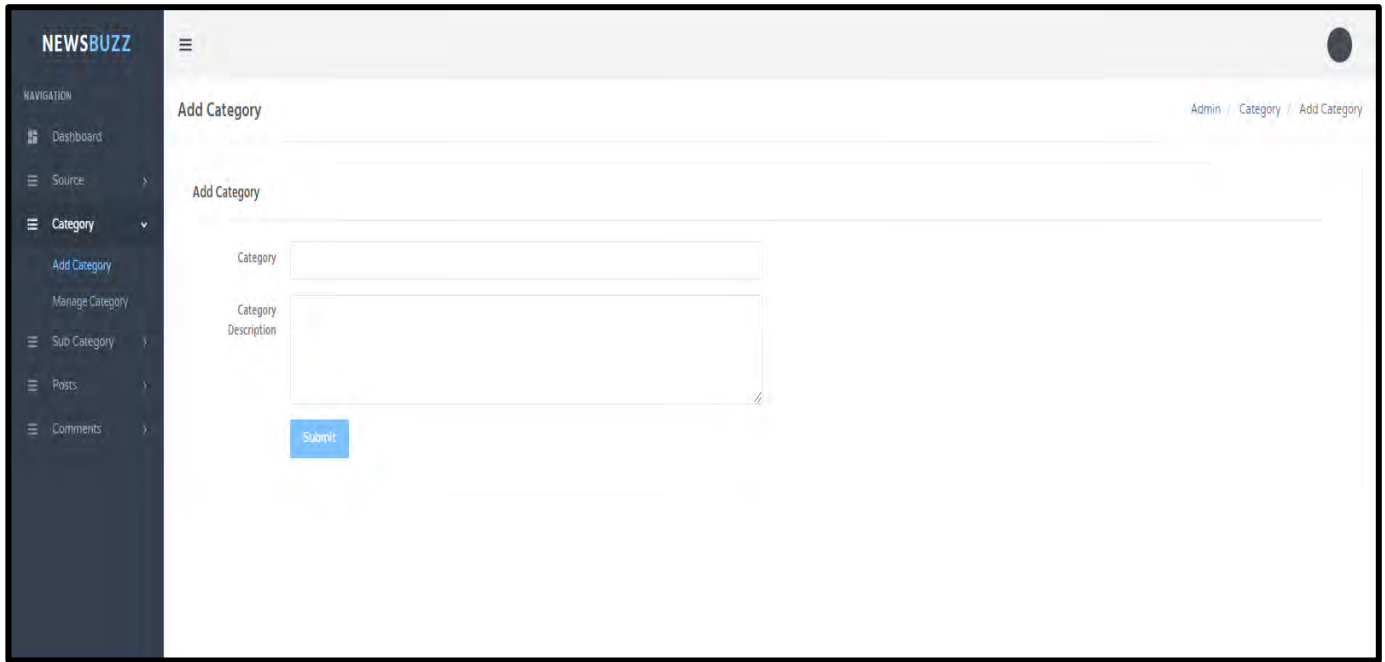


Fig 6.7 Manage Category:



Fig 6.8 Add source:



Fig 6.9 Manage sources:

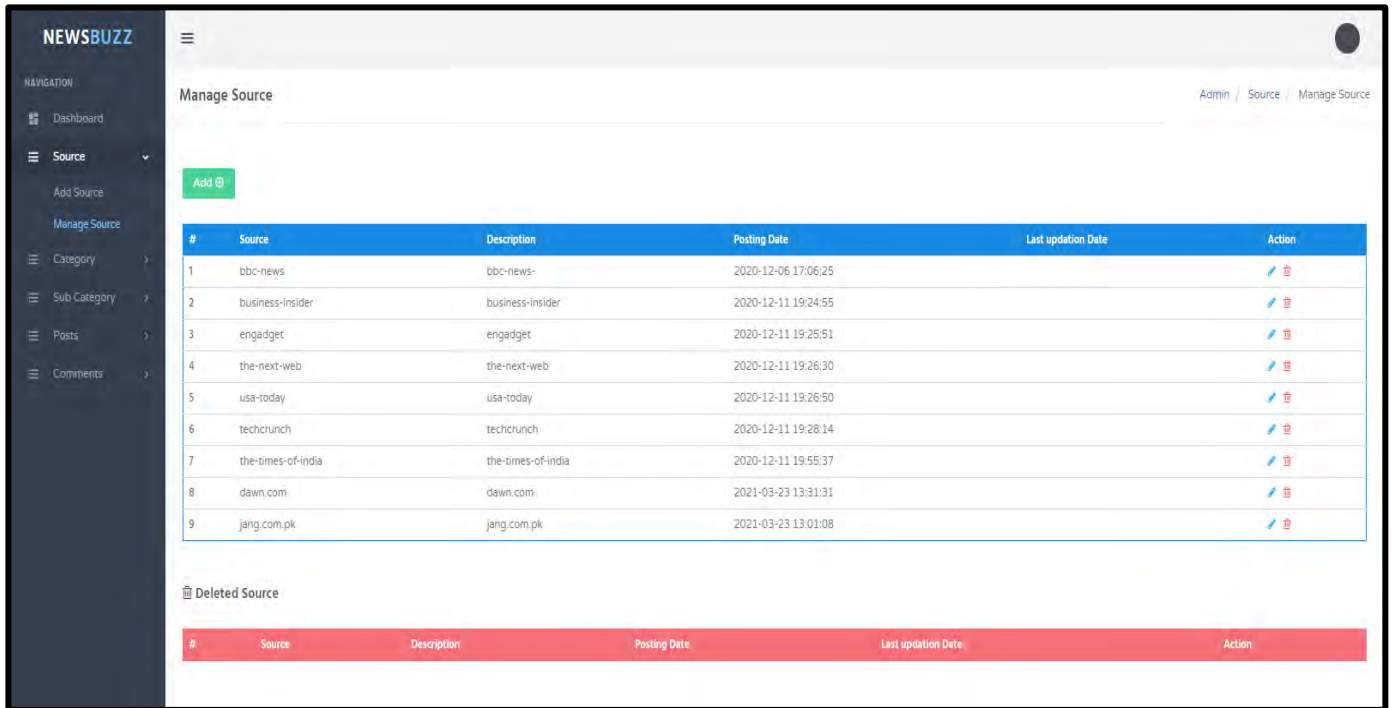


Fig 6.10: Add Subcategory:



Fig 6.11 Manage subcategory:

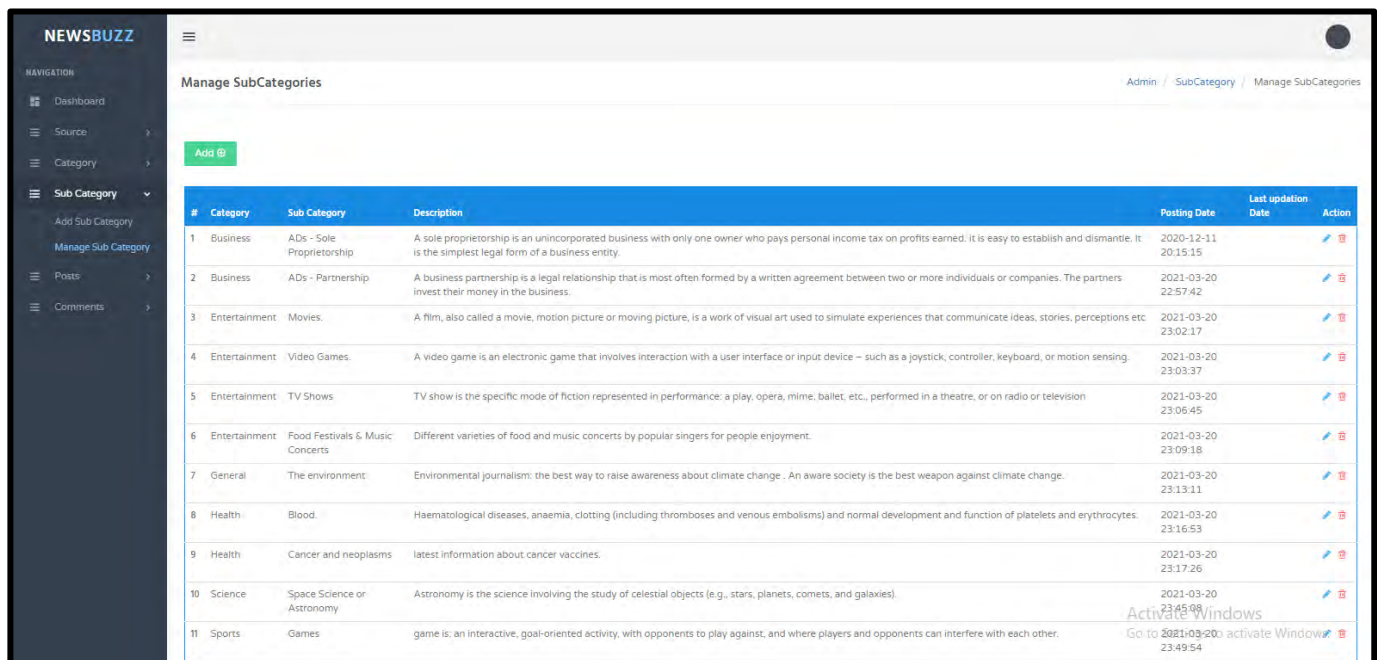


Fig 6.12 Add posts:

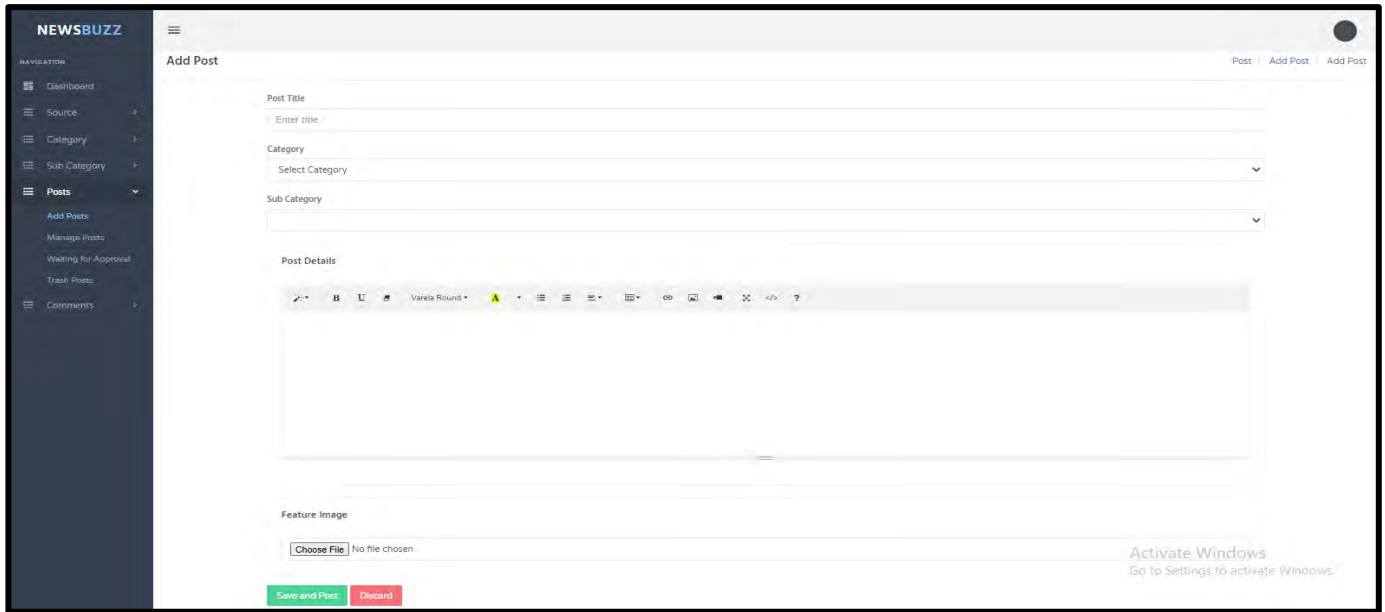


Fig 6.13 Manage Posts:

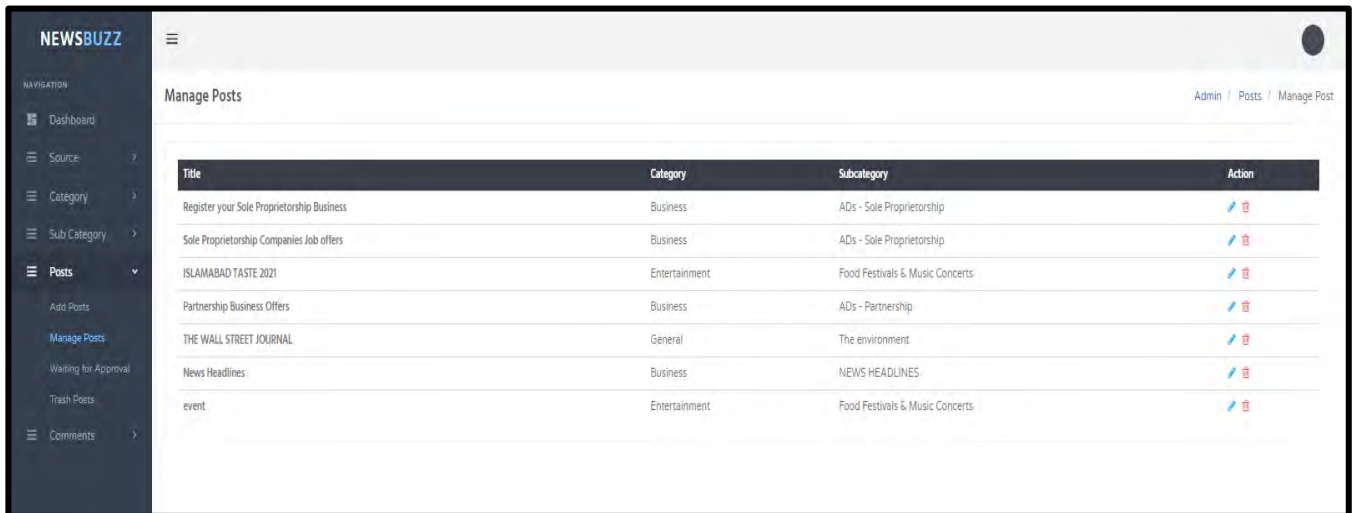


Fig 6.14 Waiting for approval:

The screenshot shows the NEWSBUZZ dashboard with a sidebar navigation menu. The main content area is titled 'Manage Unapproved Posts' and includes a breadcrumb trail: Admin / Posts / Unapprove Posts. A table displays one unapproved post with the following data:

#	PostTitle	PostDetails	PostingDate	Status	Post / News	Posting Date	Action
1	business	<p>abc</p>	2021-04-20 23:14:16	Waiting for approval	business	2021-04-20 23:14:16	← 🗑️

Fig 6.15 Trash posts:

The screenshot shows the NEWSBUZZ dashboard with a sidebar navigation menu. The main content area is titled 'Trashed Posts' and includes a breadcrumb trail: Admin / Posts / Trashed Posts. A table displays one trashed post with the following data:

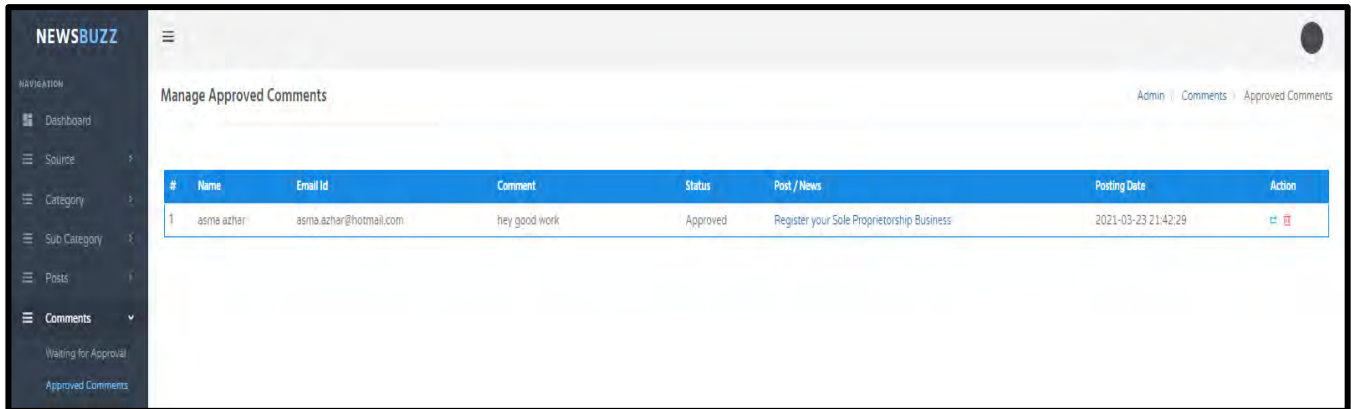
Title	Category	Subcategory	Action
business	Business	ADs - Partnership	← 🗑️

Fig 6.16 Comments waiting for approval:

The screenshot shows the NEWSBUZZ dashboard with a sidebar navigation menu. The main content area is titled 'Manage Unapproved Comments' and includes a breadcrumb trail: Admin / Comments / Unapprove Comments. A table displays one unapproved comment with the following data:

#	Name	Email Id	Comment	Status	Post / News	Posting Date	Action
1	anika azhar	asmaazhar225@outlook.com	well done!	Approved	Register your Sole Proprietorship Business	2021-04-20 23:18:59	← 🗑️

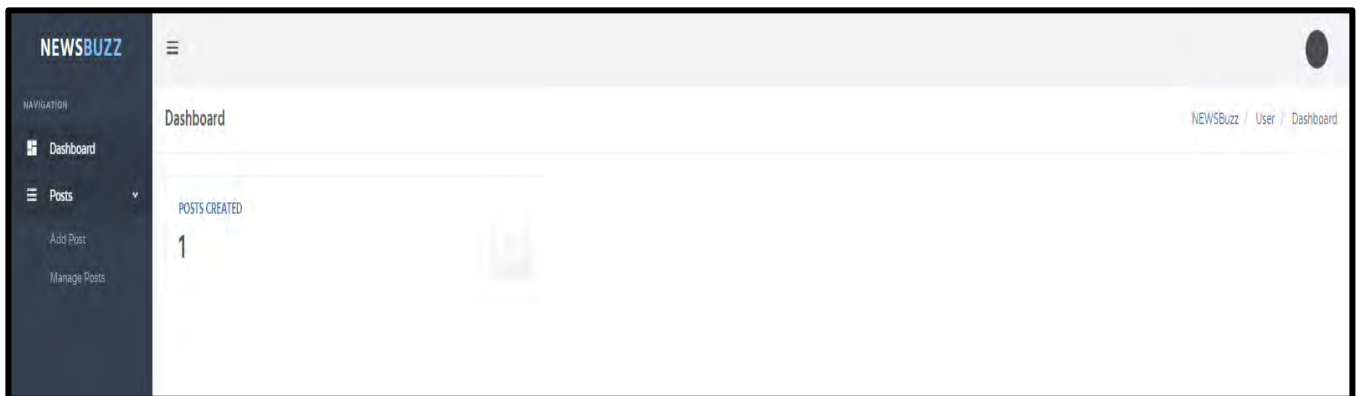
Fig 6.17 Approved Comments:



The screenshot displays the 'Manage Approved Comments' interface. On the left is a dark sidebar with the 'NEWSBUZZ' logo and a navigation menu. The main content area has a breadcrumb trail: 'Admin > Comments > Approved Comments'. Below the breadcrumb is a table with the following data:

#	Name	Email Id	Comment	Status	Post / News	Posting Date	Action
1	asma azhar	asma.azhar@hotmail.com	hey good work	Approved	Register your Sole Proprietorship Business	2021-03-23 21:42:29	✎ ✖

Fig 6.18 User Dashboard:



The screenshot shows the 'User Dashboard' for a user in the NEWSBUZZ system. The sidebar on the left contains the 'NEWSBUZZ' logo and a navigation menu. The main content area has a breadcrumb trail: 'NEWSBUZZ / User / Dashboard'. Below the breadcrumb, there is a section titled 'POSTS CREATED' with a large number '1' indicating the count. There is also a faint, larger number '1' visible in the background of the main content area.

Chapter # 7

Testing and Evaluation.

7.1 Introduction:

This chapter describes the testing and evaluation of the website developed. Section 7.2 reviews the testing that took place at three levels. Software testing refers to the testing of the produced courseware. It looks at questions such as: whether the web pages are generated correctly, whether all the links work, whether all the audio files exist. Section 7.5 covers the evaluation phase of the system. It reports on the implementation and whether it works properly or not. The system is then evaluated from a software point of view.

7.2 Testing:

This section covers the testing of the template. It deals with concept testing, software testing and the testing of the courseware itself. The concept testing asks the question as whether the developed website properly works.

7.2.1 Software testing:

Software testing is a critical element of software quality assurance and represents the ultimate reuse of specification.

Software testing involves both verification and validation. Verification involves checking that the program conforms to its specification, while validation involves checking that the program as implemented meets the expectations of the user. Static checking techniques include program inspections and analysis. Dynamic techniques (tests) involve exercising the system. Accordingly, the verification stages employ what in the technical lingo are known as the white box testing techniques whilst the validation stage uses black box testing techniques.

The testing process normally has five stages. Firstly, individual units are tested in unit testing. Module testing tests modules (usually a collection of dependent units). Sub-system testing tests collections of modules and often exposes sub-system interface mismatches. System testing tests the system as a whole and finally, there is (user) acceptance testing.

7.2.1.1 Module testing:

Module testing is defined as a software testing type, which checks individual subprograms, subroutines, classes, or procedures in a program. Instead of testing whole software program at once, module testing recommends testing the smaller building blocks of the program. Module testing is largely a white box oriented.

Module Testing is recommended because:

- Probability of identifying errors or bugs on smaller chunks of program becomes higher.
- Multiple modules can be tested simultaneously and hence supports parallel testing.
- Complexity of testing can be easily managed.

7.2.1.2 Unit Testing:

Unit testing is a level of software testing where individual units/ components of a software are tested. The purpose is to validate that each unit of the software performs as designed. A unit is the smallest testable part of any software. It usually has one or a few inputs and usually a single output.

7.2.1.3 Subsystem testing:

Subsystem verification testing is performed as a prelude to system testing. It is performed in the operational environment using installed system hardware and software.

Testing at the subsystem level should be performed:

- When different developers, vendors, or contractors have been responsible for delivering stand-alone subsystems.
- When the complete functionality of a subsystem could not be tested at a lower level because it had not been fully integrated with the necessary communication infrastructure.
- When it was previously impossible to connect to the field devices for the testing phase.

7.2.1.4 System testing:

System testing is a level of testing that validates the complete and fully integrated software product. The purpose of a system test is to evaluate the end-to-end system specifications. Usually, the software is only one element of a larger computer-based system. Ultimately, the software is interfaced with other software/hardware systems. System Testing is actually a series of different tests whose sole purpose is to exercise the full computer-based system.

7.2.1.5 Acceptance Testing:

Acceptance testing is a level of software testing where a system is tested for acceptability. The purpose of this test is to evaluate the system's compliance with the business requirements and assess whether it is acceptable for delivery.

7.3 Software Testing Types

7.3.1 Manual Testing

Manual testing is the procedure of testing the software by hand to find the faults. Tester should have knowledge of the viewpoint of end-users to confirm that all features are working as stated in the software requirement document. In this course of testing, tester executes the test cases and generate the reports by hand deprived of using any automatic tools.

7.3.2 Automation Testing

Automation testing is the procedure of testing a software using an automatic tool to discover faults. In this procedure, tester executes the test scripts and generate the test outcomes automatically by using various tools. Some of the well-known automation testing tools for functional testing are QTP/UFT and Selenium.

7.4 Testing Approaches

- o White Box Testing
- o Black Box Testing

7.4.1 White Box Testing

It is also termed as Glass Box, Clear Box, and Structural Testing. This testing is grounded on applications' internal code structure. In white-box testing, a core viewpoint of the system as well as programming skills are used to design test cases. This testing is generally done at the unit level.

7.4.2 Black Box Testing

It is also termed as Behavioral, Specification-Based or Input-Output Testing. In this testing process testers assess the functionality of the software under tests deprived of watching at the internal code structure of the software.

Fig 7.1 Test Case of User Registration:

Test Case ID.	TC-1
Tester	Anika Azhar
Test Type	Black Box
Test Case Name	Registration
Description	Check whether user is registered or not.
Procedure	Enter all the details and click the register button.
Expected Result	User should register successfully
Actual Result	User registered successfully.
Status	Success.

Fig 7.2 Test Case of User log in:

Test Case ID.	TC-2
Tester	Anika Azhar
Test Type	Black Box
Test Case Name	Log in
Description	Check whether user is logged in or not.
Procedure	Enter username and password and press the log In button.
Expected Result	User should log in successfully
Actual Result	User logged in successfully.
Status	Success.

Fig 7.3 Test Case Admin Adding posts:

Test Case ID.	TC-3
Tester	Asma
Test Type	Black Box
Test Case Name	Add Post
Description	Check whether posts are added or not.
Procedure	Enter posts name ,add description and click submit button.
Expected Result	Posts should be added successfully
Actual Result	Posts added successfully.
Status	Success.

Fig 7.4 Test Case Search other news:

Test Case ID.	TC-4
Tester	Anika Azhar
Test Type	Black Box
Test Case Name	Search other news
Description	Check whether user is able to search for other news or not.
Procedure	Select the source and category and click filter button.
Expected Result	News from selected source and selected category should be displayed to the user.
Actual Result	News from selected source and selected category is extracted and displayed.
Status	Success.

Fig 7.5 Test Case Add comments:

Test Case ID.	TC-5
Tester	Anika Azhar
Test Type	Black Box
Test Case Name	Add Comment
Description	Check whether user is able to add comment or not.
Procedure	Add name and email with comment and click submit button.
Expected Result	Comment should be displayed after admin approval.
Actual Result	Comment displayed.
Status	Success.

Fig 7.6 Test Case Add Category :

Test Case ID.	TC-6
Tester	Asma
Test Type	Black Box
Test Case Name	Add Category
Description	Check whether categories are added or not.
Procedure	Enter category name, add description and click submit button.
Expected Result	Category should be added successfully
Actual Result	Category added successfully.
Status	Success.

Fig 7.7 Test Case User logout:

Test Case ID.	TC-7
Tester	Anika Azhar
Test Type	Black Box
Test Case Name	Log out
Description	Check whether user is logged out or not.
Procedure	Click on logout button.
Expected Result	Logout successful
Actual Result	Logout successful.
Status	Success.

7.5 Evaluation:

Evaluation is a systematic determination of a subject's merit, worth and significance, using criteria governed by a set of standards. It can assist an organization, program, design, project or any other intervention or initiative to assess any aim, realizable concept/proposal, or any alternative, to help in decision-making; or to ascertain the degree of achievement or value in regard to the aim and objectives and results of any such action that has been completed.

Evaluation is the structured interpretation and giving of meaning to predicted or actual impacts of proposals or results. It looks at original objectives, and at what is either predicted or what was accomplished and how it was accomplished.

7.5.1 Purposes:

Purposes Evaluation can be conducted for the purposes of decision making, judgements, conclusion, findings, new knowledge, organizational development and capacity building in response to the needs of identified stakeholders leading to improvement, decisions about future programming, and/or accountability ultimately informing social action ameliorating social problems and contributing to organizational or social value.

Chapter # 8
Feature
Enhancement and Conclusion.

8.1 Problems During Coding:

When I implemented the Web Site, many difficulties were met. I tried to find the problems and solve them through the study.

Firstly, Installation was the very tedious step as I used this for this first time. I installed three to four time to get exact modules. This was awful to know about different modules and different versions of Visual Studio and MYSQL Server.

Secondly, I have to learn and revised all the basic concepts of PHP, HTML, JavaScript and MYSQL.

8.2 The Summary For Whole Thesis:

The purpose of this project is to design a website for People where users can access their interest related news and create their owns post for their businesses advertisements. From the project plan, to learn how to plan the project, to include the professional English writing, timetable design. For design process, to learn how to design a web product, to include the UML images graphic, functions analysis. Because I needed to learn some scripting languages and server-side languages which was an awesome experience.

For the final product, the functions of login and Adding posts. It has been tested on Windows PC which works finely. That means that the final product's cross platform design is successful. Although without the testing in real mobile devices, but if it could work on simulator, it will work fine on real devices too.

I will pay more attention on the beginning website analyzing and coding skill. Because analysis is the most important part in product development. And some problems come from the coding skill; my supervisor gave me a lot of.

8.3 Enhancement:

Feature enhancement has its own importance, because with the passage of time system evolves and there is a need for more feature and functionalities, so system should allow future enhancement. Proposed system is developed by keeping this in mind.

8.3.1 Evaluation Of The System:

After the completion of the project an important final step of evaluation is done. Evaluation is necessary step for the improvement in the future enhancement in the application. Evaluation describes the activities which include in website to check whether the goals which defines at the beginning of the project are achieved or not and to see if there are any deficiencies or weaknesses in the system. The purpose of evaluation is to do the assessment of the whole system. In this section the evaluation of my system's design and implementation has been done and it showed that the system follows the requirement gathered at the start of the system.

8.3.2 Future Enhancements:

In future, I have planned to include more facilities and features for the users of the website. I shall try to make this website more visible by changing some features and more interesting by adding some more features like

- **Grid based design**
To make it look more impressive and also effective to manage and organize large amount of data.
- **Add social sharing buttons**
By adding this feature, every user can share the news on their social media platforms which also increases our website users.
- **Mobile Application**
Will make mobile application of website NewsBuzz that will also facilitate users in many ways.

8.4 Conclusion:

It has been a great pleasure for us to work on this exciting and challenging project. This project proved good for us as it provided practical knowledge of not only programming in PHP web-based application and not some extent Windows Application and MySQL, but also about all handling procedure related with “NewsBuzz”. It also provides knowledge about the latest technology used in developing web enabled application and client server technology that will be great demand in future. This will provide better opportunities and guidance in future in developing projects independently.

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