

# **DESIGN OF WEB BASED NEWSPAPER**

A THESIS SUBMITTED IN PARTIAL FULFILMENT OF  
THE REQUIREMENT FOR THE DEGREE OF

**Bachelor of Technology**

**In**

**Computer Science and Engineering**

**By**

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## **CERTIFICATE**

This is to certify that the thesis entitled “**Design of Web Based Newspaper**” submitted by Jayajit Kumar Pradhan, in partial fulfillment of the requirements for the award of Degree of Bachelor of Technology in Computer Science and Engineering at National Institute of Technology, Rourkela is an authentic work carried out by them under my supervision and guidance. To the best of my knowledge, the matter embodied in the thesis has not been submitted to any other university / institute for the award of any Degree or Diploma.

Date:

Prof. Durga Prasad Mohapatra

Place:

## ACKNOWLEDGEMENT

I owe a great many thanks to a great many people who helped and supported me during my project work.

I express my sincere gratitude **Prof D.P.Mohaptra** for guiding and correcting various documents of mine with attention and care. He has taken pain to go through the project and make necessary correction as and when needed.

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**Jayajit Kumar Pradhan**

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## **ABSTRACT**

National Institute of Technology, Rourkela is one of the reputed institutions for technical education in India. The main purpose of the project is intended to develop a portal for management of Web based news. The portal provides a suitable and easy display for which large population around the world can learn or will have the knowledge about the world. Basically this is a crowd sourcing newspaper. The idea is anyone can send a news item using their web based gadget which is managed by administrator to whom the editor's panel kept in charge for this to make it visible for the masses. This portal is developed using HTML, PHP & CSS technologies and SQL Server.

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# **CHAPTER-1**

## **INTRODUCTION**

## 1. INTRODUCTION

Software Engineering is the application of systematic, disciplined, and quantifiable approach to the design, development, operation, and maintenance of software, and study of these approaches that is the application of engineering to software. The term software engineering first appeared in the 1968 NATO software engineering conference and was meant to provoke thought regarding the perceived software crisis at the time.

The development of portal for web based newspaper generally means creating a website in which the management of all news item sent by crowd about any type of news & activities are done by the administrator 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 is designed by using HTML, PHP, & CSS technologies and SQL Server. The portal has basically three user parts where one is registered user (authentication required) who can view, add comment can have general discussion with another user and another is administrator (has an authentication) who will manage or control the website and other user (no authentication required) can only view and search.



The website consists of basic pages from which the user can view and know the relevant information like history, upcoming. In other case, the administrator manages all the relevant actions for which the users can view properly and also make reports.

The model for this project is similar to the link (<http://business.timesonline.co.in.uk>) as given and for quick development and ease of use we selected to implement “Drupal”. In this project Drupal is installed over xampp. As we did not how to use and setup Drupal, we had learned it from the given links below:

<http://drupal.org/node/307956>

<http://drupal.org/nyobserver>

## **CHAPTER-2**

### **REQUIREMENT SPECIFICATION**

## 2. REQUIREMENT SPECIFICATION

The purpose of SRS (Software Requirement Specification) document is to describe the external behavior of the web based newspaper. It defines the operations, performance and interfaces and quality assurance requirement of the web based newspaper. The complete software requirements for the system are captured by the SRS (Software Requirement Specification).

### 2.1. Functional Requirements:

For documenting the functional requirements, the set of functionalities supported by the system are to be specified. A function can be specified by identifying the state at which the data is to be input to the system, its input data domain, the output data domain, and the type of processing to be carried on the input data to obtain the output data.

Basically the management parts are the functional requirements which are uploading details, search topic, edit option and user registration.

#### **R1: Uploading Item**

*Description:* Uploading function can be done by the user who has registered on the website.

When the user uploads an item and if it is a news item or forum is determined and edited by the administrators or editors and then it is displayed on the home page. A registered user can also add comment on other news as well.

**R1.1: Select upload option.**

*Input:* Upload item option.

*Output:*User will be prompted to enter the upload type.

**R1.2: Select the type of item.**

*Input:* Users option from one of the following

R1.2.1 News item

R1.2.2 Forum item

R1.2.3 Comment item

*Output:*User will be prompted to enter item details according to the above item.

**R1.3: Check to display**

*Input:* Check whether the item is visible for the masses.

*Output:* We will be prompted to display item.

**R1.4: Display the item**

*Input:*Edit the news item.

*Output:* The item is displayed on the screen.

**Processing:**It is controlled by the editor and which checks whether the uploaded item is fit for the mass or not if it is then it display on screen if not then it is edited to make it visible for the mass then display on the screen of the website.

## **R2: Search topic**

*Description:* Search function does not require any authentication from its user so any user can perform this function. If an user searches for a news item then the news will be displayed on the screen if it related to the search topic.

### **R2.1: Select search option**

*Input:* Search option.

*Output:* User will be prompted to enter the search topic.

### **R2.2: Check for the search topic**

*Input:* Checks for the search topic related item.

*Output:* We will be prompted to display the items.

### **R2.3 Display the item**

*Input:* Enter topic related to item.

*Output:* Display the item.

**Processing:** It checks for any item related to the search topic and displays it on the screen and if there is no item related to the topic is present then it will pop as no related item.

### **R3: Edit topic**

*Description:*Edit function can be done by only administrator or editor. Any uploaded item is examined and edited by administrator so it can be allowed to display to mass.

#### **R3.1: Select edit option**

*Input:*Edit option.

*Output:*User will prompted to edit the uploaded item.

### **R4: User registration**

*Description:*Registration is allowed to the users who are not registered yet (unregistered users) and completion of this function they can also upload items.

#### **R4.1: Select register option**

*Input:*Register option.

*Output:* User will prompted to write a user name, email id, and password.

#### **R4.2: Check for validity**

*Input:* Checks whether any other registered users have same information.

*Output:* We will be prompted to register successfully if it has different information or else its rejected.

**Processing:** It checks if the information submitted about the new user is similar to any other registered user if yes it rejects the user information if no then new user will be registered successfully.

#### **2.2. Non-functional Requirements:**

These are the requirements that are not functional in nature. Especially these are the constraints the system must work within.

- **Performance Requirements:** The system response time must be less than 30 seconds for the user interface. Or else the system will show TIMED OUT.
- **Reliability Requirements:** The system shall have a minimum uptime of 99 % excluding time pre-scheduled for maintenance and/or upgrades.
- **Safety Requirements:** All the system data must be backed up every day and the backup copies stored in another server at different location for disaster recovery.

**Quality Attributes:** The source code for the system is well documented for ease of maintenance and upgrading the system in future.

## **CHAPTER-3**

**DESIGN**

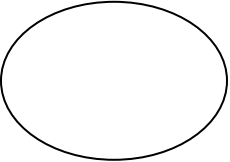

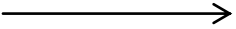



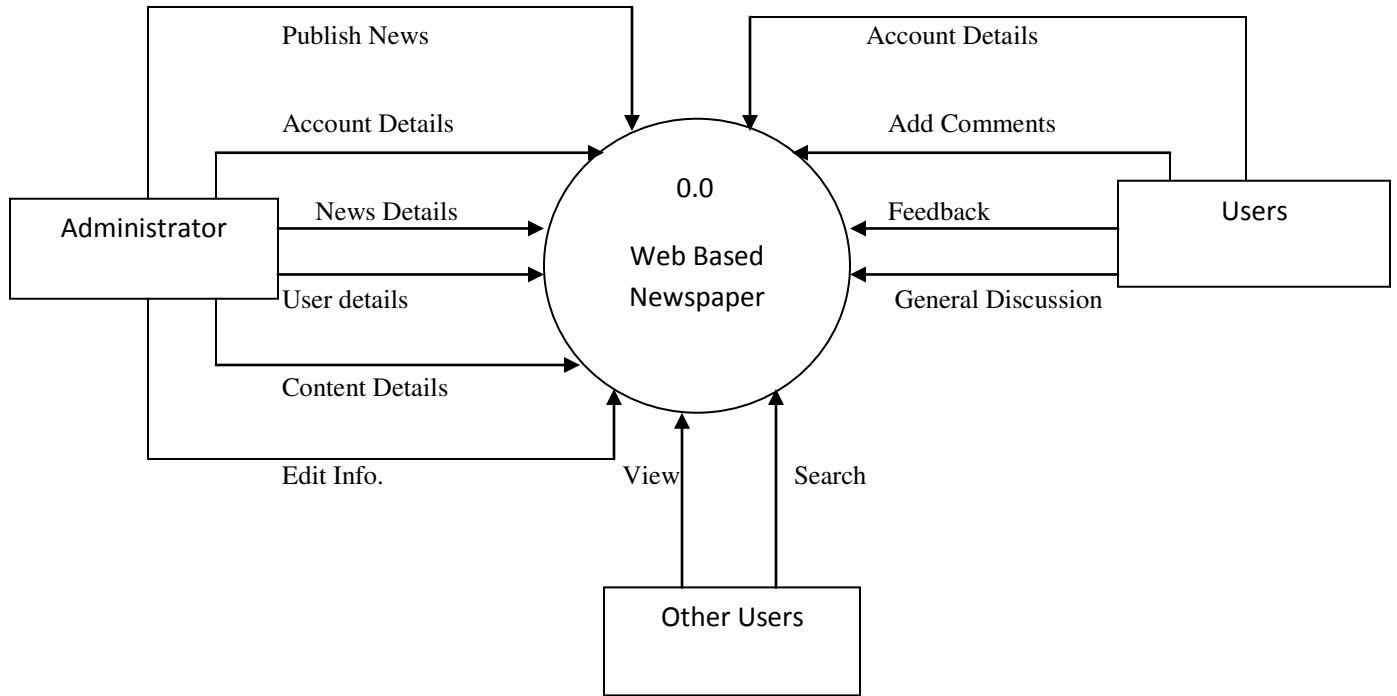
### 3.DESIGN

Design phase deals with transforming the requirements, as described in the SRS document, into a form that is implemented using a programming language. The various designs of this system are shown as following:

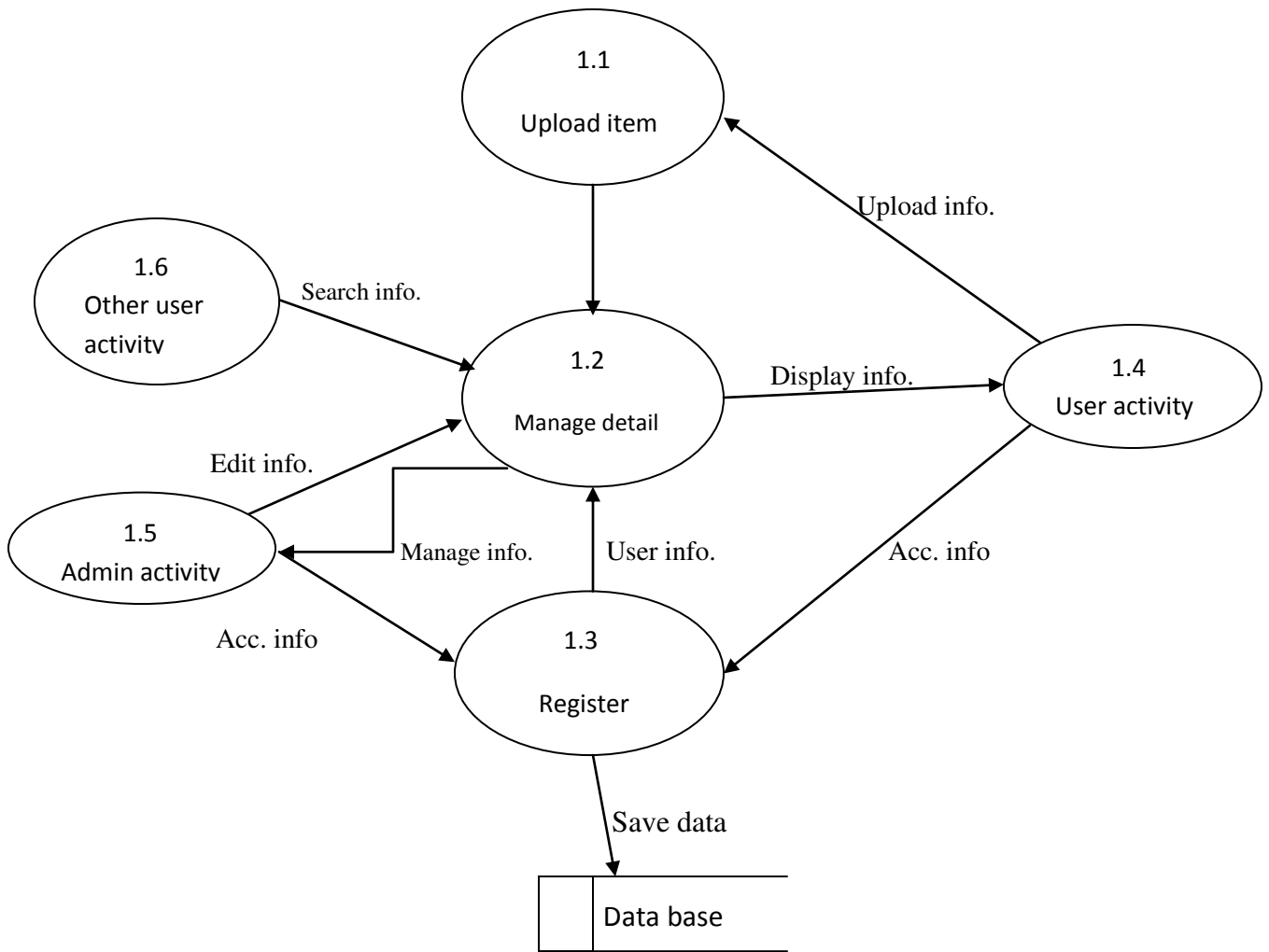
#### 1. Data Flow Diagram:

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.

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



**FIGURE 3.1 CONTEXT DIAGRAM**



**FIGURE 3.2 LEVEL 1DFD**

**Data Dictionary:**

News Details : {Sports News + Education News + Business news...}

User Details : { User Id + Email Id + Password}

Content Details: {Email Id + Message}

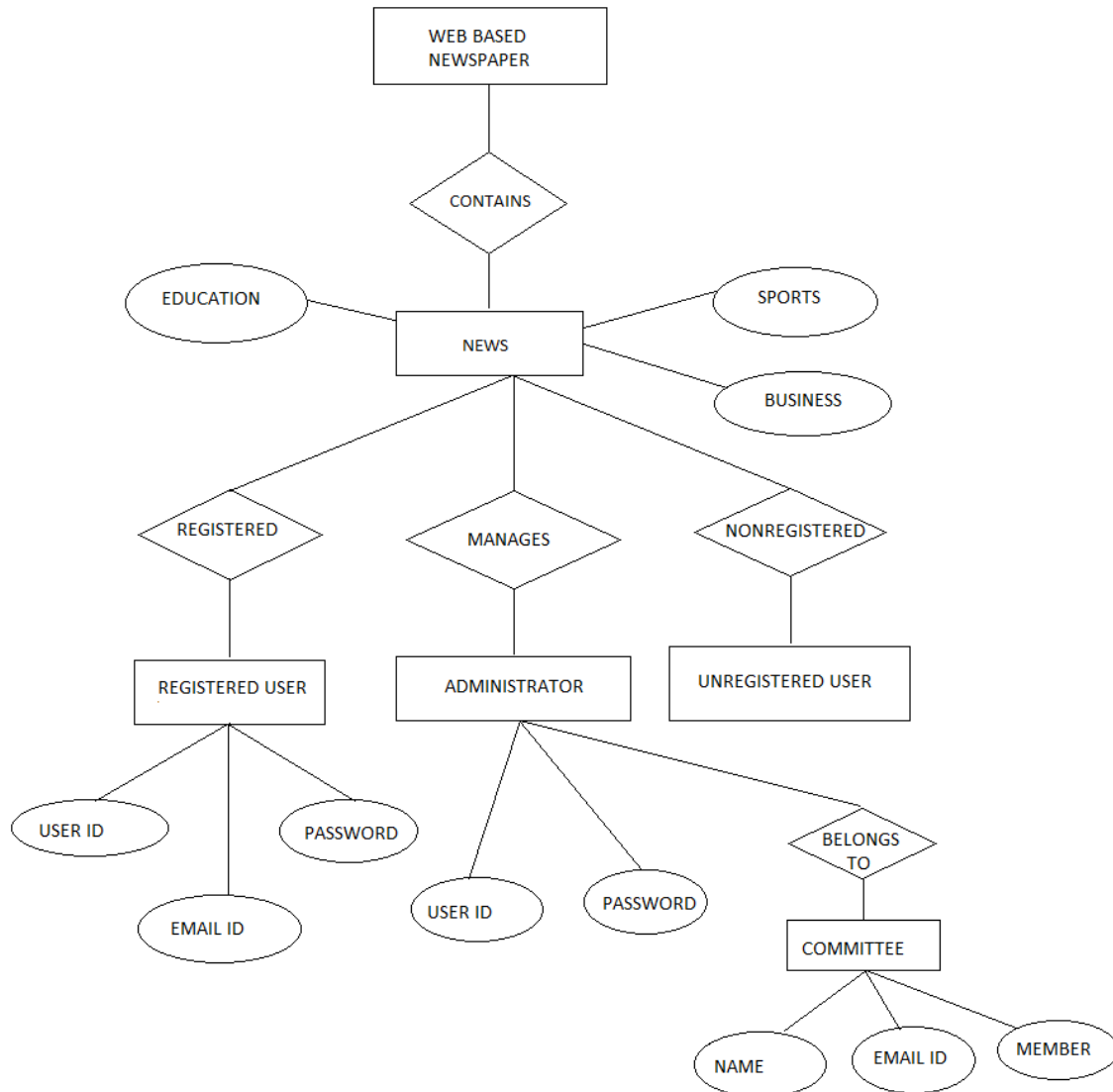
Account Details : { User+ Old Password + New Password}

Feedback : { Name+ Email+ Message}

View Detail : { Headlines + Previous News}

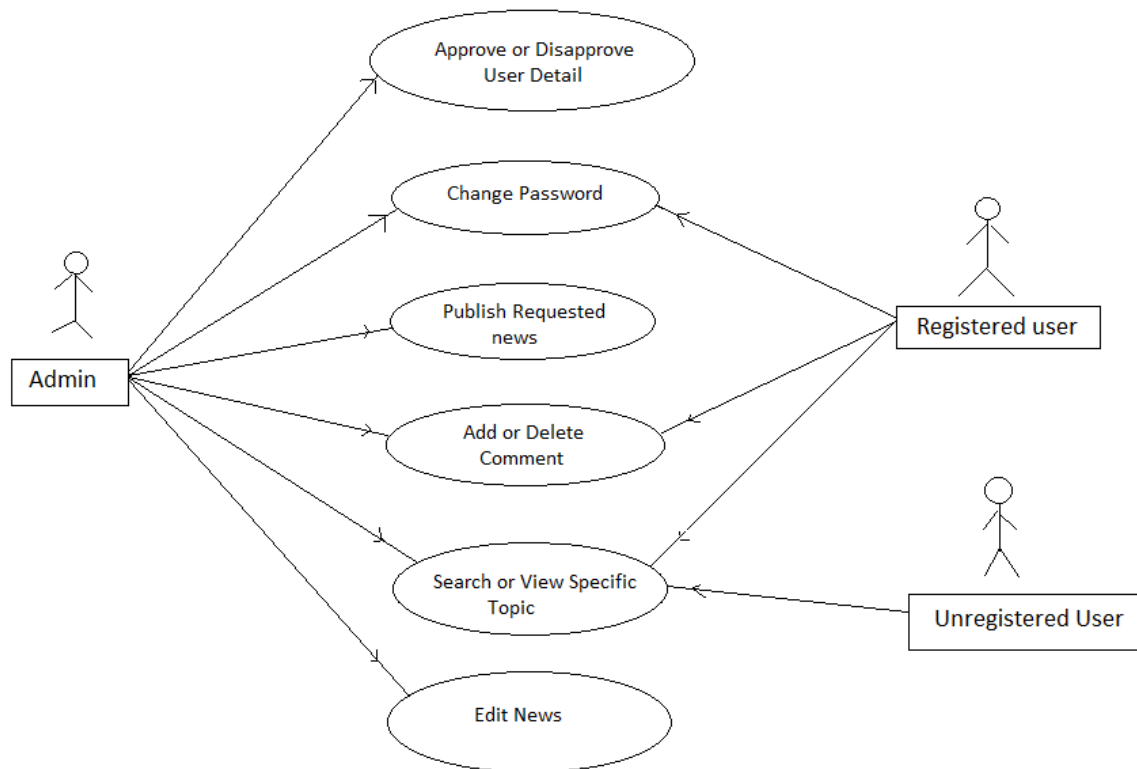
Search Detail: {Topic + News}

## 2. Entity Relationship Diagram:



**FIGURE 3.3 ER DIAGRAM**

### 3. Use case diagram:



**FIGURE 3.4 USECASE DIAGRAM**

## **CHAPTER-4**

### **IMPLEMENTATION**

## 4. IMPLEMENTATION

Implementation or execution in any project is done when the project planning is complete as detailed as possible.

In this phase it monitors everything that could jeopardize the project or part of it in another words the theory is being tested by implementation to make sure the data in the system changes according to the plan.

In order to keep track of project plan and keep ourselves in control all the tool and steps involved are applied by the project manager. Steps in which all the tools are used:

- Take action according to plan
- Record and document all the work, changes & results
- Analyze the result of action or changes made according to the plan

The steps involved here in this particular phase are:

- Installation of Hardware and Software
- Conversion of data
- System Training
- Documentation of the system



**Installation of hardware and software:** Before implementation the hardware and the software required for debugging the system should be made fully operative so the translation can occur smoothly which is one of the most critical and costly activities in the system development life cycle.

**Conversion of data:** As the old system is converted into new system similarly the data from the old system should also be converted to run in the new system with in new format. In this step the recovery procedures are needed to be fully defined and also the database is configured with security.

**System training:** All the programs of the system are loaded onto the computer systems of the user during this step. After loading the system we check by whether the project is under the control of the user and works according to the plan.

To confirm the above sentence we need to complete the following steps:

- To execute the package
- To pass the data
- To process the data
- To take out the reports/records

As the new system is completely trained about the computerized system then the working is also change from manual to computerized working and the process is called 'Changeover'.

There are few strategies which described for changeover of the system bellow:

1. Direct changeover
2. Parallel run
3. Pilot run

**(i) *Direct Changeover*:** The new system needs complete training and testing when it completely replaced on the old system due to uncertain approach of the system.

**(ii) *Parallel run*:** When computerized and manual systems are implemented simultaneously for some defined period then the same information is processed by both the systems. This strategy is costly but not very risky.

This is very costly because:

- Manual results can be compared with the results of the computerized system.
- The operational work can be doubled.

Failure of the computerized system at the early stage does not change the working of the organization, because the manual system goes on, as it used to do.

**(iii) Pilot run:**The data and information in pilot run of the new system is put into run for the whole or part of the system from one or more of the preceding periods. The outcomes at this stage are compared with the old system results. In this strategy the errors are found easily and also it builds confidence.

**Documentation of the system:**This is also one of the main activities in the system development life cycle. This ensures the stability and continuity of the system. There are basically 2 types of documentation. These are: User or Operator Documentation and System Documentation

The user documentation is a complete explanation of the system from the end user's point of view how to use or operate the system. It contains the major error messages likely to be run into by the users. The system documentation comprises the details of system design, programs,

Coding, system flow, data dictionary, etc. This helps to realize the system and permit changes to be made in the existing system to fulfill new user needs

## **4.1 TECHNOLOGIES USED**

### **4.1.1 SQL SERVER**

In this project Microsoft SQL Server is used which is a relational database management system developed by Microsoft. SQL Server Express is a cost free and very easy-to-use which is based on SQL Server 2005 technology. It is designed to deliver a platform for its use with superior ease. It enables fast deployments for its objectives and its use begins with a simple and robust graphical user interface (GUI). GUI guides the user throughout the installation process and its tools are emanate for SQL Server Express which includes SQL Server Management Studio Express Edition, Surface Area Configuration Tool and SQL Server Configuration Manager. These tools abridge the basic database operations.

### **4.1.2 CODING**

The objective of coding phase for a given design is to implement the design in best way possible. In this phase design of the system is translated into code in a programming language. The coding phase affects the maintenance and testing phase of the system development life cycle process. Testing and maintenance effort reduces if the code is well written.

Since the testing and maintenance cost of software are much expensive than the coding cost, the goal of coding should be to reduce the testing and maintenance effort. Hence, during coding the emphasis must be on developing programs which are easy to write. Simplicity and clarity should be achieved, during the coding phase.

In this project HTML, CSS, PHP, & C# codes are used

HTML (Hypertext Markup Language) is the main markup language for displaying web pages and other information that can be displayed in web browser. HTML written in the form of the HTML elements consisting of tags enclosed in angle brackets within the web page content.

The purpose of the web browser is to read HTML documents and compose them into visible web pages. The browser never displays the HTML tags these tags are used to interpret the content of the pages.

CSS (Cascading Style Sheets) is referred to define the appearance and layout of text and other material. CSS is encouraged to be used over explicitly presentational HTML markup.

JavaScript is an embedded script language which affects the behavior of HTML web pages.

PHP is an embedded HTML scripting language and also a general purpose server side scripting language originally designed for web development to produce dynamic web pages. The code is interpreted by a web server with a PHP processor module which generates the resulting web page. Software that uses PHP includes Joomla, Wordpress, and Drupal. Software that is used in this project is Drupal.

PHP allows the user to:

- Reduces the time to create large websites.
- Creates a customized user experience for visitors based on the information gathered from them.
- Open up possibilities for online tools.
- Allow creating of shopping carts for e-commerce websites.

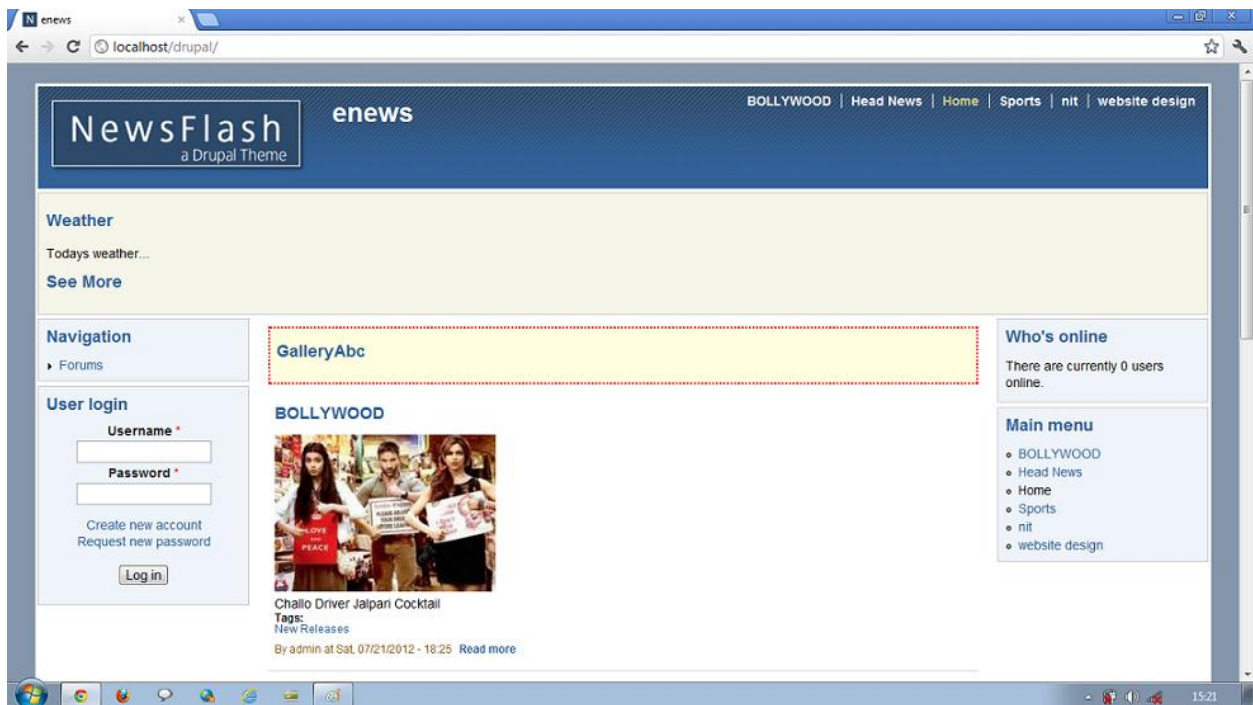
## **4.2 RESULTS AND SCREEN SHOTS**

After going through all the phases of System Development Life Cycle of this project, the portal is designed successfully.

The below figures are the screenshots of that portal given as

#### 4.2.1 HOME PAGE:

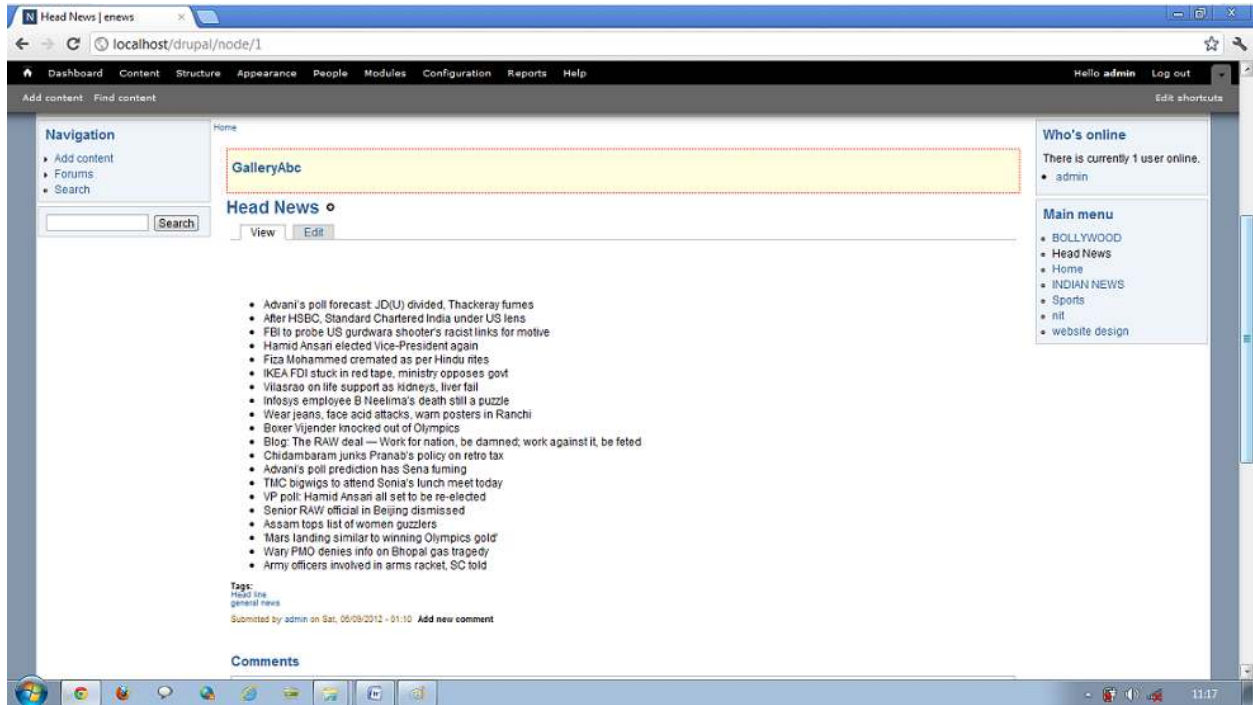
Below is the snap shot of the home page before login on this page we can see all the news.



**FIGURE 4.1 HOME PAGE**

## 4.2.2 HEADLINES:

Below shows the snapshot of all the headlines on the main news around the world after login of users.



**FIGURE 4.2 HEADLINES**



### 4.2.3 INDIAN NEWS:

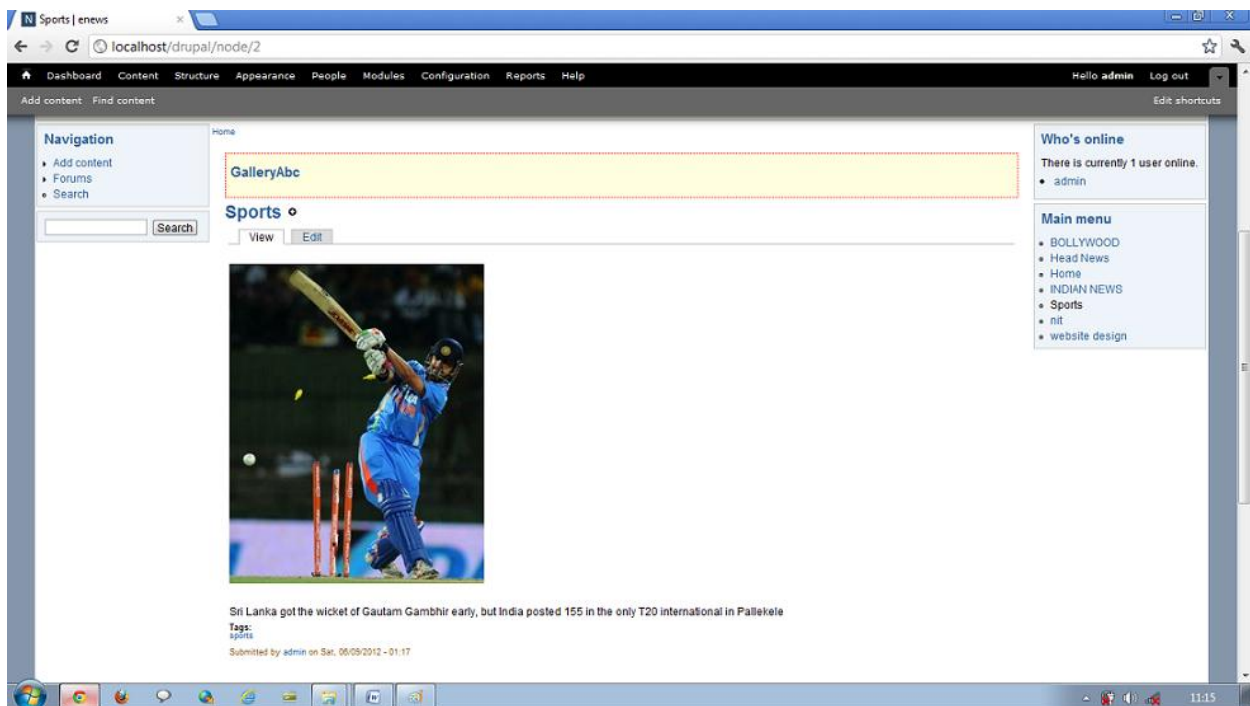
Below shows the snapshot of a news page which covers a news about indian politics, election and business news etc.



**FIGURE 4.3 INDIAN NEWS**

## 4.2.4 SPORTS:

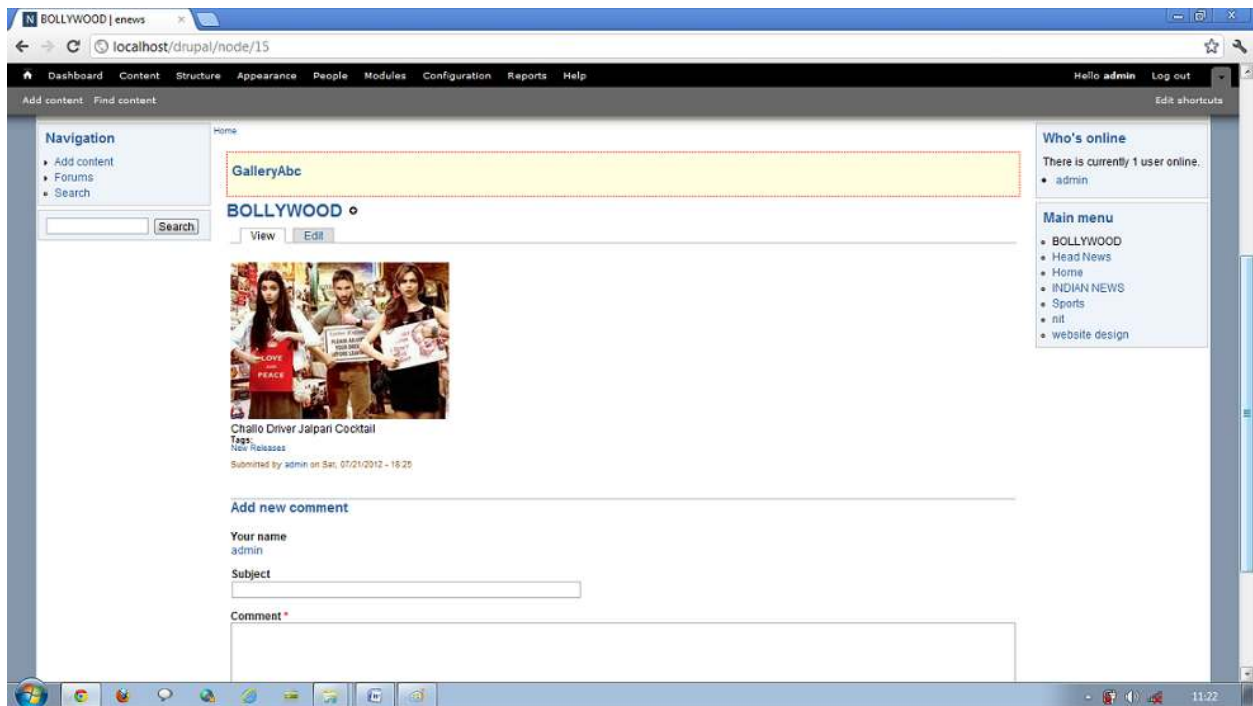
Below shows the snapshot of sports news page which displays all news related to sports



**FIGURE 4.4 SPORTS**

## 4.2.5 BOLLYWOOD:

Below shows the snapshot of bollywood page which displays the news about bollywood.



**FIGURE 4.5 BOLLYWOOD**

## **CHAPTER-5**

### **TESTING**

## 5. TESTING

Testing phase is a very important for a successful system. In this phase before implementing the new system into operation, for eliminating bugs a test run of the system is done. After completing codes for the whole programs of the system, a test plan should be developed and run one given set of test data.

Using the test data subsequent test run are carried out:

**Unit testing:** It is a method by which individual units of source code, sets of one or more program modules collectively with associated control data, usage procedures, and operating procedures, are tested to determine whether they are fit for use. Intuitively, one can view a unit as the smallest testable part of an application. In procedural programming a unit can be an entire module but is more commonly an individual function. In object-oriented programming a unit is an entire interface but could be an individual method. Unit test is created by programmers or by white box testers during the development process.

Each test case is independent from the others: substitutes like method stubs, mock objects can be used to assist testing a module in isolation. Unit tests are typically written and run by software developers to ensure that code meets its design and behaves as intended. Its implementation can vary from being very manual to being formalized as part of build automation.

**Integration testing:** It is the phase in software testing in which individual software modules are combined and tested as a group. It occurs after unit testing and before validation testing.

Integration testing takes as its input modules that have been unit tested, groups them in larger aggregates, applies tests defined in an integration test plan to those aggregates, and delivers as its output the integrated system ready for system testing .

**Program test:**After the programs have been coded, compiled and carried out to working conditions, they must be independently tested with the prepared test data. Any unwanted happening should be noted and debugged.

**System Test:**When the program test for each of the programs of the system is written and errors are removed then system test is complete. At this stage the test is done on actual data. The complete system is put into execution on the actual data. At every stage of the execution, the output of the system is studied. During the outcome analysis, it may be found that the outputs are not matching the estimated output of the system. In such situation, the bugs or errors in the particular programs are recognized and are fixed and further verified for the expected output.

When it is confirmed that the system is running error-free, the users are called with their own real data so that the system could be presented running as per their requirements.

## **CHAPTER-6**

### **CONCLUSION AND FUTURE WORK**

## **6. CONCLUSION AND FUTURE WORK**

After processing through all phases of the system development life cycle, the portal is developed. In future it will be hosted on the internet server which will be accessed by all people in the world and can view the site and learn as much as news and information about the world. The Administrator or editor who will be assigned for editing or managing or controlling will be given the secure login information and will change or modify the website as per the requirements.

Also in future we can add more features to support ipads, iphone and other electronic devices.



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## REFERENCES

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