1. DESIGN CONSIDERATIONS

❖ ASSUMPTIONS

- ❏ **Performance:**
  NJ requires a very low bandwidth, hence the performance will not degrade with an increasing number of potential users. At the development stage, a free hosting service will be used. But when installing the system to a real environment, it will be hosted in a much more reliable server to increase the performance.
  My SQL will provide the adequate speed for database transactions. Since no big data analysis is done, My SQL is the ideal database for this project.
- ❏ **Security**:
  Security measures are provided in many aspects of this system.
- ❏ **User authentication**:
  Users will have to authenticate using the username and passwords. Passwords can be changed by the user.
- ❏ **Login details**:
  Each user's login time and logout time will be recorded in the system, to make the tractability process easy in case of a faulty action.
- ❏ **Usability and ease of use**:
  The interfaces are designed to make it easy for any potential user to get familiar with the system immediately. No additional training is required to use the system.
- ❏ **Capacity and scalability**:
  The system will be available throughout the 24 hours. Mean time to failure and mean time to repair will be decided to increase the availability. With a paid hosting space, the availability can be guaranteed to a great precision.

❖ CONSTRAINTS

- ❏ If login successful then switch user to his/her account.
- ❏ If the user does not have an account then go for sign up.
- ❏ Enter the valid location to which you want to search.
- ❏ There are more benefits for those who are members of this web site.
- ❏ User should have basic knowledge of computers.
- ❏ The Web Publishing System has one active actor and one cooperating system.

- ❏ The Author, Reader accesses the Online Journal through the Internet.
- ❏ Any Author's communication with the system is through email.
- ❏ The Editor accesses the entire system directly.

❖ SYSTEM ENVIRONMENT

The **system environment** is primarily the set of variables that define or control certain aspects of process execution. They are set or reset each time a shell is started. From the **system**-management point of view, it is important to ensure the user is set up with the correct values at log in. In our project it would be admin and the user.

❖ DESIGN METHODOLOGY

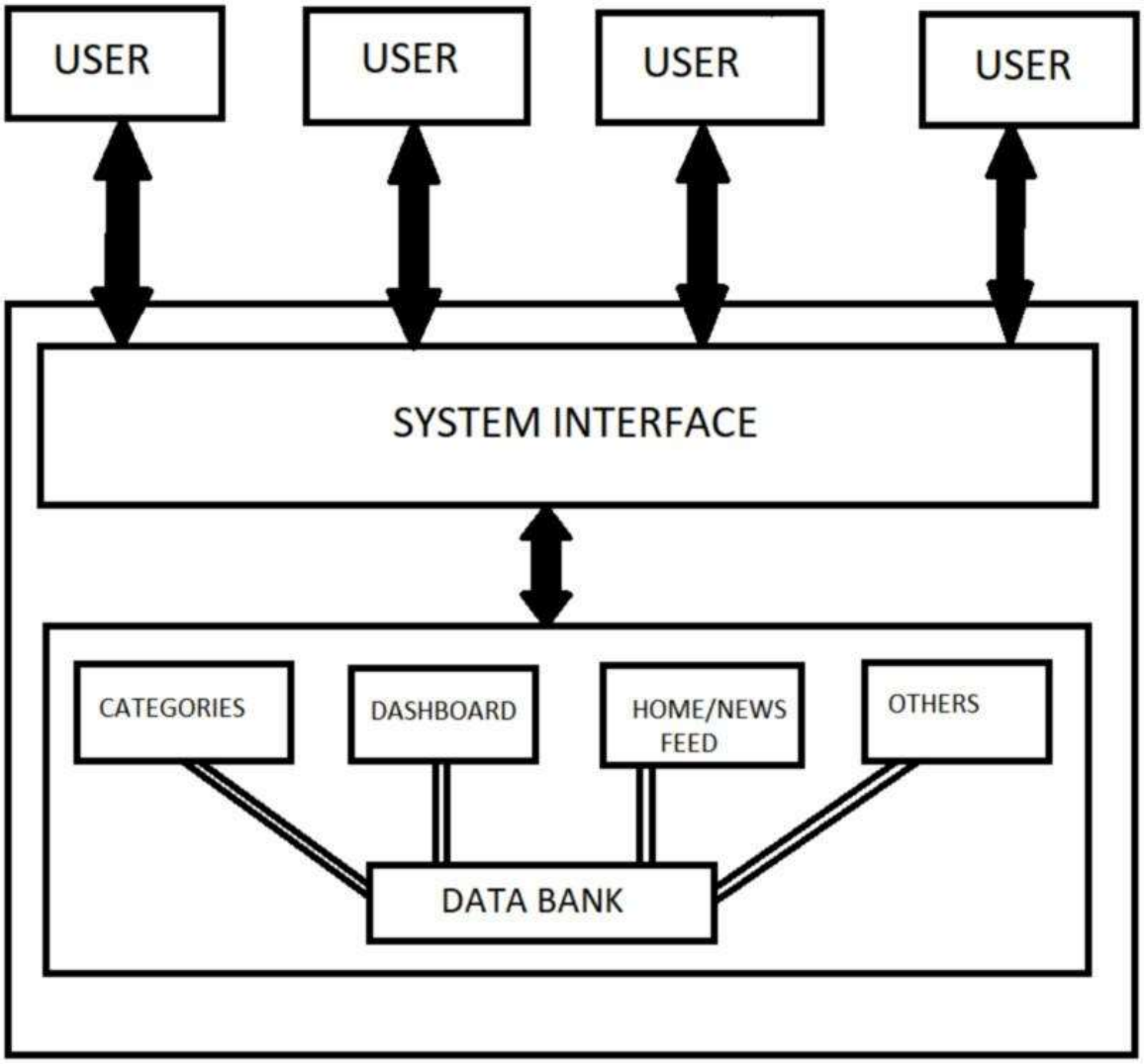
Design methodology refers to the development of a system or method for a unique situation. Today, the term is most often applied to technological fields in reference to web design, software or information systems design. Various degree programs involve design methodology, including those in the graphic and digital arts. Read this article to learn more about what design methodology is. Schools offering Art degrees can also be found in these popular choices.

Components of Design Methodology

The key to design methodology is finding the best solution for each design situation, whether it be in industrial design, architecture or technology. Design methodology stresses the use of brainstorming to encourage innovative ideas and collaborative thinking to work through each proposed idea and arrive at the best solution. Meeting the needs and wants of the end user is the most critical concern. Design methodology also employs basic research methods, such as analysis and testing.

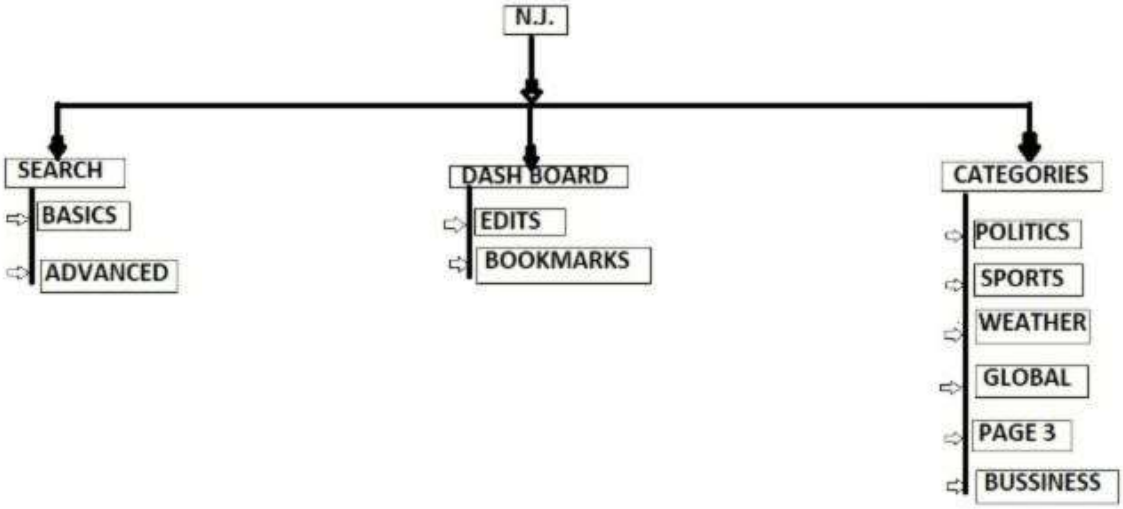
2. ARCHITECTURE

❖ SYSTEM DESIGN



❖ CONTEXT DIAGRAM

❖ FUNCTIONAL DECOMPOSITION TREE

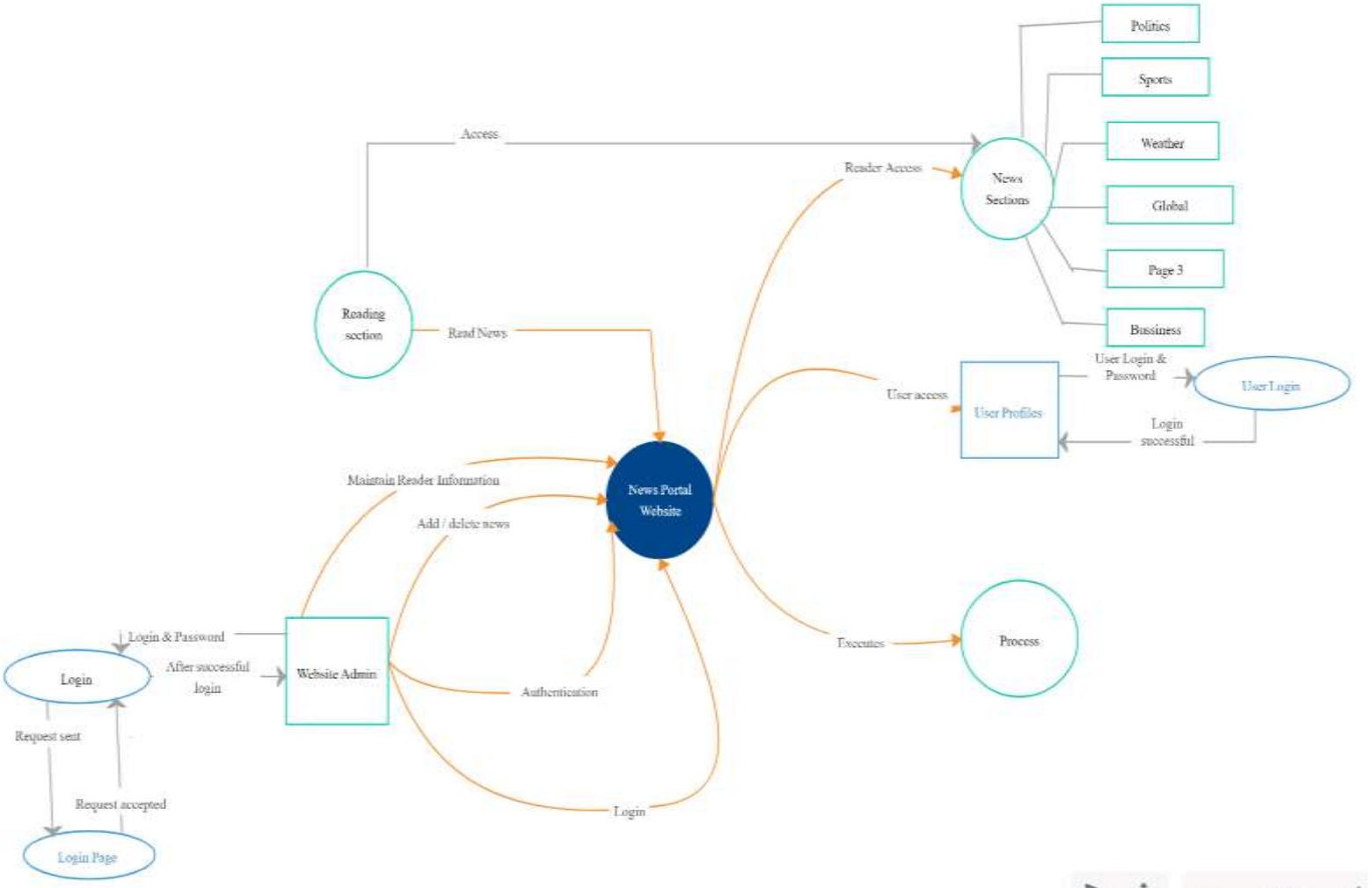


3. DATA DESIGN

DATA DESCRIPTION

My SQL database and JDBC to communicate with the database that is locally installed on the server.

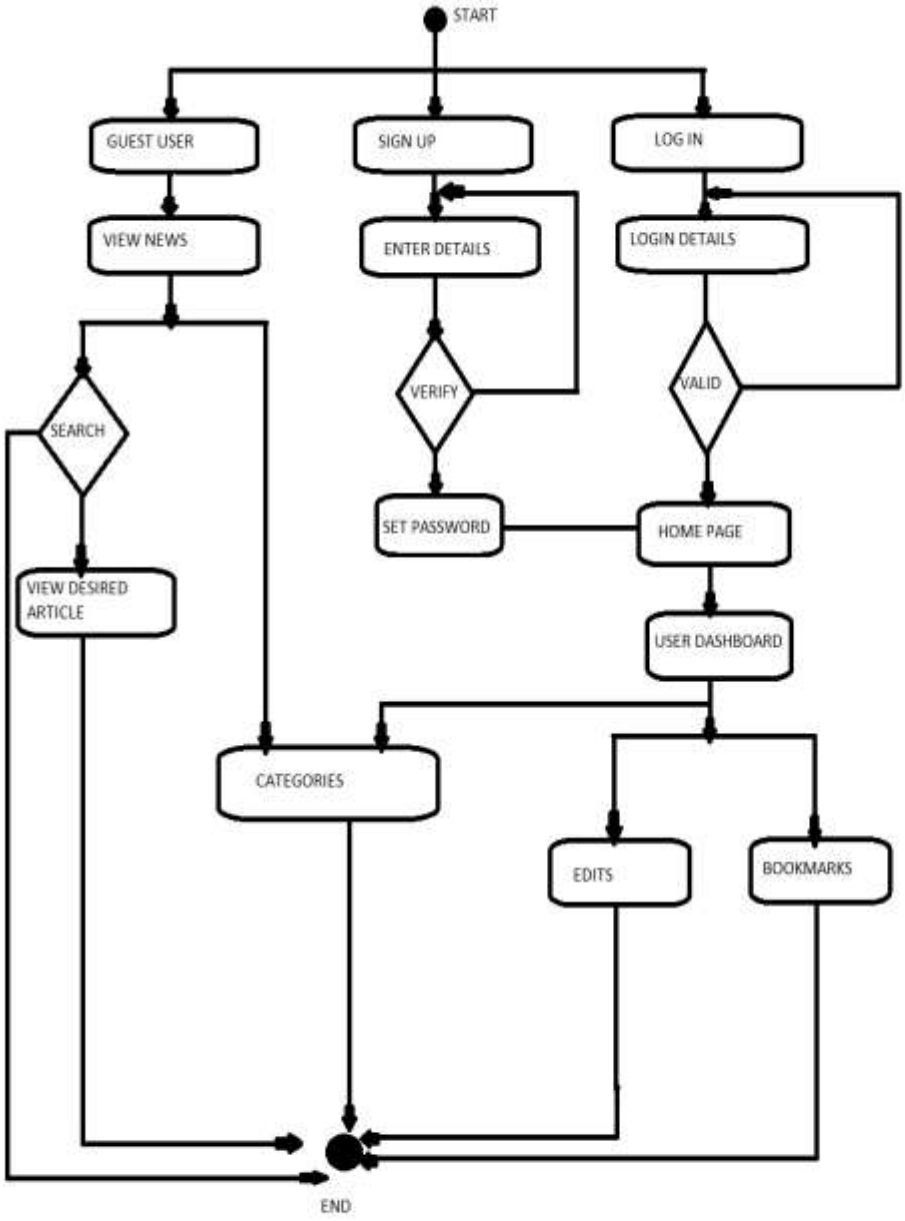
DATA FLOW DIAGRAM


Politics
Sports
Weather
Global
Page 3
Bussiness
Access
Reader Access
News Sections
Reading section
Read News
User Login & Password
User Login
User access
User Profiles
Login successful
Maintain Reader Information
News Portal Website
Add / delete news
Login & Password
Login
After successful login
Website Admin
Authentication
Executes
Process
Request sent
Request accepted
Login Page
Login
71%

❖ DATA DICTIONARY

Functions	Field name	Data Type	Field size for display	Null
funlogin	usern	var	20	NO
	passw	var	10	NO
	captcha	char	5	NO
funsignup	fname	char	20	NO
	lname	char	20	YES
	gend	var	10	NO
	dobe	date	10	NO
	mobn	int	10	NO
	eid	var	30	NO
	uname	var	30	NO
	pword	var	30	NO
fundash	chec	var	10	YES
	books	var	1000	YES
funcat	pols	var	10	YES
	spo	var	10	YES
	weatc	var	10	YES
	glob	var	10	YES
	page	var	10	YES
	buss	var	10	YES

4. ACTIVITY DIAGRAM:



5. SYSTEM INTERFACE DESIGN

❖ USER INTERFACE DESIGN

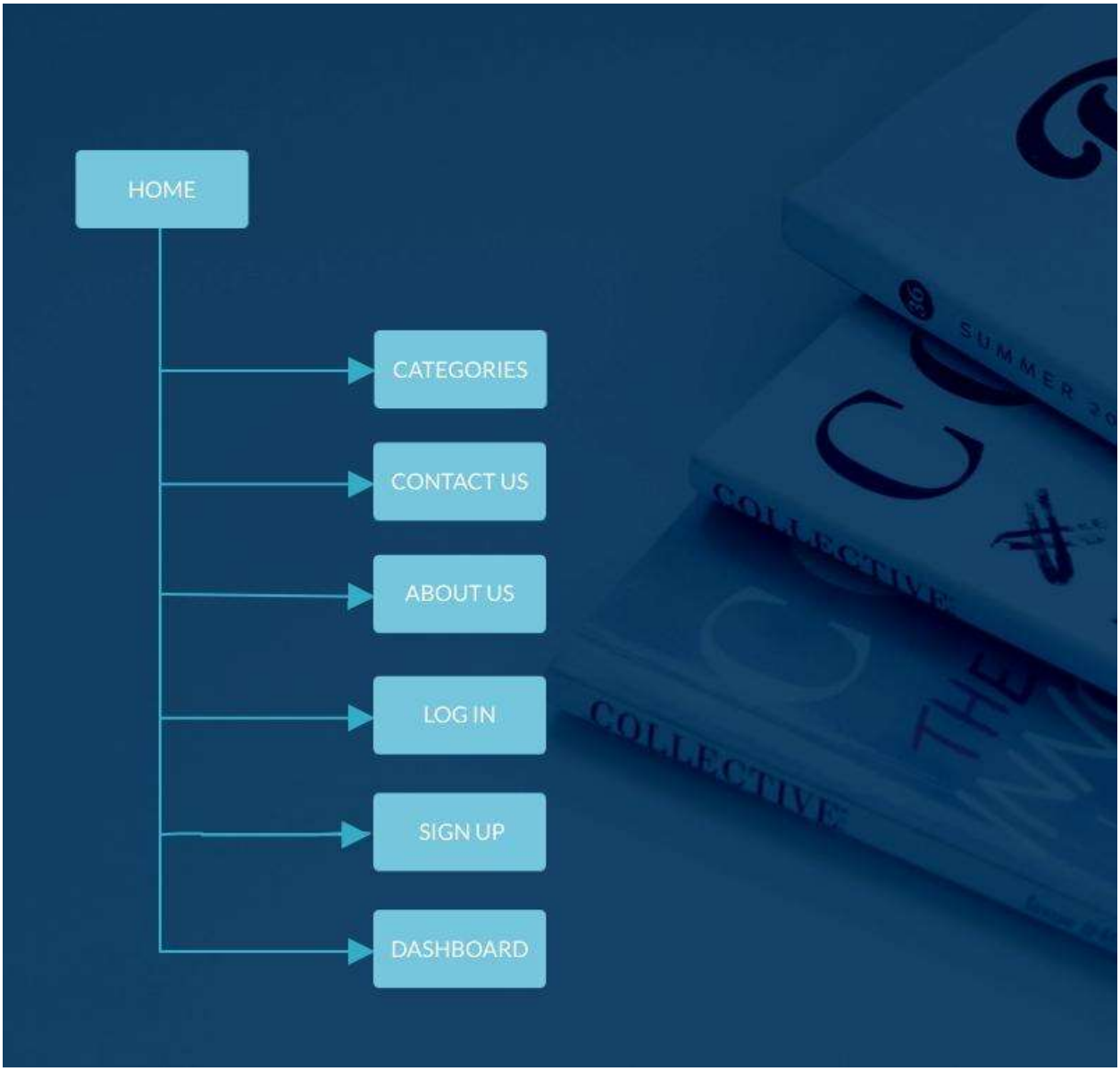
UI is designed according to UI design principles.

- **The structure principle**: UI is organized in such a way that related things are combined together and unrelated things are separated.
- **The simplicity principle:** It is easy to follow the provided interface. In the case of mistake, the system displays an error message.
- **The visibility principle**: All system‟ functions are available through UI. It does not overwhelm users with too many alternatives.
- **The feedback principle:** Through the system of messages, the design keeps users informed of actions, errors, or exceptions.
- **There use principle:** Indesign, the same names were used to perform the same operations with different objects in order to reduce ambiguity.

❖ WEB PAGES IN A TREE

When the user enters the website the “Home” page will open. From the “Home” page user can access various pages which are “Categories”, “Contact us”, “About us”, ”Log In”, “Sign up” and “DashBoard”. These pages are interconnected and are easy to navigate through the navigation bar, also these pages cover all the functionality of the system.

Following is the Web page tree diagram:-



❖ DESCRIPTION

- ❑ “Home” page is the main page of our design through which a user can navigate easily to other pages.
- ❑ “Categories” page showcases the user, various categories of news, the user can be interested in.
- ❑ “Contact Us” page gives the contact information of the developers.
- ❑ “About Us” page gives the information regarding the website.
- ❑ “Login” page provides the user the path to login.
- ❑ “Signup” page helps to create an account on the website.

- ❏ “Dashboard” page displays the user information and helps the user to edit it.

❖ OBJECTS AND ACTION

After entering the website the user can access various pages as mentioned above.

- ❏ Categories Page

  It will provide the user to read news according to the interest of the user. Following are the list of categories:-

  1. Politics
  2. Sports
  3. Weather/climate
  4. Global
  5. Page 3
  6. Business

  These will be the links to open the news for the respective category on the Home Page.
- ❏ Contact Us and About Us, page provides access to the developers and displays information regarding the website.
- ❏ Login page will help the user to get logged in to the website. It does the following things:-
  1. Asks the user for the username.
  2. Asks the user for the password.
  3. Captcha
  4. After login, it will direct the user to the home page.
  5. A link for signup will also be provided on this page.
- ❏ Sign up page will help the user to create an account with the following parameters:-
  1. First Name
  2. Last Name
  3. Gender
  4. DOB
  5. Mobile no.
  6. Email ID
  7. Will ask about the categories they are interested in.

  It will direct the user to the homepage after sign up.
- ❏ Dashboard page will have the following links and functions:-

  1. Edit profile

2. Link to read news
3. Bookmarks(saved news articles).