Education Website Design Self Reliant

A Project Report

Submitted in partial fulfilment of the Requirements for **Edubridge Learning Course**

BY

Ms. Vaishnavi Bhambure Batch Code: 7670

Under the guidance of Mrs. Mohan Priya

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SELF RELIANT

1.INTRODUCTION

As technology continues to advance, information's disseminates easily with no hassles and it has been a common part of our everyday needs in this world. Rapid advances in technology have helped to meet these demands of the society. The success of the school in carrying out its primary charge of educating and socializing students is contingent on student's awareness. Nowadays, most educators find it easy to have a website which they can accessit through online.

Where every student can find out all types of colleges and crocuses provide by the colleges along with the entrance exam. In my website I try to add all department entrance exam.

1.10bjective

The study aimed to analyse, to design, to develop, to test, and to implement with an effective and useful education website, specifically this is intended to:

- 1. The students can get to know all education path after 10th, 12th and graduation
- 2. Let the visitors be able to find all required information.
- 3. Visitors can get review of colleges also
- 4. Every information of exam and syllabus

1.2 Scope

This system can be implemented to any type of streams difference type of careers with the proper college list and entrance exam list. The system recommends a facility to accept the feedbacks

If local person didn't have idea of all the colleges and course with provide by different colleges for that purpose self reliant website in develop which provide wide range of information about different colleges there fees ,exams syllabus etc.

2. SOFTWARE AND HARDWARE REQUIREMENT:

2.1Software Requirement:

Number	Description
1	Window 7,8,10
2	HTML/ Css / SQL / Selenium
3	PHP 5.5.38
4	Compiler: notepad, Visual studio, sublime, Eclipse 2022-0.9
5	Apache version: Apache/2.4.64(win64) OpenSSL/1.0.2h PHP/5.5.388
6	Browser: Chrome, Firefox, Microsoft Edge and Opera

2.2Hardware Requirements:

There are no specific hardware requirements in making a website. Almost any PC computer on which you can connect to the internet, will be sufficient. Of course, processes execution will be slower on the less powerful computers. Therefore hardware requirements should be dependent on the characteristics of processes execution.

Processor	Intel CORE i3
RAM	8.0 GB

Hard disk Drive	500GB

3. SYSTEM DESIGN

3.1Processes Model

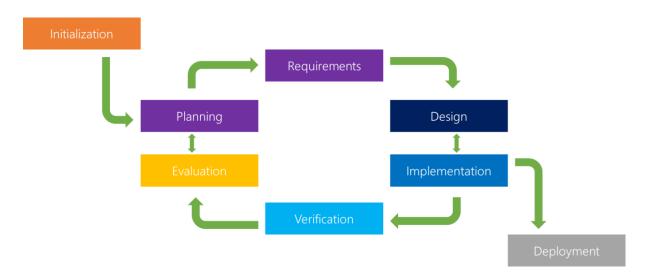


Fig 3.1

<u>Initial Planning</u>: The researchers had an initial planning which involves forming of group to share ideas, opinions and to divide the task. The researchers were divided into subgroups to complete the task in its expected date which was making the documentation and the other subgroup constructed and developed the application.

<u>Planning and Requirements:</u> In this phase the requirements for the software were gathered and analyzed. This produces a complete and final specification of requirements. And also, the researchers then chose the best tools and methods to be followed in the development of the application.

Analysis and Design. The researchers decided on what program language to use so that the researchers are comfortable to work with. The researchers then started prototyping, designing, and coding. After the researchers had done designing and coding, the researchers then test multiple parts of the system acting together to determine if they were fit to use. Debugging also occurred in this phase to find defects in the program and fixed then soon as possible.

3.2Use Case Diagram

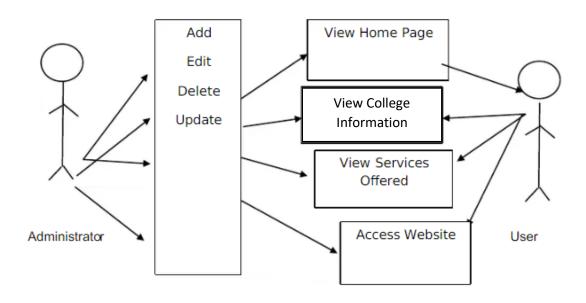


Fig 4.2

3.2.1 Use Case Table

A use case diagram is used to represent the dynamic behavior of a system. It encapsulates the system's functionality by incorporating use cases, actors, and their relationships. It models the tasks, services, and functions required by a system/subsystem of an application. It depicts the high-level functionality of a system and also tells how the user handles a system.

Use Case	Actor	Description
1.Login	Admin And User	1.Login done by admin and user to admin
2.Add Category	Admin	Addition of new category is only add by admin
3.Add colleges	Admin	Addition of new college list is done by admin
4.Mange college and list of entrance	Admin	Mange college and list of entrance such as addition of items and cancels it
5.Regstration	Admin and user	Registration is handle by user and admin also
6.View courses and colleges	Admin and user	User are able to view course and colleges according to need

3.2.2Use case Description

Use Case 001:Login

1. Introduction:

This use case outline the steps that need to be followed

2. Actors:

- Admin
- User

3. Pre-Condition:

The admin have valid credentials

4. Scenario:

Sr	Action	Software
1.	Login to the system	System request the
		following data
		1.User id
		2.Password
2.	Use fill out data	The System verifies that the above items have been filled out If any data is missing, the system warms the user and the scenario continues with software reaction

5. Post-condition

If use case is successfully executed, the user should login to the application

6. Basic Flow:

Login

- i. The page will request the admin to provide valid credentials
- ii. Admin enters into the system

7. Alternate Flow:

1.Invaild Credentials:

If actor provides invalid credentials in the basic flow, a validation message or error message should appear. Hence, returning the /actor to the basic flow...

8. Special Requirement:

None

9. Associated Use Case(S)

None

Use Case 002:Add category

1. Introduction:

This use case outline the steps that need to be followed in order to login into the system

2. Actors:

• Admin

3. Pre-Condition:

The admin have valid credentials

4. Scenario:

Sr	Action	Software
1.	Add category	System request to admin to add category Need authentication
2.	fill out data	The System verifies that the above items have been filled out If any data is missing, the system warms the user and the scenario continues with software reaction If all data has been entered, the System asks the users to verify dashboard If the user indicates they would like to cancel the scenario end here
3.	confirms that their selected category is correct	If the admin indicates that their selected student is correct the scenarios continues with the software reaction

5. Post-condition

If use case is successfully executed, the admin should add new categories in applications

6. Basic Flow:

Add Category

- i. enter into system
- ii. makes change add new category

7. Alternate Flow:

1.Invaild Credentials:

If admin/actor provides invalid credentials in the basic flow, a validation message or error message should appear. Hence, returning the admin/actor to the basic flow...

8. Special Requirement:

None

9. Associated Use Case(S)

None

Use Case 003:Add college and list of entrance exam

1. Introduction:

This use case outline the steps that need to be followed in order to login into the system

2. Actors:

• Admin

3. Pre-Condition:

The admin have valid credentials

4. Scenario:

Sr	Action	Software
1.	Add college	System request to admin to add item
		Need authentication
		Item should be available
2.	Admin fill out data	The System verifies that the
		above items have been
		filled out If any data is
		missing,
		the system warms the user
		and the scenario continues
		with software reaction
		If all data has been entered,
		the System asks the users to
		verify dashboard If the user
		indicates they would like to
		cancel the scenario end
		here
3.	Admin confirms that their selected item is correct	If the admin indicates that
		their selected student is
		correct the scenarios
		continues with the software
		reaction

5. Post-condition

If use case is successfully executed, the admin should add new items in applications

6. Basic Flow:

Add Category

- iii. enter into system
- iv. makes change add new items

7. Alternate Flow:

1.Invaild Credentials:

If admin/actor provides invalid credentials in the basic flow, a validation message or error message should appear. Hence, returning the admin/actor to the basic flow.

8. Special Requirement:

College list are available

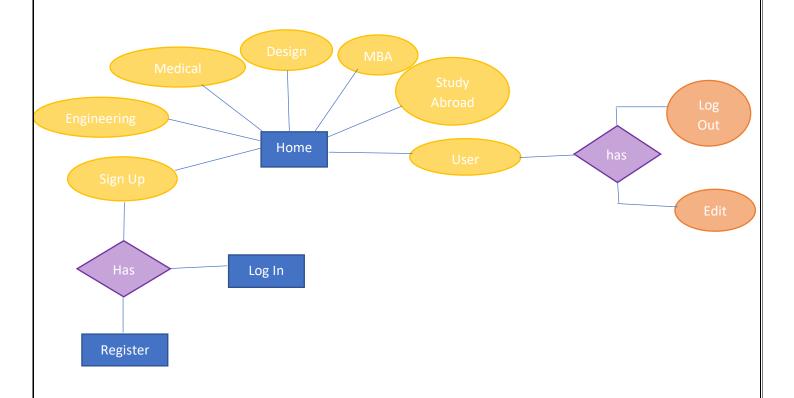
9. Associated Use Case(S)

None

3.3 ER Diagram

ER Diagram stands for Entity Relationship Diagram, also known as ERD is a diagram that displays the relationship of entity sets stored in a database. In other words, ER diagrams help to explain the logical structure of databases. ER diagrams are created based on three basic concepts: entities, attributes and relationships.

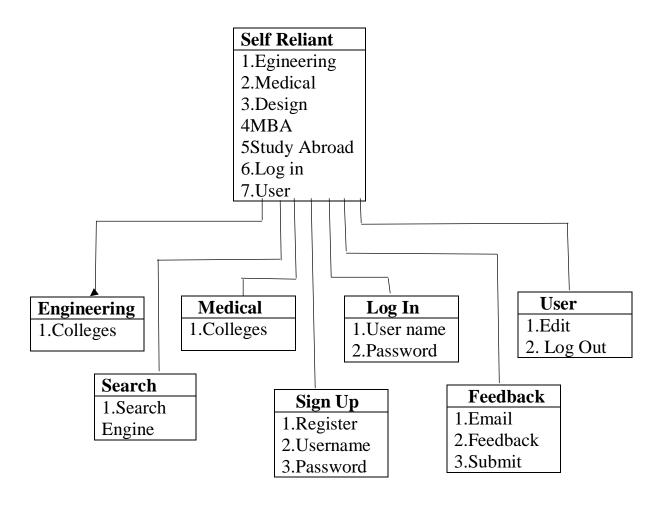
ER Diagrams contain different symbols that use rectangles to represent entities, ovals to define attributes and diamond shapes to represent relationships



3.4 Class Diagram

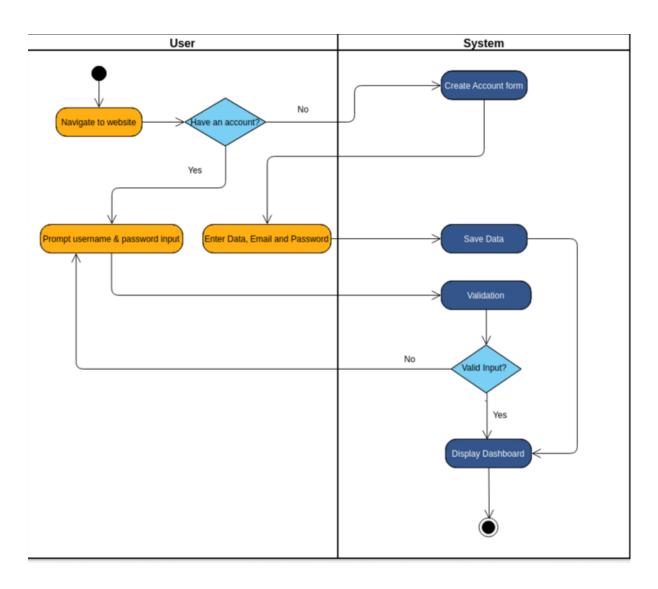
Class diagram is a static diagram. It represents the static view of an application. Class diagram is not only used for visualizing, describing, and documenting different aspects of a system but also for constructing executable code of the software application.

Class diagram describes the attributes and operations of a class and also the constraints imposed on the system. The class diagrams are widely used in the modeling of objectoriented systems because they are the only UML diagrams, which can be mapped directly with object-oriented languages.



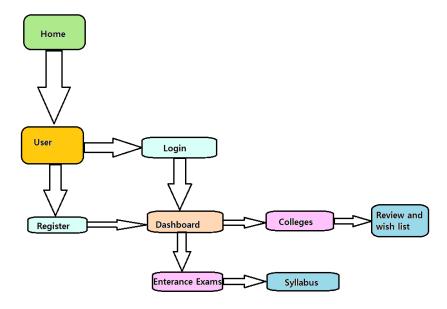
3.5 Activity Flow Diagram

Activity Diagrams describe how activities are coordinated to provide a service which can be at different levels of abstraction. Typically, an event needs to be achieved by some operations, particularly where the operation is intended to achieve a number of different things that require coordination, or how the events in a single use case relate to one another, in particular, use cases where activities may overlap and require coordination.



3.6 Data Flow Chart

A data flow diagram (DFD) maps out the flow of information for any process or system. It uses defined symbols like rectangles, circles and arrows, plus short text labels, to show data inputs, outputs, storage points and the routes between each destination. Data flowcharts can range from simple, even hand-drawn process overviews, to in-depth, multi-level DFDs that dig progressively deeper into how the data is handled. They can be used to analyze an existing system or model a new one. Like all the best diagrams and charts, a DFD can often visually "say" things that would be hard to explain in words, and they work for both technical and nontechnical audiences, from developer to CEO. That's why DFDs remain so popular after all these years. While they work well for data flow software and systems, they are less applicable nowadays to visualizing interactive, real-time or database-oriented software or systems.



4.IMPLEMENTATION

Html

HTML is the standard markup language for Web pages.

With HTML you can create your own Website

Css

CSS is the language we use to style an HTML document.

CSS describes how HTML elements should be displayed

Javascript

JavaScript is the world's most popular programming language.

JavaScript is the programming language of the Web.

JavaScript is easy to learn

4.1 Module

> Registration:

A new user will have to register in the system by providing essential details in order to view the products in the system. The admin must accept new user by unblocking him.

➤ Login:

A user must login with his username and password to the system after registration.

> Search bar:

Users can search for a particular college and course in the list by name.

> Add to wish list:

The user can add the desired college into his wish list user can view wish list and can remove it from the wish list by clicking remove.

➤ feedback: user can give feedback about website, colleges and asks query about it.

5.CODE AND OUTPUT:

5.1 Website Code and Output

Home Page:

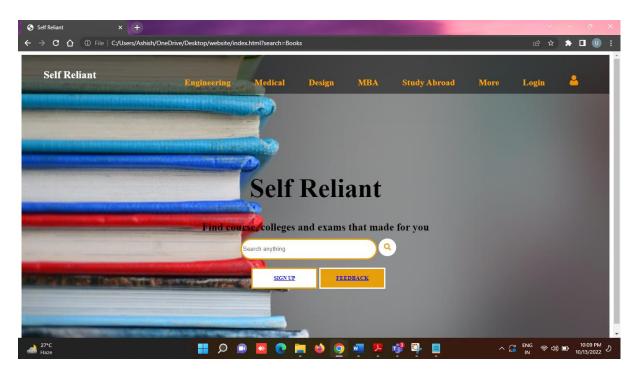
We add different education filed and search bar with sing up and sing in button

```
<!DOCTYPE html>
<html>
<head>
<title>Self Reliant</title>
k rel="stylesheet" type="text/css" href="style.css">
        rel="stylesheet"
                           href="https://pro.fontawesome.com/releases/v5.10.0/css/all.css"
crossorigin="anonymous"/>
</head>
<body>
<div class="bgimage">
<div class="menu">
 <div class="leftmenu">
 <h4> Self Reliant</h4>
 </div>
 <div class="rightmenu">
 <</li>
 id="firstlist"><a href="info1..html"> Engineering</a>
 <a href="info2.html">Medical</a>
```

```
<a href="#">Design</a>
<a href="info4.html">MBA</a>
<a href="#">Study Abroad</a>
<a href="#">More</a>
d="log"><a href="login.html">Login</a>
id="sign" ><a href=""><img src="user.png" height="23px" width=""></a>
</div>
</div>
<div class="text">
<h1>Self Reliant</h1>
<h2 class="">Find course, colleges and exams that made for you </h2>
<div class="sea">
<input type="text" name="box" placeholder="Search anything" class="inp">
<a class="b" href="#"><i class="fas fa-search"></i></a>
</div>
<div class="b1">
<button id="bottonone">
<a href="from.html" class="one"><b>Sign Up</b></a></button>
<button id="bottontwo">
<a href="feedback.html" class="one"><b>Feedback</b></a></button>
 </div>
 </div>
 </div>
 </body>
```

</html>

<ti>>



Registration Page:

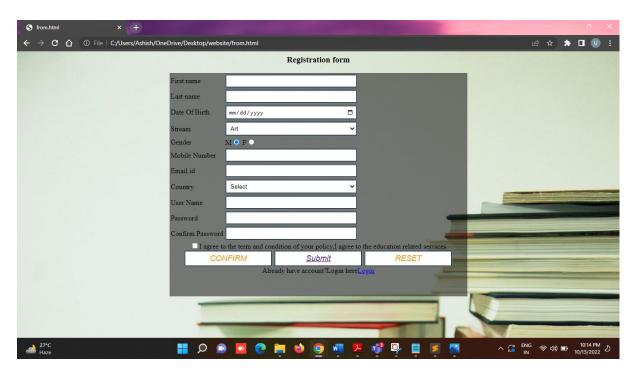
```
<html>
<head> <h3>Registration form</h3>
link rel="stylesheet" type="text/css" href="style.css">
<script>
function user1()
{
   var n,x,y;
   n=document.registor.id.value;
   x=document.registor.p1.value;
   y=document.registor.p2.value;
   if(isNaN(n)==false)
```

```
{
alert("enter characters in username");
}
if(x!=y)
{
alert("password incorrect");
}
</script>
</head>
<body class="registor">
    <div class="reg">
<form action="index.html" name="registor">
First name<br>
<input type="text" required id="name">
Last name<br>
<t
>
Date Of Birth<br/>
```

```
<input type="date" required id="name"><br>
Stream<br/>d>select id="name">
<option>Art</option>
<option>Science</option>
<option>Commerce</option>
<option>Other</option>
</select><br>
Gender<br>
M<input type="radio" value='M' name="rd1" id="ma" checked>
F<input type="radio" value='F' name="rd1" id="ma">
Mobile Number<br>
<input type="tye" minlength="6" maxlength="10" id="name" name="txtno"
required><br>
Email id<br>
<input type="email" id="name" required><br>
Country<br><select id="name">
```

```
<option>Select</option>>
<option>India</option>
<option>Nepal</option>
<option>Sri lanka
<option>usa</option>
<option>australia</option>
<option>uk</option>
<option>china</option>
<option>korea</option>
<option>japan</option>
<option>brazil</option>
<option>africa</option>
<option>russia</option>
<option>poland
</select><br>
User Name<br/>/td><input type="text" name="id" id="name"
required><br>
Password<br><input type="password" name="p1" id="name"
required><br>
Confirm Password<br>cinput type="password" name="p2" id="name"
required><br>
```

```
<input type="checkbox" id="ch" required>I agree to the term and condition of your policy,I
agree to the education related services<br>
<input type="button" value="CONFIRM" id="sub" onclick="user1()">
<button class="" id="sub" onclick="user1()" ><a href="index.html">Submit</a></button>
<input type="reset" value="RESET" id="sub"><br>
<span>Already have account?Login here<a href="login.html">Login</a></span>
</form>
</div>
</body>
</html>
```



Log In:

<!DOCTYPE html>

<html>

<head>

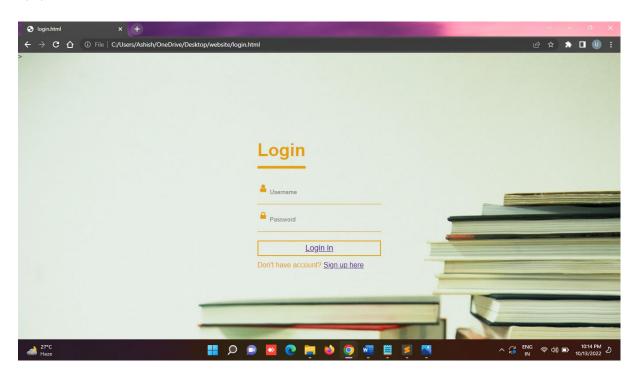
```
k rel="stylesheet" type="text/css" href="style.css">
<meta charset="utf-8">
<script type="text/javascript">
function login(ps,n)
     {
       if(ps == "" \parallel n == "") \\
      alert("No blank values allowed");
        }
      else
       alert("Successful");
       }
       </script>
</head>
<body class="login" >
<form class="loginbox" >
<h1>Login</h1>
<div class="textbox" >
<i class="fa fa-user" aria-hidden="true"></i>
<input type="text" id="user" placeholder="Username" name="nam"></div>
<div class="textbox" >
<i class="fa fa-lock" aria-hidden="true"></i>
<input type="password" id="pss" placeholder="Password" name="pas" >
```

</div>

<button class="btn" onclick="login(nam.value,pas.value)">Login in</button>
 Don't have account? Sign up here
</form>

</html>

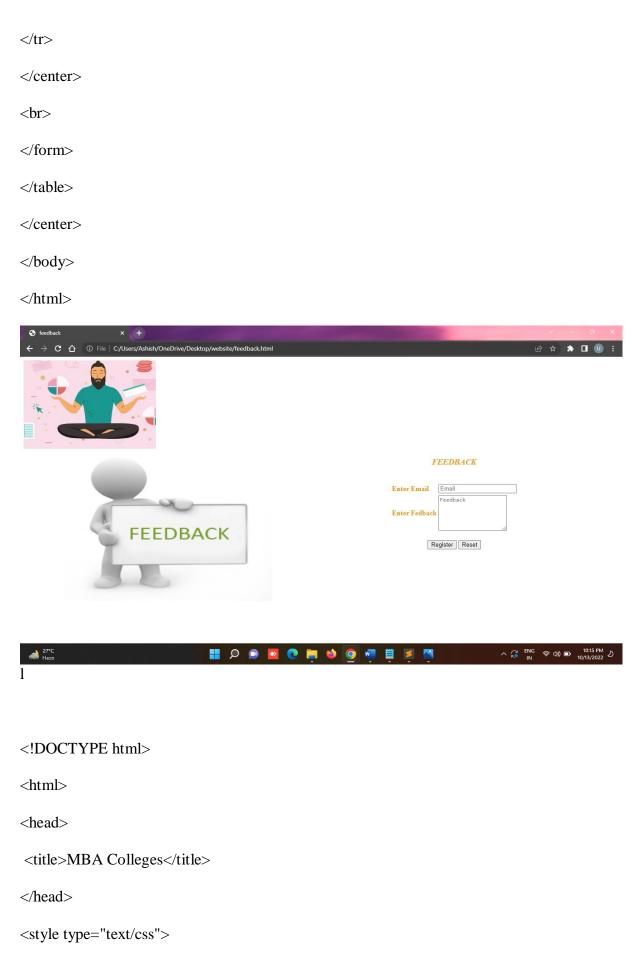
</body>



Feedback:

<html>
<head>
<title> feedback </title>
k rel ="stylesheet" type="text/css" herf="style.css">
</head>
<body background-image:("Dusk.jpg")
>

```
<div class="loginbox">
<img src="Selfreliant.jpg" class="aak" width="300" height="200"><br>
<img src="feedback.gif" width="600" height="350" align="left">
<center>
<form>
<h3><caption><b><center><font color=#e89f0c ><em><strong>
FEEDBACK</strong></em></center></b></caption></h3>
<tor=#e89f0c><strong>
Enter Email<strong>
<input type="text" name="email"placeholder="Email">
<br>
<tor=#e89f0c><strong>
Enter Fedback <strong>
<textarea rows="5"cols="18" placeholder="Feedback"></textarea>
<center>
<br>
<input type="button" value="Register" id="fed">
<input type="reset" value="Reset" id="fed">
```



```
*{
margin: 0px;
padding: 0px;
}
body{
font-family: arial;
. main \{ \\
margin: 2%;
}
.card{
   width: 20%;
   display: inline-block;
   box-shadow: 2px 2px 20px black;
   border-radius: 5px;
  margin: 2%;
align:center;
margin-left:10%;
  }
.image img{
 width: 100%;
 border-top-right-radius: 5px;
 border-top-left-radius: 5px;
}
.title\{
```

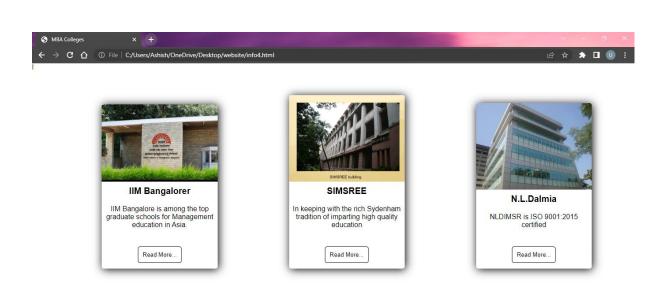
```
text-align: center;
 padding: 10px;
 }
h1{
 font-size: 20px;
.des\{
 padding: 3px;
 text-align: center;
 padding-top: 10px;
    border-bottom-right-radius: 5px;
 border-bottom-left-radius: 5px;
}
button{
 margin-top: 40px;
 margin-bottom: 10px;
 background-color: white;
 border: 1px solid black;
 border-radius: 5px;
 padding:10px;
button:hover{
 background-color: black;
 color: white;
 transition: .5s;
```

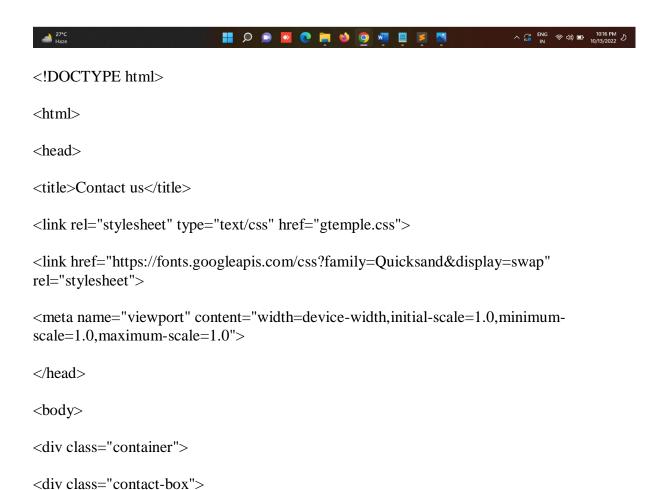
```
cursor: pointer;
}
</style>
<body>
<div class="main">
<div class="card">
<div class="image">
 <img src="t1.jpg">
</div>
<div class="title">
<h1>IIM Bangalorer</h1>
</div>
<div class="des">
IIM Bangalore is among the top graduate schools for Management education in
Asia.
<button>Read More...</button>
</div>
</div>
<div class="card">
<div class="image">
 <img src="t2.jpg">
</div>
<div class="title">
```

```
<h1>SIMSREE
</h1>
</div>
<div class="des">
In keeping with the rich Sydenham tradition of imparting high quality education
<button>Read More...</button>
</div>
</div>
<!--cards -->
<div class="card">
<div class="image">
 <img src="t3.jpg">
</div>
<div class="title">
<h1>
N.L.Dalmia</h1>
</div>
<div class="des">
NLDIMSR is ISO 9001:2015 certified
<button>Read More...</button>
</div>
</div>
</div>
```



</html>





```
<div class="left"></div>
```

<div class="right">

<h2>IIT (Indian Institute of Technology) Bombay</h2>

<P class="text"> IIT (Indian Institute of Technology) Bombay is one of the oldest engineering institutes in India. IIT Bombay was established in 1958, and it is the premier institute in India to be established with foreign assistance. In 1961, IIT Bombay was declared as the Institute of National Importance by the Indian government. After attaining the premier status, IIT Bombay has shown excellence in academics, research and overall development of students. Among IITs, IIT Bombay has an impressive record and achievements in research, academics, and international outlook.

IIT Bombay has been successful in emerging as a leader in the field of engineering education and research. The performance of IIT Bombay in global rankings over the years is one of the major reasons for an increase in the number of international students. At the same time, the performance of IIT Bombay in NIRF rankings is also noteworthy.

</div>
</div>
</div>
</div>
</body>



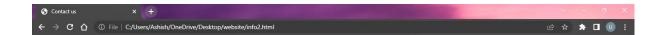


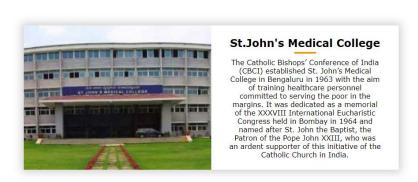
IIT (Indian Institute of Technology) Bombay IIT (Indian Institute of Technology)

Bombay is one of the oldest engineering institutes in India. IIT Bombay was established in 1958, and it is the premier institute in India to be established with foreign assistance. In 1961, IIT Bombay was declared as the Institute of National Importance by the Indian government. After attaining the premier status, IIT Bombay has shown excellence in academics, research and overall development of students. Among IITS, IIT Bombay has an impressive record and achievements in research, academics, and international outlook. IIT Bombay has been successful in emerging as a leader in the field of engineering education and research. The performance of IIT Bombay in global rankings over the years is one of the major reasons for an increase in the number of international students. At the same time, the performance of IIT Bombay in NIRF rankings is also noteworthy.



html
<html></html>
<head></head>
<title>Contact us</title>
<pre><link href="gtemple2.css" rel="stylesheet" type="text/css"/></pre>
<pre><link href="https://fonts.googleapis.com/css?family=Quicksand&display=swap" rel="stylesheet"/></pre>
<meta content="width=device-width,initial-scale=1.0,minimum-scale=1.0" name="viewport"/>
 body>
<div class="container"></div>
<div class="contact-box"></div>
<div class="left"></div>
<div class="right"></div>
<h2>St.John's Medical College</h2>
<p class="text"> The Catholic Bishops' Conference of India (CBCI) established St. John's Medical College in Bengaluru in 1963 with the aim of training healthcare personnel committed to serving the poor in the margins. It was dedicated as a memorial of the XXXVIII International Eucharistic Congress held in Bombay in 1964 and named after St. John the Baptist, the Patron of the Pope John XXIII, who was an ardent supporter of this initiative of the Catholic Church in India.</p>







5.2 Database connectivity Code and Output

1.connection.php

```
<?php

$dbhost = "localhost";
$dbuser = "root";
$dbpass = "";
$dbname = "login_sample_db";

if(!$con = mysqli_connect($dbhost,$dbuser,$dbpass,$dbname))
{

die("failed to connect!");
}
2.function.php
<?php

function check_login($con)
{</pre>
```

```
if(isset($_SESSION['user_id']))
{
$id = $_SESSION['user_id'];
$query = "select * from users where user_id = '$id' limit 1";
result = mysqli_query($con,$query);
if($result && mysqli_num_rows($result) > 0)
{
$user_data = mysqli_fetch_assoc($result);
return $user_data;
}
//redirect to login
       header("Location: login.php");
       die;
function random_num($length)
{
$text = "";
if(\$length < 5)
legsth = 5;
le = rand(4, length);
for ($i=0; $i < $len; $i++) {
\text{stext} := \text{rand}(0,9);
}
return $text;
}
```

```
3.index.php
<?php
session_start();
include("connection.php");
include("functions.php");
$user_data = check_login($con);
?>
<!DOCTYPE html>
<html>
<head>
<title>My website</title>
</head>
<body>
<a href="logout.php">Logout</a>
<h1>This is the index page</h1>
<br>
Hello, <?php echo $user_data['user_name']; ?>
</body>
</html>
4.Login.php
<?php
session_start();
include("connection.php");
include("functions.php");
if($_SERVER['REQUEST_METHOD'] == "POST")
{
//something was posted
$user_name = $_POST['user_name'];
$password = $_POST['password'];
```

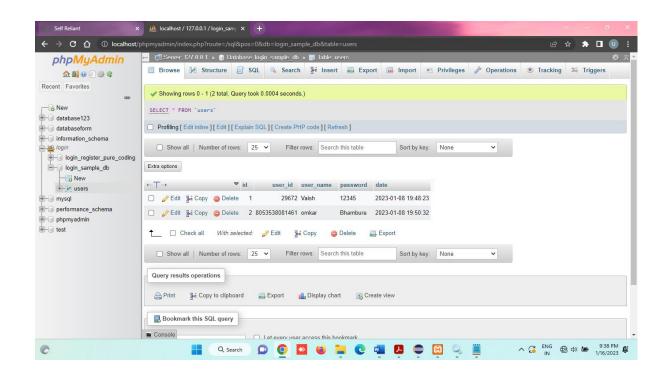
```
if(!empty($user_name) && !empty($password) && !is_numeric($user_name))
{
//read from database
$query = "select * from users where user_name = '$user_name' limit 1";
$result = mysqli_query($con, $query);
($result)
{
if($result && mysqli_num_rows($result) > 0)
$user_data = mysqli_fetch_assoc($result);
if($user_data['password'] === $password)
$_SESSION['user_id'] = $user_data['user_id'];
header("Location: index.php");
die;
}
echo "wrong username or password!";
}else
echo "wrong username or password!";
}
?>
```

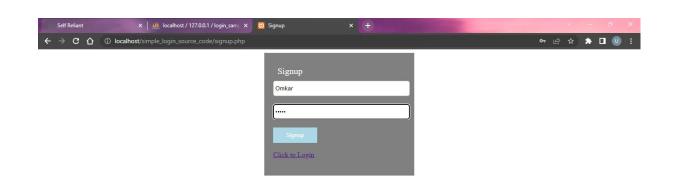
```
<!DOCTYPE html>
<html>
<head>
<title>Login</title>
</head>
<body>
<style type="text/css">
#text{
height: 25px;
border-radius: 5px;
padding: 4px;
border: solid thin #aaa;
width: 100%;
       }
#button{
padding: 10px;
width: 100px;
color: white;
background-color: lightblue;
border: none;
       }
#box{
background-color: grey;
margin: auto;
width: 300px;
padding: 20px;
       }
```

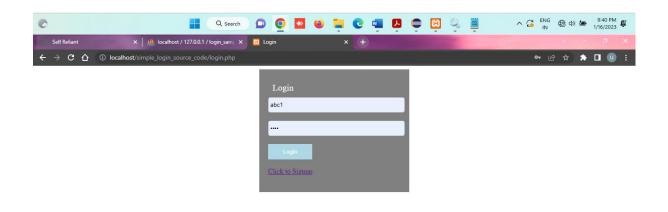
```
</style>
<div id="box">
<form method="post">
<div style="font-size: 20px;margin: 10px;color: white;">Login</div>
<input id="text" type="text" name="user_name"><br><br>
<input id="text" type="password" name="password"><br><br>
<input id="button" type="submit" value="Login"><br><br>
<a href="signup.php">Click to Signup</a><br><br>
</form>
</div>
</body>
</html>
5.Signup.php
<?php
session_start();
include("connection.php");
include("functions.php");
if($_SERVER['REQUEST_METHOD'] == "POST")
{
//something was posted
$user_name = $_POST['user_name'];
$password = $_POST['password'];
if(!empty($user_name) && !empty($password) && !is_numeric($user_name))
{
//save to database
$user_id = random_num(20);
$query = "insert into users (user_id,user_name,password) values
('$user_id','$user_name','$password')";
mysqli_query($con, $query);
```

```
header("Location: login.php");
die;
}else
echo "Please enter some valid information!";
}
?>
<!DOCTYPE html>
<html>
<head>
<title>Signup</title>
</head>
<body>
<style type="text/css">
#text{
height: 25px;
border-radius: 5px;
padding: 4px;
border: solid thin #aaa;
width: 100%;
       }
#button{
padding: 10px;
width: 100px;
color: white;
background-color: lightblue;
border: none;
```

```
}
#box{
background-color: grey;
margin: auto;
width: 300px;
padding: 20px;
}
</style>
<div id="box">
<form method="post">
<div style="font-size: 20px;margin: 10px;color: white;">Signup</div>
<input id="text" type="text" name="user_name"><br><br>
<input id="text" type="password" name="password"><br><br>
<input id="button" type="submit" value="Signup"><br><br>
<a href="login.php">Click to Login</a><br><br>
</form>
</div>
</body>
</html>
6.logout.php
<?php
session_start();
if(isset($_SESSION['user_id']))
{
unset($_SESSION['user_id']);
}
header("Location: login.php");
die;
```









6 SYSTEM TESTING

6.1 Types of Testing

- **6.1.1 Functional testing:** Functional testing is a kind of black-box testing that is performed to confirm that the functionality of an application or system is behaving as expected. It is done to verify all the functionality of an application.
- **6.1.2 Unit testing:** the application is ready and given to the Test engineer, he/she will start checking every component of the module or module of the application independently or one by one, and this process is known as Unit testing.
- **6.1.3 Sanity testing:** Testing that is done to ensure that all the major and vital functionalities of the application/system are working correctly. This is generally done after a smoke test.
- **6.1.4 Smoke testing:** Testing that is done after each build is released to test to ensure build stability. It is also called as build verification testing.
- **6.1.5 Regression testing:** Testing performed to ensure that adding new code, enhancements, fixing of bugs is not breaking the existing functionality or causing any instability and still works according to the specifications Regression tests need not be as extensive as the actual functional tests but should ensure just the amount of coverage to certify that the functionality is stable.
- **6.1.6 Integration testing:** When the system relies on multiple functional modules that might individually work perfectly, but have to work coherently when clubbed together to achieve an end to end scenario, validation of such scenarios is called Integration testing.
- **6.1.7 Beta/Usability testing:** Product is exposed to the actual customer in a production like an environment and they test the product. The user's comfort is derived from this and the feedback is taken. This is similar to that of User Acceptance testing.
- **6.1.8** Non-functional testing: Non-functional Testing is a type of Software Testing that is performed to verify the non-functional requirements of the application. It verifies whether the behavior of the system is as per the requirement or not.
- **6.1.9 Performance testing:** A type of testing to ensure that a software program or system meets specific performance goals, such as response time or throughput.
- **6.1.10 Load testing:** A type of testing to ensure that a software program or system can handle a large number of users or transactions.
- **6.1.11 Security testing**: A type of testing to ensure that a software program or system is secure from unauthorized access or attack.
- **6.1.12 Scalability testing:** A type of testing to ensure that a software program or system can be scaled up or down to meet changing needs.
- **6.1.13 Stress testing:** A type of testing to ensure that a software program or system can handle an unusually high load.
- **6.1.14 Usability testing:** A type of testing to ensure that a software program or system is easy to use.

- **6.1.15 Volume testing:** A type of testing to ensure that a software program or system can handle a large volume of data.
- **6.1.16 Black Box Testing:**Black Box Testing is a software testing method in which the functionalities of software applications are tested without having



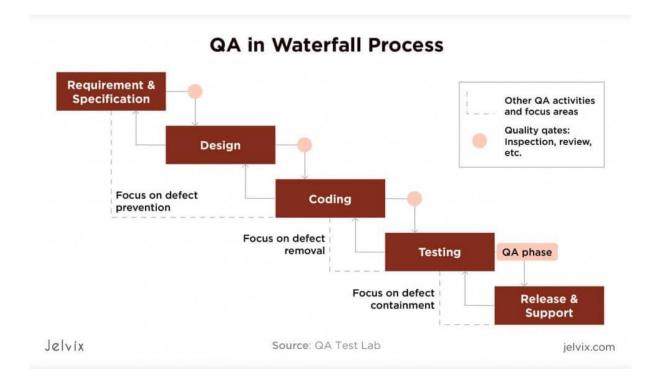
knowledge of internal code structure, implementation details and internal paths. Black Box Testing mainly focuses on input and output of software applications and it is entirely based onsoftware requirements and specifications. It is also known as Behavioral Testing.

6.1.17 White box testing: White box testing techniques analyse the internal structures the used data structures, internal design, code structure, and the working of the software rather than just the functionality as in black box testing. It is also called glass box testing or clear box testing or structural testing. White Box Testing is also known as transparent testing, open box testing.

6.2 Testing Methodologies

6.2.1 Waterfall

Waterfall is a standard software development strategy – the project is broken down by stages, and the teams move to the next phase only after the previous one has been finalized. Once the stage was completed, the team members can't come back to it anymore. Let's see what position QA holds at different stages of the Waterfall project.



Stage 1 – Requirements

For QA: participating in creating functional and non-functional requirements, security assessment, and acceptance criteria creation.

The task of a Quality Assurance team is to describe the ideal version of the product. QA experts set the deliverables for QA engineers and developers, define the criteria for evaluating code quality, and find methods for its assessment. Requirements, created by a QA team, will be used throughout the entire testing and development process. Product requirements are specified in Software Requirements Specifications.

Stage 2 – Design

Although QA experts don't participate in design directly, they are constantly kept in the loop. Design the website as per requirement adding all the functionalities to it connecting database. Deciding layouts ,size ,font, colours etc

Stage 3 – Implementation

The implementation stage consists of development and deployment. This is where the team creates the functionality of the product. At this stage, the role of a QA team includes overseeing the development process, detecting architectural issues, and fundamental problems with the development approach. For instance, a QA expert might spot that a framework, chosen by a development team, will make it difficult to uphold certain performance requirements. If quality assurance experts catch these issues early on, the number of bugs and fixes lowers significantly.

Stage 4 – Verification

In Waterfall, verification is the main stage for introducing QA test methodologies. QA engineers take in the product on the final stage of completion and check if it corresponds with set requirements. The team checks if testing and development processes were done on time, if the promised results were met, and seeks ways for improvement.

Stage 5 – Maintenance

QA analyzes feedback from users and seeks a long-term way to remove development and testing issues. In this quality assurance methodology, teams report quality improvements, number of fixed bugs and escaped decades, automate test cases, and provide feedback for testing and quality control specialists.

6.2.2 Integration testing:

We consider the self Reliant Website as a black box and white box; also check up all of the parts. Also, we will conduct as following orders:

Creating test plans, performing code review of the application modules that integrate the application block, executing the use cases of the application, performing load testing, performing stress testing, performing globalization testing and perform security testing.

- 1. System compatible with different web browsers (for eg. Google chrome, Fire fox, IEetc.)
- System compatible with different Operatin System (Widows, Linux, and Mac)
 - 3. System compatible with 32 bit or 64 bit operation
 - 4. Stress testing against a large number of customers
 - 5. Stress testing against a large number of purchasing in one product

6.2.3 Unit testing:

Log In:

- a. Identification and Password properly initiated, encrypted, and validated
- b. MySQL injection test
- c. Checking for uppercase, lowercase, number, special character in ID and password
- d. Either of ID and password not blank
- e. Checking for overlapping ID
- f. Checking for weak passwords
- g. Not available to minors without permission from parents
- h. Checking for e-mail notification about making ID and initiating password

Logout:

- a. Search history saved properly after logout
- b. Checking out information saved in database
- c. Customer redirected to the login screen
- d. Checking e-mail system about purchasing information

6.3 Boundary Value Analysis

Registration form accept password length of 8 to 13

Boundary Value Analysis (Password accepts 8 to 13)

Invalid Valid Invalid (min -1) (min,min + 1, nominal, max
$$-1$$
, max) (max + 1)

7 8, 9, 10, 12, 13 14

6.4 Equivalence PartitioningRegistration form age should be 16 to 80

Invalid	V	'alid	Invalid		
15	16	80	81		

6.5 Testcase Report 6.5.1 TestCase

1	Project name: self reliant.com
2	Reference: self relaint PDF
3	Created By: Vaishnavi Bhambure
4	On Date: 20-12-2022
5	Review Date:

TEST SCENARIO ID	TS_001
TEST SCENARIO	Verifying Register Page

Test	Test case	Pre-	Steps	Test data	Expected	Actual	Post	Result
case id	Description	condition	_			results	conditions	_
	int- account connectivity		Enter First & Last Name	First Name: Vaishnavi Last Name: Bhambure	user should able to proceed fill other detail.	As expected	N/A	Pass
TC-Self Reliant-		Date of Birth	01-02-2002	user should able to proceed fill other detail.	As Expected	N/A	Pass	
001	using valid details.	id 2. Self Reliant app should installed.	Stream	Science Female	user should able to proceed to fill further detail.	As Expected	N/A	Pass
			Enter valid mobile number	9076084003	Proceed to fill further details	As Expected	N/A	Pass
		Enter valid Email ID	Vaishnubhambure @gmail.com	Proceed to fill further details	As Expected	N/A	Pass	
			Country	India	Proceed to fill	As Expected	N/A	Pass

Username	VaishnuB	further details Proceed to fill further details	As Expected	N/A	Pass
Enter valid Password	*****	Proceed to fill further details	As Expected	N/A	Pass
Enter Confirm password	*****	Proceed to fill	As Expected	N/A	Pass
		further details			

TEST SCENARIO ID	TS_002
TEST SCENARIO	Verifying Login Page

Test	Test case	Pre-	Steps	Test data	Expected	Actual	Post	Result
case id	Description	condition				results	conditions	
			Enter valid Usrname	vaishnuB		As expected	N/A	Pass
TC-Self Reliant- 003	Login using valid details.	1.Internet connectivity 2. Self Reliant app	Enter valid Password	*****	User should able to see Home page.	As Expected	N/A	Pass
		should installed.				As Expected	N/A	Pass
			Enter					

TC-Self Reliant- 004	Login using in valid details.	1.Internet connectivity 2. Self Reliant app should installed.	In valid Usrname	vaishnaviB123	User should unable to see Home page.	As Expected	N/A	Pass
			Enter valid Password	*****		As Expected	N/A	Pass

TEST SCENARIO ID	TS_003
TEST SCENARIO	verifying the Feedback Page

Test case id	Test case	Pre- condition	Steps	Test data	Expected	Actual results	Post conditions	Result
TC-Self Reliant- 005	Click On Feedback button	1.Internet connectivity 2. Self Reliant app should installed.	Click on feedback button	N/A	User should able to see Feedback Form page.	As expected	N/A	Pass
	User Valid Email Id	1.Internet connectivity	Enter Valid Email id	Vaishnubhambure @gmail.com	User should	As Expected	N/A	Pass

TC-Self Reliant- 006	2. Self Reliant app should installed.			unable to see Feedback Form page.			
		Enter Feedback	Sometimes website work slowing		As Expected	N/A	Pass
		Click on register Feedback button	Click on button		As Expected	N/A	Pass

TEST SCENARIO ID	TS_002
TEST SCENARIO	verifying the search functionality

Test case id	Test case Description	Pre- condition	Steps	Test data	Expected	Actual results	Post conditions	Result
TC-Self Reliant- 006	checking website accept alphabets, number And special characters.	1.Internet connectivity 2. Self reliant app should installed.	Enter Valid college name or Exam name	Ferguson college Or MH-CET	It will displayed the collges	As expected	N/A	Pass

6.5.2 Automation Testing (Selenium) Code for Self Reliant Website project:

```
package newpackage;
import org.openga.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openga.selenium.WebElement;
import org.openga.selenium.chrome.ChromeDriver;
import org.openga.selenium.interactions.Actions;
public class self reliant {
     public static void main(String[] args) throws
InterruptedException {
          System.setProperty("Webdriver.chrome.driver",
     "C:\\Users\\Ashish\\Downloads\\chromedriver win32\\chrome
driver.exe");
          WebDriver driver=new ChromeDriver();
          driver.manage().window().maximize();
          //Opening website
driver.get("file:///C:/Users/Ashish/OneDrive/Desktop/website/i
ndex.html");
        System.out.println(driver.getTitle());
        Thread. sleep (2000);
        driver.findElement(By.className("inp")).click();
        Thread. sleep (1000);
        // get serach by xpth
driver.findElement(By.xpath("/html/body/div/div[2]/div[1]/inpu
t")).sendKeys("Ferguson collge");
        Thread. sleep (1000);
        driver.findElement(By.className("fas fa-
search")).click();
        Thread. sleep (1000);
        //Register
driver.findElement(By.xpath("//*[@id=\"bottonone\"]/a/b")).cli
ck();
        Thread. sleep (1000);
driver.findElement(By.xpath("/html/body/div/table/tbody/tr[1]/
td[2]/input")).sendKeys("Vaishnavi");
        //Lastname
driver.findElement(By.xpath("/html/body/div/table/tbody/tr[2]/
td[2]/input")).sendKeys("Bhambure");
        //DOB
driver.findElement(By.xpath("/html/body/div/table/tbody/tr[3]/
td[2]/input")).sendKeys("01/02/2002");
```

```
//Stream
driver.findElement(By.xpath("/html/body/div/table/tbody/tr[4]/
td[2]/select")).sendKeys("Science");
        //gender
        WebElement radio1=
driver.findElement(By.xpath("/html/body/div/table/tbody/tr[5]/
td[2]/input[2]"));
        radio1.click();
        System.out.println(radio1.isSelected());
        //Moblie no
driver.findElement(By.xpath("/html/body/div/table/tbody/tr[6]/
td[2]/input")).sendKeys("8859764788");
        //Email id
driver.findElement(By.xpath("/html/body/div/table/tbody/tr[7]/
td[2]/input")).sendKeys("vaishnubhabure@gmail.com");
        //country
        Actions ac=new Actions(driver);
driver.switchTo().frame(driver.findElement(By.xpath("/html/bod
y/div/table/tbody/tr[8]/td[2]/select")));
     WebElement
src=driver.findElement(By.xpath("/html/body/div/table/tbody/tr
[8]/td[2]/select/option[2]"));
     src.click();
      //username
driver.findElement(By.xpath("/html/body/div/table/tbody/tr[9]/
td[2]/input")).sendKeys("VaishnuB");
      //password
driver.findElement(By.xpath("/html/body/div/table/tbody/tr[10]
/td[2]/input")).sendKeys("Vaish@123");
      //confirmpassword
driver.findElement(By.xpath("/html/body/div/table/tbody/tr[11]
/td[2]/input")).sendKeys("Vaish@123");
        //checkbox
        driver.findElement(By.id("ch")).click();
        //submitbutton
driver.findElement(By.xpath("/html/body/div/button/a")).click(
);
        //to login
driver.findElement(By.xpath("/html/body/div/div[1]/div[2]/ul/1
i[7]/a")).click();
        //to enter username
```

```
driver.findElement(By.id("user")).sendKeys("VaishnuB");
                       //to enter password
driver.findElement(By.id("pss")).sendKeys("Vaish@123");
                                //submit
driver.findElement(By.xpath("/html/body/form/button/a")).click
 ();
                                //feedback
                               driver.findElement(By.id("bottontwo")).click();
driver.findElement(By.name("email")).sendKeys("vaishnubhambure
@gmail.com");
driver.findElement(By.xpath("/html/body/div/center/form/font/t
able/tbody/tr[2]/td[2]/textarea")).sendKeys("Sometimes itsnot
word properly");
}
eclipse-workspace - selenium Proj/src/newpackage/self reliant.java - Eclipse IDE
Q : # | #
 \sharp Package Explorer 🗴 Ju JUnit 🕒 😩 🖁 📟 🔲 🗓 dragndrop.java 🗓 mini_project.java 🗓 LoginSteps.java 😍 Login,feature 🚇 self_reliant.java 🗴 🗓 newmethods.java
                                                                                                                                                                                                                                            - -
 > 👑 cucumberjava1
                                                                   package newpackage;
                                                                 20 import org.openqa.selenium.By;
3 import org.openqa.selenium.WebDriver;
4 import org.openqa.selenium.WebElement;
  > 🔛 learning
   myfirstpro

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    ✓ selenium_Proj

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                                                                                                                                                                                                                                                    뮨
                                                                 5 import org.openga.selenium.chrome.ChromeDriver;
        default package)

cucumber
                                                                 6 import org.openqa.selenium.interactions.Actions;
                                                             8 public class self_reliant {
9    public static void main
10    System.setProperty(
       dragndrop.java
                                                                            public static void main(String[] args) throws InterruptedException {
         J dragndrop.java
J drop_down.java
J first1.java
J impwait.java
J navigatecmd.java
J newmethods.java
J newwebsite.java
                                                                                   System.setProperty("Webdriver.chrome.driver",

"C:\\Users\\Ashish\\Downloads\\chromedriver_win32\\chromedriver.exe");

WebDriver driver=new ChromeDriver();
                                                                                    driver.manage().window().maximize();
                                                                                    //Opening website
driver.get("file:///C:/Users/Ashish/OneDrive/Desktop/website/index.html");
             para_testnq.java
                                                                                    System.out.println(driver.getTitle());
                radio_button.java
            Thread.sleep(2000);
            testAnnotation.iava
                                                                                     driver.findElement(By.className("inp")).click();
                                                                                    // get serach by xpth
driver.findElement(By.xpath("/html/body/div/div[2]/div[1]/input")).sendKeys("Ferguson
             xpath_prog.java
                                                                                    Thread.sleep(1000);
    > A JRE System Library [JavaSE-17]
                                                                                    driver.findElement(By.className("fas fa-search")).click();
Thread.sleep(1000);
    > A Referenced Libraries
      JUnit 3
                                                                                    //Register
driver.findElement(By.xpath("//*[@id=\"bottonone\"]/a/b")).click();
Thread.sleep(1000);
driver.findElement(By.xpath("/html/body/div/table/tbody/tr[1]/td[2]/input")).sendKeys
                                                                                     //Lastname
                                                                                                                      /Dr. wmath/#/html/hadr/dir/table/thadr/tar[01/td[01/innut#\\ condVer
                                                                                                                                               Smart Insert 75 : 1 : 3759
                                                                                                                                                                                                       ^ ☐ ENG ⊕ Ф) 🖢 9:16 PM 👺
                                                                                       Q Search 🔘 🧿 🔯 🐞 📜 🙋 🝱 🚨
```

6.5.3 cucumber (Selenium) Code for Self Reliant Website project:

feature File

```
Feature: User tries to login to selfreliant.com with valid
credentials
  Scenario: Valid login
    Given I am a user of selfreliant.com
    When I log in using valid credentials
    Then I should be logged in
  Scenario: Invalid login
    Given I am a user of selfreliant.com
    When I log in using invalid credentials
    Then I should not be logged in
Selenium File
package StepDefinations;
import org.openga.selenium.By;
import org.openga.selenium.WebDriver;
import org.openga.selenium.chrome.ChromeDriver;
import io.cucumber.java.en.Given;
import io.cucumber.java.en.Then;
import io.cucumber.java.en.When;
public class selfReliant login {
   WebDriver driver;
          @Given("I am a user of selfreliant.com")
          public void i am a user of amazon com() throws
InterruptedException {
               System.setProperty("Webdriver.chrome.driver",
     "C:\\Users\\Ashish\\Downloads\\chromedriver win32\\chrome
driver.exe");
               driver=new ChromeDriver();
               driver.manage().window().maximize();
driver.get("file:///C:/Users/Ashish/OneDrive/Desktop/website/i
ndex.html");
             Thread. sleep (2000);
          }
          @When("I log in using valid credentials")
```

```
public void i log in using valid credentials() {
driver.findElement(By.xpath("/html/body/div/div[1]/div[2]/ul/1
i[7]/a")).click();
                  //to enter username
driver.findElement(By.id("user")).sendKeys("VaishnuB");
                //to enter password
driver.findElement(By.id("pss")).sendKeys("Vaish@123");
          }
          @Then("I should be logged in")
          public void i should be logged in() {
     driver.findElement(By.xpath("/html/body/form/button/a")).
click();
          }
          @When("I log in using invalid credentials")
          public void i log in using invalid credentials() {
driver.findElement(By.xpath("/html/body/div/div[1]/div[2]/ul/1
i[7]/a")).click();
                  //to enter username
driver.findElement(By.id("user")).sendKeys("Bhambure");
                //to enter password
driver.findElement(By.id("pss")).sendKeys("Vaish@12");
          @Then("I should not be logged in")
          public void i should not be logged in() {
driver.findElement(By.xpath("/html/body/form/button/a")).click
();
}
```

7.CONCULSION

The project entitled **Self Reliant Website** was completed successfully. The system has been developed with much care and free of errors and at the same time it is efficient and less time consuming. The purpose of this project was to develop a web application and an android application for purchasing items from a shop This project helped us in gaining valuable information and practical knowledge on several topics like designing web pages using html CSS, and JavaScript. The project helped us understanding about the development phases of a project and software development life cycle. We learned how to test different features of a project

This project has given us great satisfaction in having designed an application which can be implemented to any nearby colleges and other abroad colleges ,course provide bby different colleges with enter exam for that and fees also by simple modifications. There is a scope for further development in our project to a great extend. A number of features can be added to this system in future like providing.