



Team No :BCA4B\_5(1)

Team Approval Code : 41405

## CERTIFICATE

This is to certify that the project entitled Learning Improvement System for Project (CS5005) is submitted by **Vruti Jaysukhbhai Dhameliya (201903100110061), Nimil Rameshbhai Lathiya (201903100110091)** for 5<sup>th</sup> semester as a partial fulfilment for the degree of Bachelor of Computer Application during the academic year 2021-2022.

Mr. Amish Patel

Guide

Dr. Jikitsha Sheth

Co-Guide

Dr.Kalpesh Lad

Programme Coordinator

Date: November 2021

Place: UTU

.....  
For External Exam

Name of External Examiner

1.

2.

Signature



Constitute College of  
**UKA TARSADIA**  
UNIVERSITY  
University Established Under  
the Gujarat Act No. 25 of  
2009, Government of Gujarat

Approved by All India Council for Technical Education

# **PROJECT**

## **Learning Improvement System**

**Submitted by**

Vruti Dhameliya (201903100110061)

Nimil Lathiya (201903100110091)

**Guided by,**

Mr. Amish Patel

**Co-Guided by,**

Dr. Jikitsha Sheth

for partial fulfilment of the requirements  
for the Degree of Bachelor of Computer Application  
B. V. Patel Institute of Computer Science,  
Uka Tarsadia University.  
November, 2021.

# LEARNING IMPROVEMENT SYSTEM

## DECLARATION

We hereby declare that the project titled “Learning Improvement System” is fully implemented by us. It is neither paid nor copied. Even though, later on, in case of any infringement found for this project work, we are solely responsible for the same and understand that as per UGC norms, the University can revoke the degree conferred to us.

Enrollment Number	Name	Signature
201903100110061	Vruti Jaysukhbhai Dhameliya	
201903100110091	Nimil Rameshbhai Lathiya	

As a guide, I assure you that there is no plagiarism found in the submitted document.

**Mr. Amish Patel**

**Dr. Jikitsha Sheth**

Date: 19-11-2021

Place: UTU

## LEARNING IMPROVEMENT SYSTEM

# Work Sufficiency Certificate

As a guide, I assure you that the project work presented by the team is sufficient according to the specified time duration and team size.

Mr. Amish Patel

Date: 19-11-2021

Place: UTU

### ACKNOWLEDGEMENT

This project has been conducted as a part of 5th Semester of BCA which covers the idea of System Analysis and Designing. We take this opportunity to express our sincerely thanks and deep sense of gratitude to our guides **Mr. Amish Patel** and **Dr. Jikitsha sheth** for imparting us valuable guidance in starting the preparation of this project. She helped us by solving many doubts and suggesting many references. We would also like to offer gratitude towards faculty of Shrimad Rajchandra Institute of Management and Computer Application, who helped us giving valuable suggestions and encouragement which not only helped us in preparing this project document but a better insight in this field. Lastly, we express deep sense of gratitude towards our colleagues also those who directly or indirectly helped us while preparing this project document. For providing us the necessary information guidelines for our project a without your support this project would have been a distant dream.

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# **LEARNING IMPROVEMENT SYSTEM**

## **1. Proposed system**

### **1.1 Definition: -**

This system is used to encourage learners who want to improve their knowledge in the domains of computers science by reading books, articles or by enrolling into the courses of their interested domain of computer science. They can also place their queries or questions related to computer science in a discussion forum.

### **1.2 Purpose: -**

The main purpose of this system is to improve online studies and learning of computer science learners to get more out of online studies and to provide more and more content using user's daily reading activities.

### **1.3 Scope: -**

This system is used by only those learners who are learning only in computer science to improve their knowledge in particular domains.

### **1.4 Previous Semester features: -**

- Article: -**

User can read and upload article in to this system. Using this features user can improve their self in particular domain of computer science.

- Book: -**

User can read and upload book in to this system. Using this features user can improve their self in particular domain of computer science. Book is available in pdf format.

## LEARNING IMPROVEMENT SYSTEM

- **Forum:** -

Using this features, user can upload their question on forum. For upload the question, first of all user should be select the domain. After they can upload the question in particular domain.

- **Domain:** -

Using this features, user can find their interested domain's book and articles.

### 1.5 Extended features: -

- **Use tags:** -

Tags are used for suggesting courses, articles, and books and it also used for fast searching on the website.

- **Online course portal:** -

Learners can have enrolled in given course that are uploaded by domain expert and expert can track student information. Also learners can track their certifications and skill on their completed course also it helps to provides an advanced recommendation that what learners can do after completing a particular course that they completed recently.

- **Motivational triggers:** -

This feature motivates learners to find an answer to a given question they can find answers from books, articles, or from another online source.

## LEARNING IMPROVEMENT SYSTEM

- **Recommended more resources using tags:** -

This feature also includes tags to suggest relevant content to the user.

Suggestion is added from the user's daily readings in the system.

- **Online compiler:** -

Learner can compile their code in give online compiler without downloading any software or plugin.

- **Gamification:** -

This feature includes challenges, levels, instant feedback, scores, competition provided in the course to motivate learners to spend more time learning more things on our websites.

### 1.6 Functional Requirements: -

- Create an account: - This functionality creates a new account by filling the registration detail for the user.
- Users can update his or her profile.
- Users can provide research articles in particular courses if its mandatory.
- Users can get notifications about the articles according to their interest in self-improvement, time management, problem-solving, etc.
- Admin maintains all registered users' details and can use it for users' better performance.
- Admin can remove users' indiscipline according to the teacher's feedback.
- Admin solves all problems of users regarding their feedback.
- Multiple tag can be added to the particular courses, articles, books and forum question.
- User can compile their code in the given online compiler and verify if it run successfully or not.

## LEARNING IMPROVEMENT SYSTEM

- Users can add or enrolled into the courses that are added into the system.
- Learner can track their certificate and skills improvement by completing any particular course.

### 1.7 Non-functional Requirements: -

- Security: - Only authorized user can access the system with username and password. password will be store in encryption format in database.
- Performance: - As system provide fast performance so, user can quickly access this system.
- Availability: - System is available 24\*7 for the user.
- User-friendly Interface: -The system is interactive for any user and provide responsive design.

### 1.8 Tools and Technology: -

- HTML (Version: 5.0)
- CSS (Version: 5.0)
- JavaScript
- PHP (Version: 7.4.5)
- MySQL (Version: 8.0)

## LEARNING IMPROVEMENT SYSTEM

### 1.9 User with their characteristics

- **Admin:** -

- Login: -Admin can log in to the system.
- Manage profile: -Admin can manage their profile.
- Manage domain: -Admin can manage domains of computer science (IT).
- Manage user: -Admin can manage domain experts and learners.
- Manage forum: -Admin can manage discussion forum.
- Manage tag: - Admin can manage tag like update and delete tag in the system.
- View course list: - Admin can only view course list. They can't update it.
- Add motivational triggers: - Admin can add motivational triggers in the system and also update it.

- **Domain expert:** -

- Login: -An expert can register themselves into the system and after that, they can log in the system.
- Manage profile: -Experts can manage the profile.
- Manage forum: -Experts can provide the questions on the discussion forum and also solve the queries that are post in the forum.
- Manage material: -They can manage learning materials like books, Articles.
- Approve/Reject question: - Experts can approve/reject topics/questions add by the learner.
- Manage course: - Expert can manage courses in the system.
- View motivational triggers: - Expert can only see the motivational triggers. They can't update it.

## LEARNING IMPROVEMENT SYSTEM

- **Learner:** -

- Login: -The learner can register themselves into the system and after that, they can log in the system.
- Manage profile: -Learners can manage the profile.
- View article: -The learner can view articles/books of their interested domain.
- Upload question on forum: -The learners can add their query on the topics/questions which are already uploaded in the discussion forum.
- Send request: - Learner can send a request for any question and also can comments on any question.
- Enrolled course: - Learner can enrolled in the system by pay some money or free.
- View and give answer of motivational trigger: - Learner can view and give answer of motivational triggers.

# LEARNING IMPROVEMENT SYSTEM

## 2. System Process Flow

### 2.1 Use-Case Diagram: -

- Admin

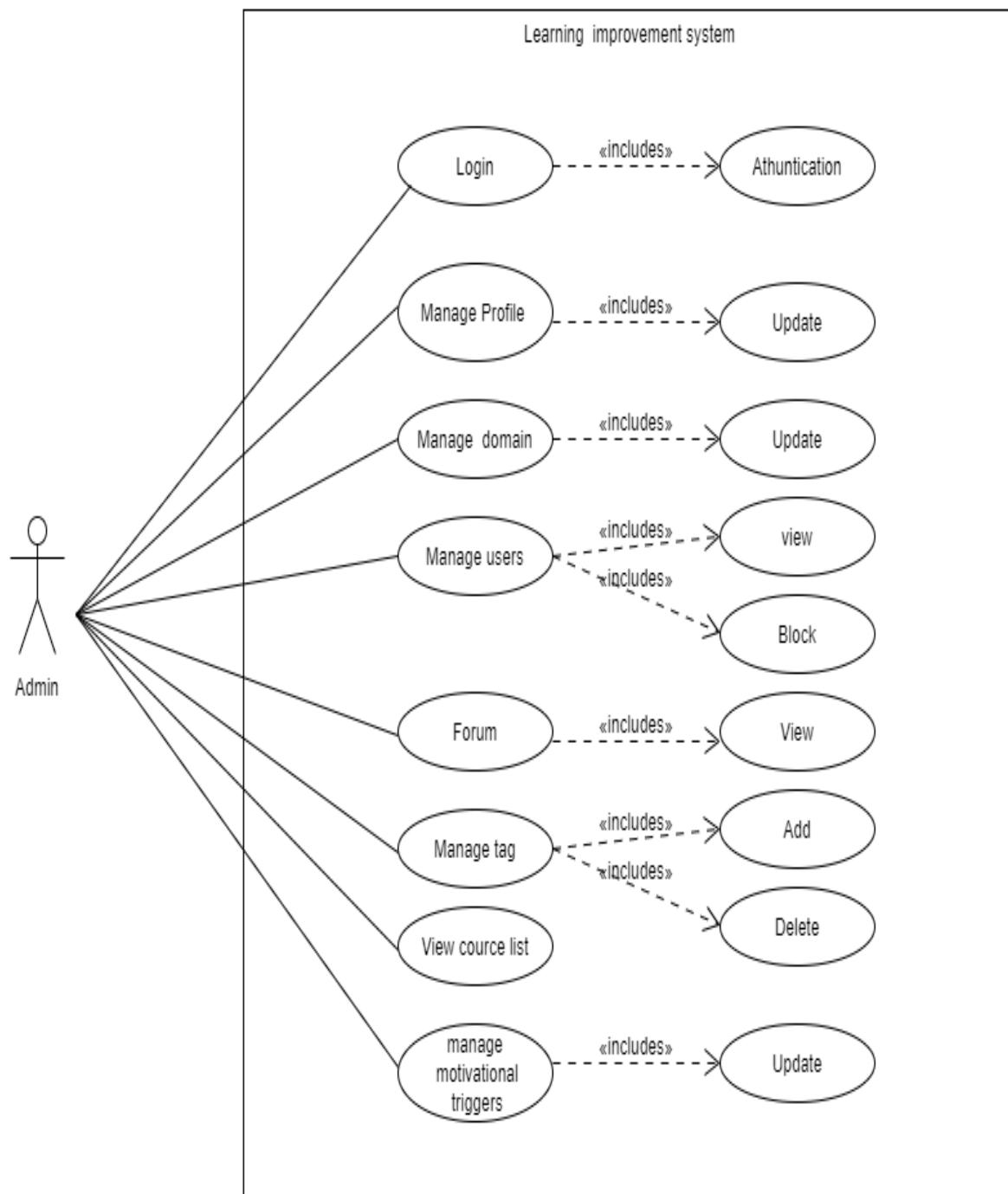


Figure 1 Use-case of Admin

# LEARNING IMPROVEMENT SYSTEM

## • Domain Expert



Figure 2 Use-case of Domain expert

# LEARNING IMPROVEMENT SYSTEM

## • Learner



Figure 3 Use-case of Learner

## LEARNING IMPROVEMENT SYSTEM

### 2.2 Activity Diagram: -

- Login activity

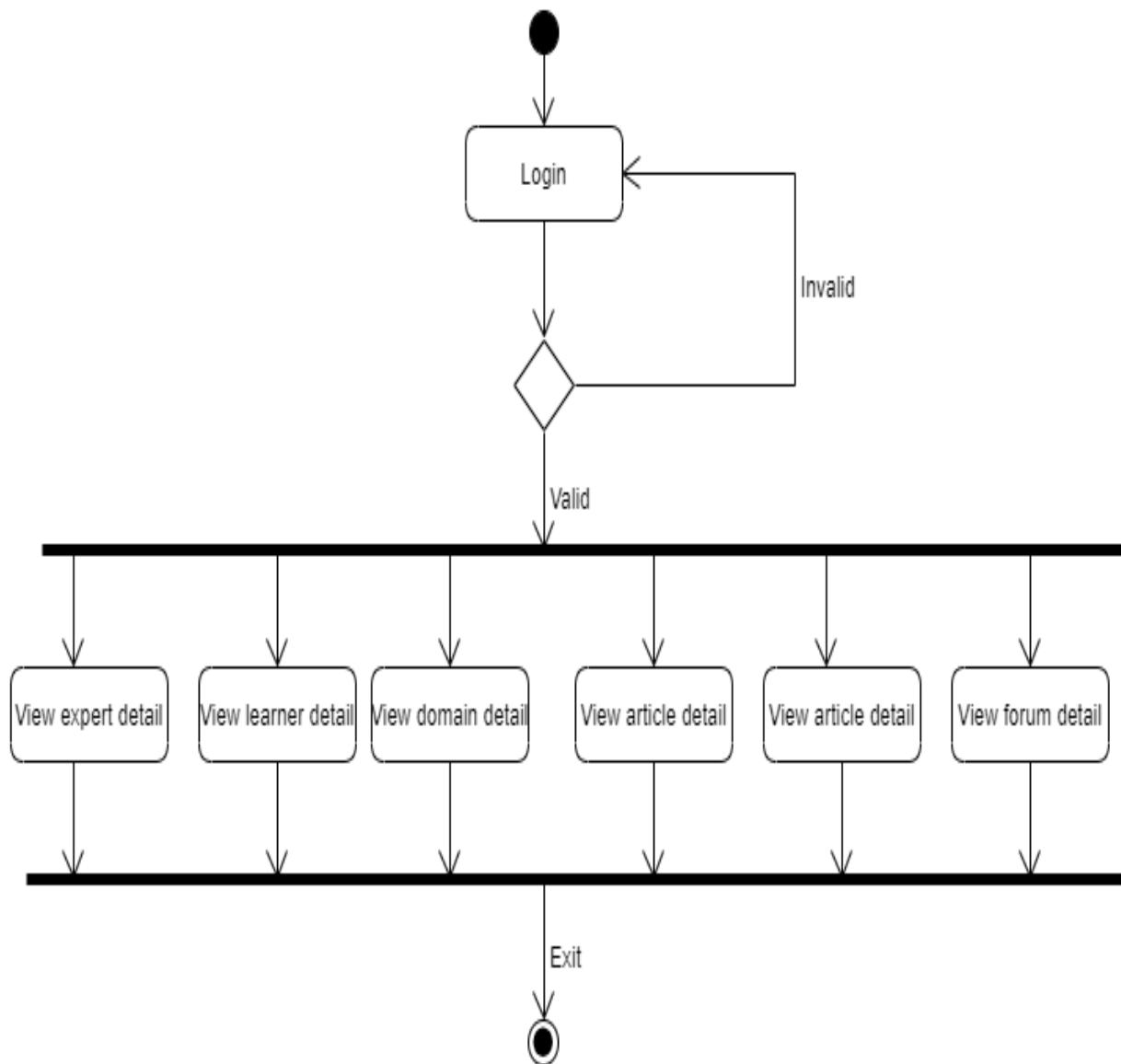


Figure 4>Login activity

## LEARNING IMPROVEMENT SYSTEM

- Article activity

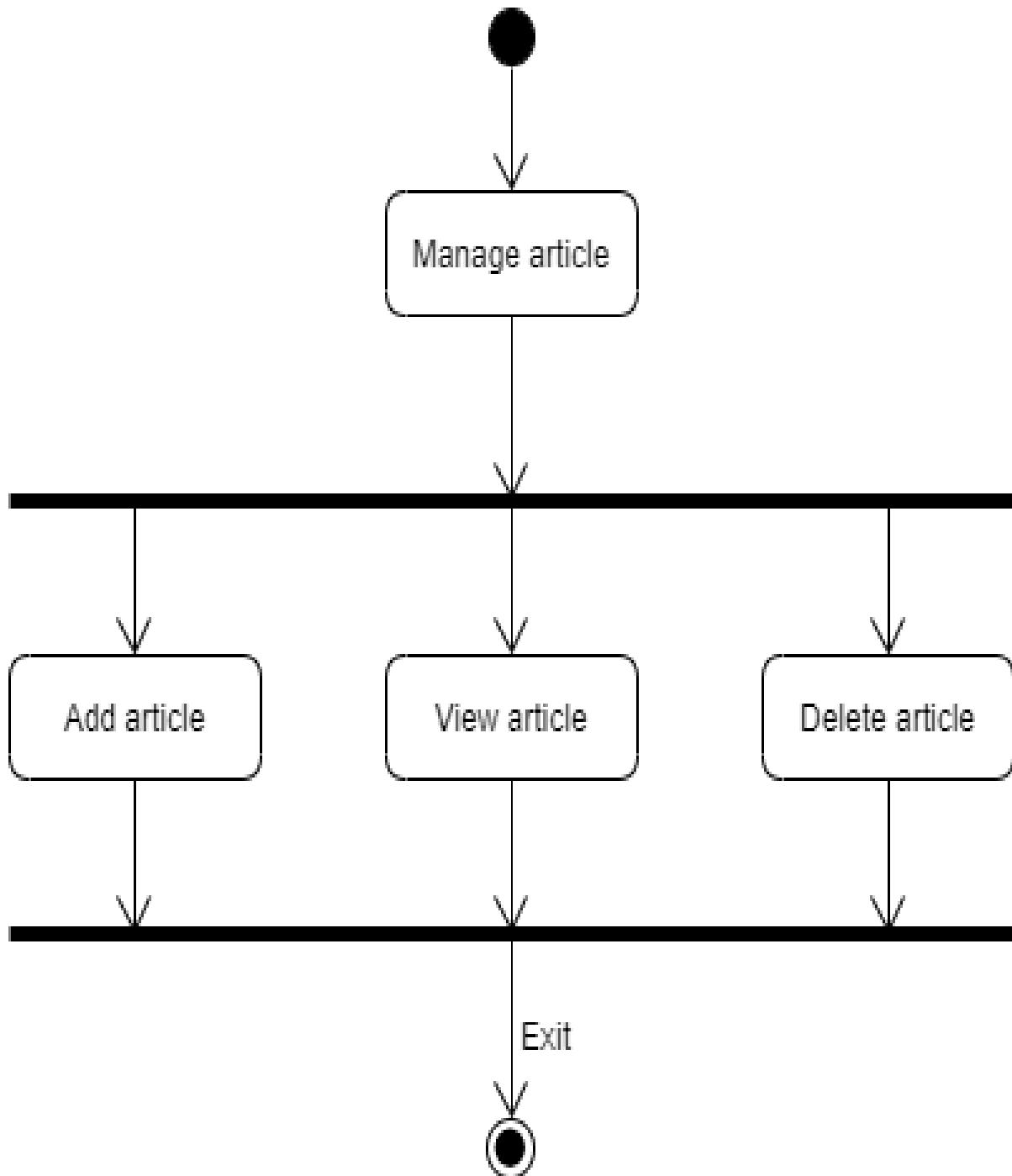


Figure 5 Manage article activity

## LEARNING IMPROVEMENT SYSTEM

- Book activity

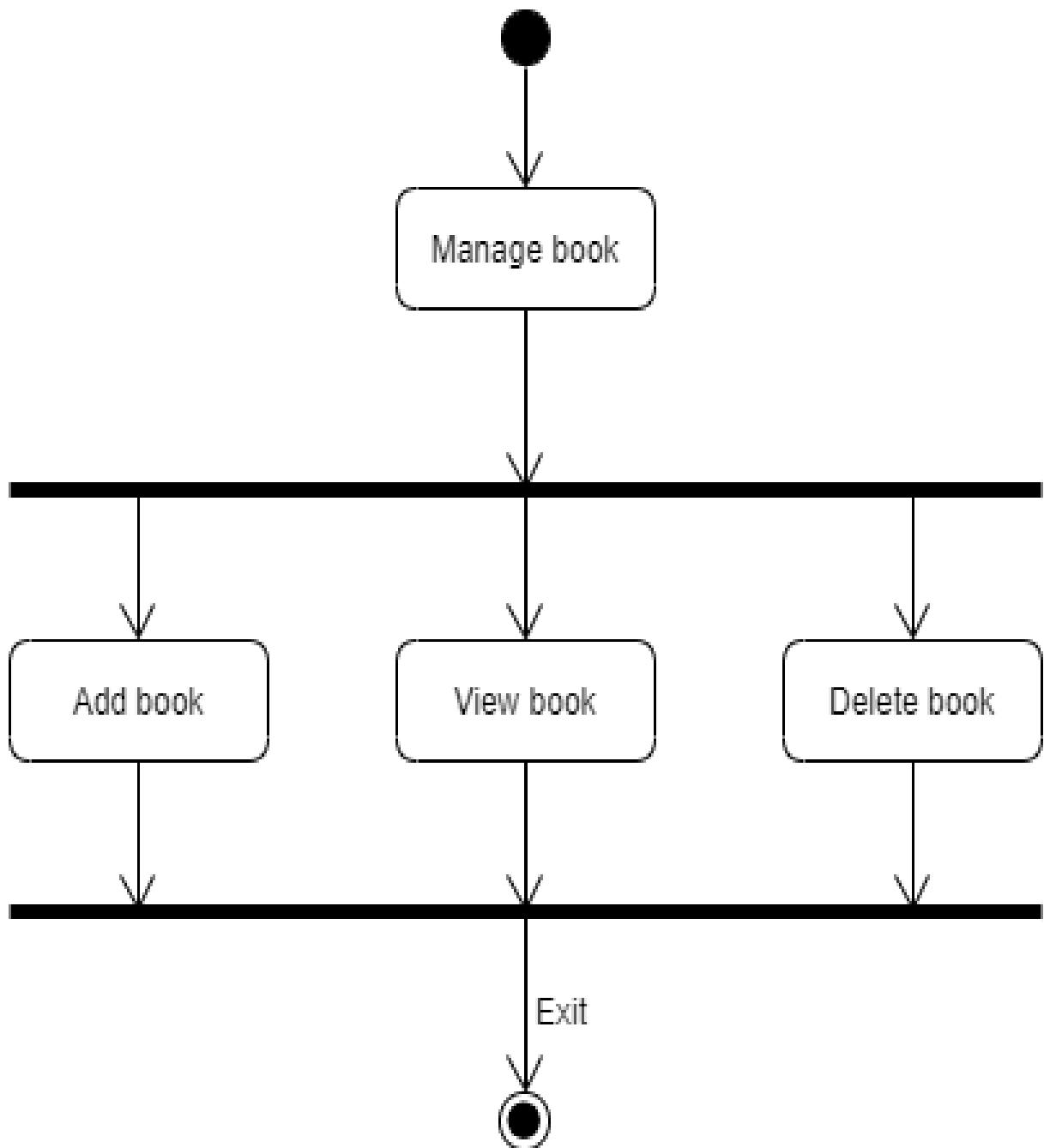


Figure 6 Manage book activity

# LEARNING IMPROVEMENT SYSTEM

- Course activity

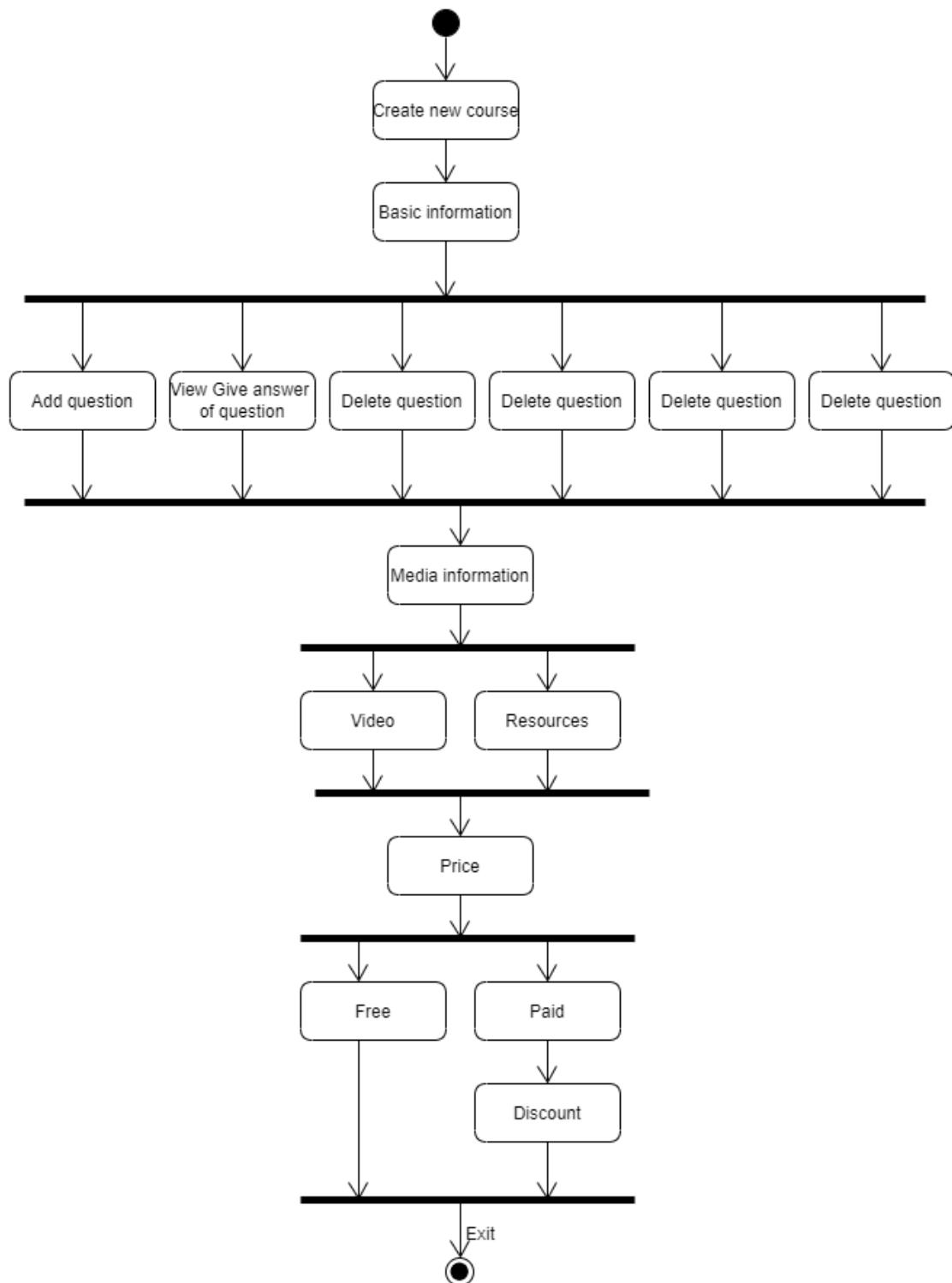


Figure 7 Manage course activity

## LEARNING IMPROVEMENT SYSTEM

- Domain activity

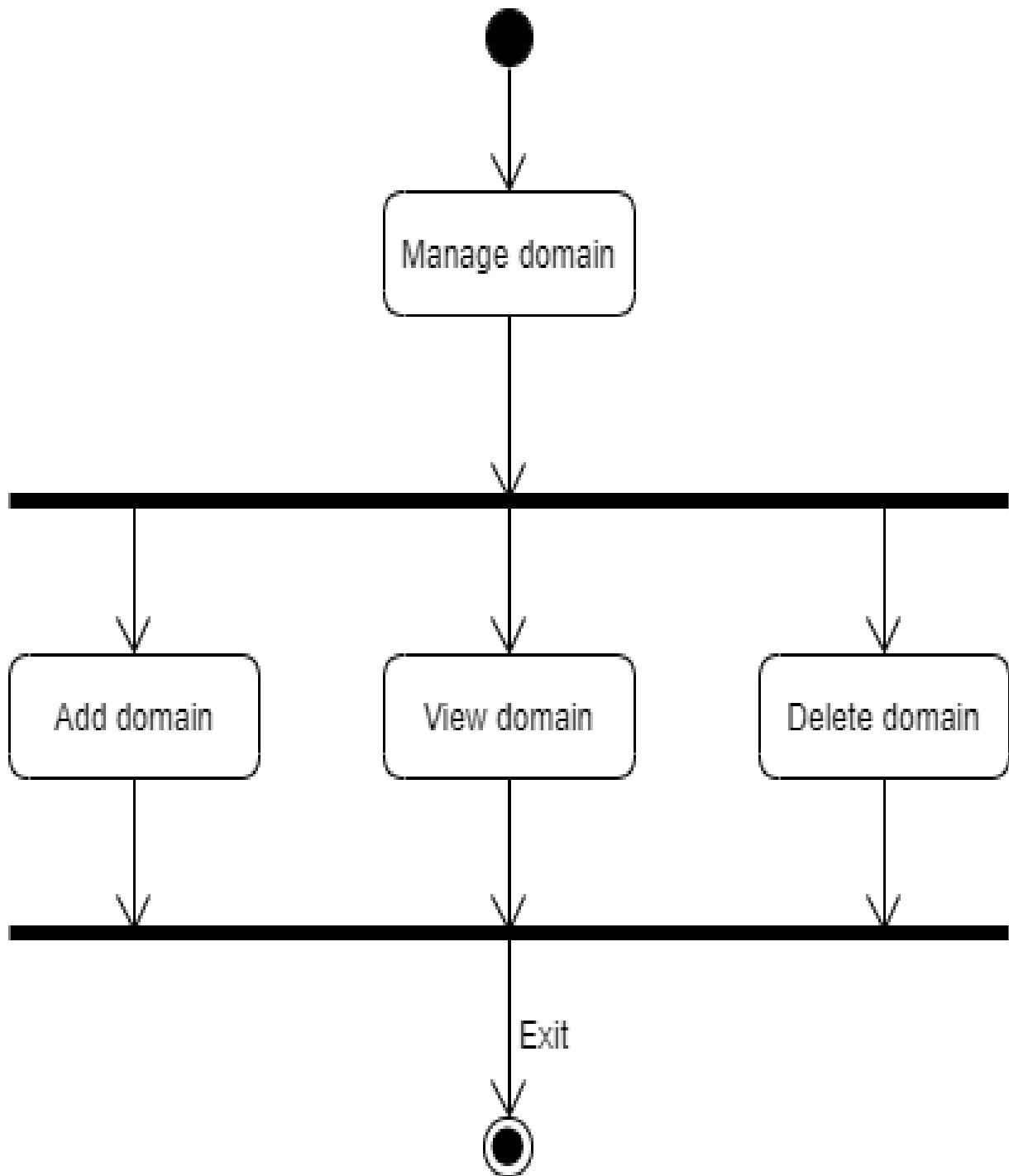


Figure 8 Manage domain activity

## LEARNING IMPROVEMENT SYSTEM

- Forum activity

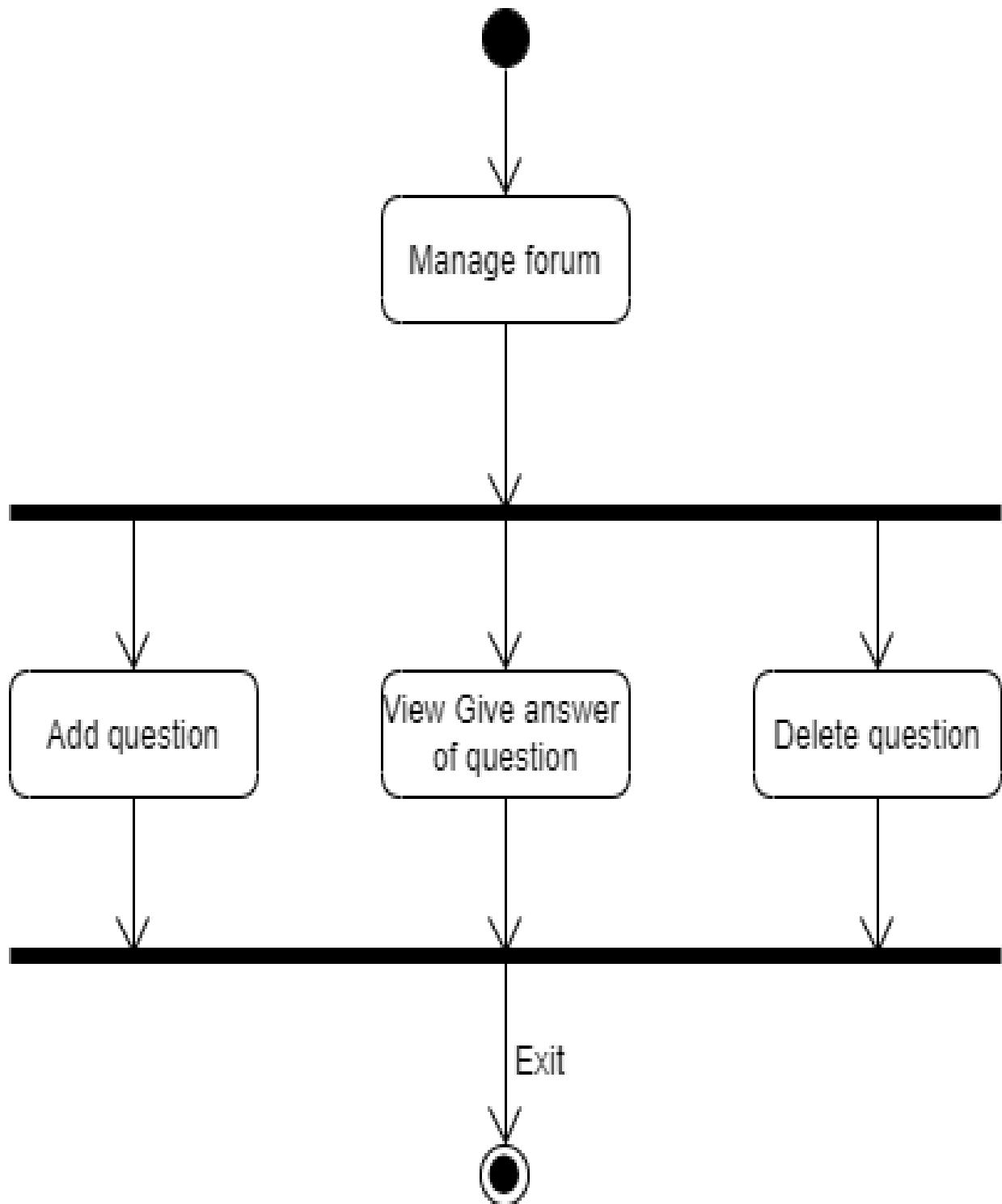


Figure 9 Manage forum activity

# LEARNING IMPROVEMENT SYSTEM

- Online payment activity

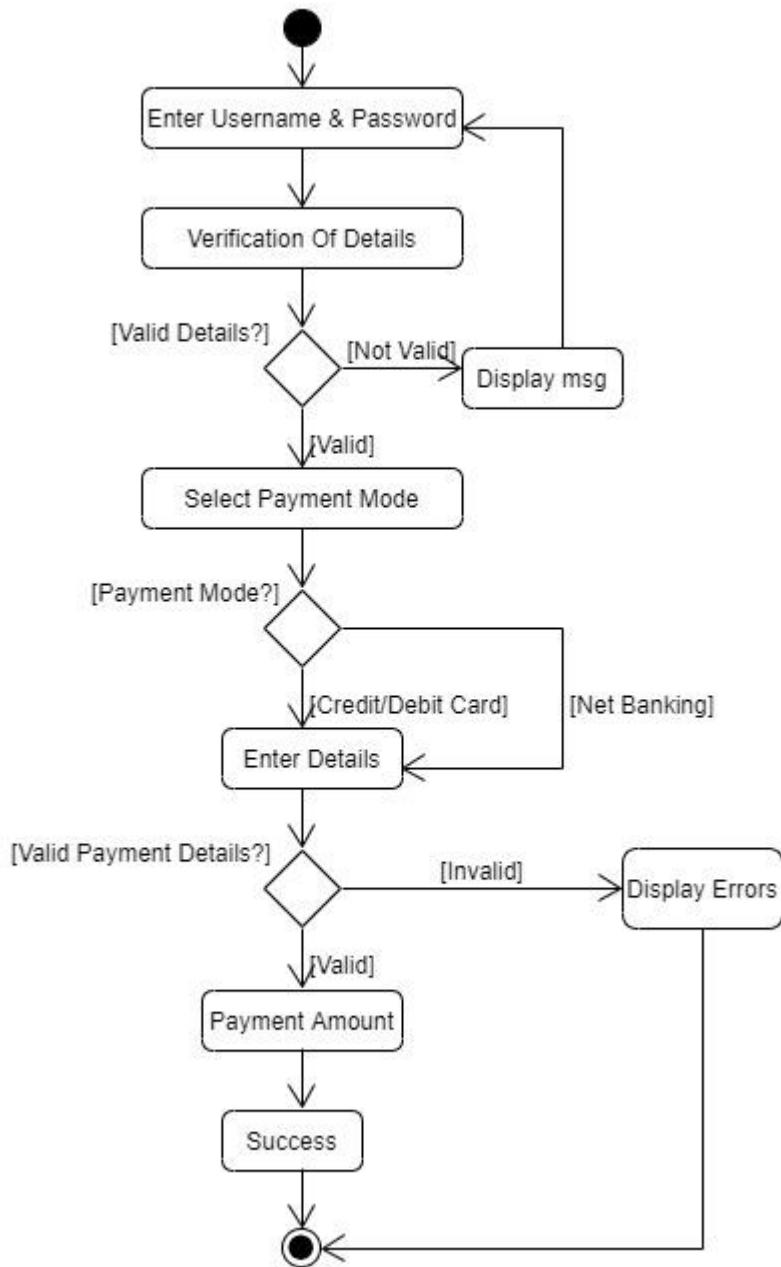


Figure 10 Online payment activity

# LEARNING IMPROVEMENT SYSTEM

## 3. System Design

### 3.1 Data modeling

Software Development model

**Model Name:** Incremental model is used in this system

**What is incremental model:**

The incremental build model is a method of software development where the product is designed, implemented and tested incrementally (a little more is added each time) until the product is finished. It involves both development and maintenance.

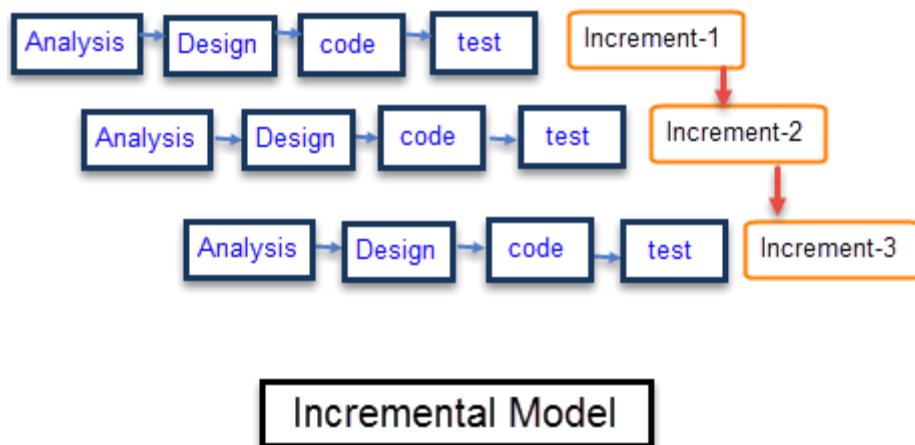


Figure 11 Incremental model

**Why Learning system use this model:**

This system is created in very basic and some unique features when this version is start its working successfully. we start working on its next updated version with some more functionality and those all version(modules) are implemented and delivered until the desired system is not released.

First Module of this system contains features like type vise user registration, admin side home page, article drafting and book uploading in the system

# LEARNING IMPROVEMENT SYSTEM

Second Module of this system contains fixing of some errors of 1<sup>st</sup> module and it also contains forum drafting page, domain vise forums etc.

## 3.2 Data Dictionary

### 3.2.1 Data\_user

*Table 1 User*

Field_name	Data_type	Constraints	Sample_value
User_id	INT	PRIMARY KEY auto_increment	01
User_name	VARCHAR (30)	NOT NULL	Abc_123
User_email_id	VARCHAR (20)	NOT NULL	abc01@gmail.com
User_password	VARCHAR (700)	NOT NULL	abc@123
User_type	CHAR (1)	NOT NULL	E / L

**Purpose of the table:** -

In this database table, it stores all the major information of the User.

### 3.2.2 data\_domain\_expert

*Table 2 Domain expert*

Field_name	Data_type	Constraints	Sample_value
Expert_id	INT	FOREIGN KEY	01
Expert_img	VARCHAR (260)	NOT NULL	wallpaperflare.co m_wallpaper.jpg
Expert_contact_no	INT	NOT NULL	1234567890
Expert_DOB	DATE	NOT NULL	19-02-2021
Expert_gender	CHAR (1)	NOT NULL	M / F

## LEARNING IMPROVEMENT SYSTEM

Expert_qualification	VARCHAR (10)	NOT NULL	PHD in artificial intelligence
Expert_certificate_PDF	VARCHAR (260)	NOT NULL	.pdf
Expert_experience	VARCHAR (50)	NOT NULL	3 year in abc pvt.ltd

**Purpose of the table: -**

In this database table, it stores all the major information of the Domain\_experts.

### 3.2.3 data\_learner

*Table 3 Learner*

Field_name	Data_type	Constraints	Sample_value
Learner_id	INT	FOREIGN KEY	01
Le_img	VARCHAR (260)	NOT NULL	wallpaperflare.com_wallpaper.jpg
Le_contact_no	INT	NOT NULL	1234567890
Le_DOB	DATE	NOT NULL	19-02-2021
Le_gender	CHAR(1)	NOT NULL	M / F
Le_qualification	VARCHAR (10)	NOT NULL	PHD in artificial intelligence

**Purpose of the table: -**

In this database table, it stores all the major information of the Learner.

## LEARNING IMPROVEMENT SYSTEM

### 3.2.4 data\_domain

*Table 4 Domain*

Field_name	Data_type	Constraints	Sample_value
Domain_id	INT	PRIMARY KEY auto_increment	01
Domain_name	VARCHAR (50)	NOT NULL	Machine learning

**Purpose of the table:** -

In this database table, it stores all the major information of the Domain.

### 3.2.5 data\_forum\_que\_master

*Table 5 Forum Question Master*

Field_name	Data_type	Constraints	Sample_value
Forum_que_id	INT	PEIMARY KEY auto increment	01
Forum_id	INT	FOREIGN KEY	01
User_id	INT	FOREIGN KEY	01
FO_Que_title	VARCHAR (200)	NOT NULL	Programming
FO_que	VARCHAR (400)	NOT NULL	Description about forum
FO_date_time	TIMESTEMP	NOT NULL	17-02-2021
FO_requested_ex	INT	FOREIGN KEY	01
FO_status	CHAR (1)	NOT NULL	A / P

**Purpose of the table:** -

In this database table, it stores all the major information of the question which are upload in the forum.

## LEARNING IMPROVEMENT SYSTEM

### 3.2.6 data\_forum\_ans

*Table 6 Forum Answer*

Field_name	Data_type	Constraints	Sample_value
Ans_id	INT	PRIMARY KEY	01
FO_id	INT	NOT NULL	01
FO_answer	VARCHAR (400)	NOT NULL	Description about forum answer

**Purpose of the table:** -

In this database table, it stores all the major information of the answer which are post in the forum.

### 3.2.7 data\_forum

*Table 7 Forum*

Field_name	Data_type	Constraints	Sample_value
Forum_id	INT	PRIMARY KEY	01
FO_name	VARCHAR (400)	NOT NULL	01
Forum_domain_id	INT	FOREIGN KEY	Description about forum answer

**Purpose of the table:** -

In this database table, it stores all the major information of the forum.

## LEARNING IMPROVEMENT SYSTEM

### 3.2.8 data\_book

*Table 8 Book*

Field_name	Data type	Constraints	Sample value
book_id	INT	PRIMARY KEY	01
User_id	INT	FOREIGN KEY	01
book_name	VARCHAR(250)	NOT NULL	Database management system
book_author_name	VARCHAR(10)	NOT NULL	Henry F. Korth
book_published_date	DATE	NOT NULL	04-01-2001
domain_id	INT	FOREIGN KEY	01
book_cover_img	VARCHAR(100)	NOT NULL	C:/xampp/htdocs/Project_B5/Book_files/ /data breach wllap.jpg
book_desc	VARCHAR(400)	NOT NULL	Information about book
Book_PDF	VARCHAR(100)	NOT NULL	.pdf

#### Purpose of the table: -

In this database table, it stores all the major information of the book.

## LEARNING IMPROVEMENT SYSTEM

### 3.2.9 data\_article

*Table 9 Article*

Field_name	Data_type	Constraints	Sample_value
article_id	INT	PRIMARY KEY auto_increment	01
user_id	INT	FOREIGN KEY	01
article_domain_id	INT	FOREIGN KEY	01
article_title	VARCHAR (50)	NOT NULL	Computational Learning
article_desc	VARCHAR (500)	NOT NULL	Description about articles

**Purpose of the table: -**

In this database table, it stores all the major information of the Article.

### 3.2.10 data\_user\_domain\_info

*Table 10 User domain info*

Field_name	Data_type	Constraints	Sample_value
info_id	INT	PRIMARY KEY	01
User_id	INT	FOREIGN KEY	01
domain_id	INT	FOREIGN KEY	01
User_type	VARCHAR (1)	NOT NULL	E / L

**Purpose of the table: -**

In this database table, it stores all the major information of the user domains.

## LEARNING IMPROVEMENT SYSTEM

### 3.2.11 data\_skills\_master

*Table 11 Skill Master*

Field_name	Data_type	Constraints	Sample_value
skill_id	INT	FOREIGN KEY	01
Skill_name	VARCHAR (30)	NOT NULL	IOS developer

**Purpose of the table:** -

In this database table, it stores all the major information of the skills.

### 3.2.12 data\_skills

*Table 12 Skills*

Field_name	Data_type	Constraints	Sample_value
User_id	INT	FOREIGN KEY	01
Skill_name	VARCHAR (30)	NOT NULL	IOS developer

**Purpose of the table:** -

In this database table, it stores all the major information of the skills.

### 3.2.13 data\_online\_time

*Table 13 Online time*

Field_name	Data_type	Constraints	Sample_value
time_id	INT	PRIMARY KEY	01
login_id	INT	FOREIGN KEY	01
Login_date_time	DATETIME	NOT NULL	27-01-2020
Logout_date_time	DATETIME	NOT NULL	3:30
time_duration	INT	NOT NULL	2 hour

# LEARNING IMPROVEMENT SYSTEM

## Purpose of the table: -

In this database table, it stores all the major information about online time of domain expert.

### 3.2.14 data\_tag\_master

*Table 14 Tag master*

Field name	Datatype	Constraint	Sample value
tag_id	INT	PRIMARY KEY auto increment	01
tag_name	VARCHAR(50)	NOT NULL	
tag_add_date	DATE	NOT NULL	28-06-2021
user_id	INT	FOREIGN KEY	03

## Purpose of the table: -

In this database table, it stores all the major information of the tag.

### 3.2.15 data\_tag\_score

*Table 15 Tag score*

Field name	Datatype	Constraint	Sample value
score_id	INT	PRIMARY KEY	01
tag_id	INT	FOREIGN KEY	04
tag_score	INT	NOT NULL	

## Purpose of the table: -

In this database table, it stores all the major information about score of the tags.

### 3.2.16 data\_course\_master

*Table 16 Course Master*

Field name	Datatype	Constraint	Sample value
course_id	INT	PRIMARY KEY	03

## LEARNING IMPROVEMENT SYSTEM

course_title	VARCHAR (20)	NOT NULL	Php
course_add_date	DATE	NOT NULL	20-06-2003
course_cover_image	VARCHAR (50)	NOT NULL	
course_overview	VARCHAR (50)	NOT NULL	
expert_id	INT	FOREIGN KEY	06
course_duration	VARCHAR (5)	NOT NULL	10 hours
course_chapter	INT	NOT NULL	5
course_language	VARCHAR (10)	NOT NULL	php
course_discount	VARCHAR (5)	NOT NULL	10%
course_level	CHAR (1)	NOT NULL	B, I, A
cover_video	VARCHAR (100)	NOT NULL	
course_price	FLOAT (10)	NOT NULL	5000/-
domain_id	INT	FOREIGN KEY	01
course_enrolled_mode	CHAR (1)	NOT NULL	P, F

**Purpose of the table: -**

In this database table, it stores all the major information of the course.

### 3.2.17 data\_course\_enrolled

*Table 17 Course enrolled*

Field name	Datatype	Constraint	Sample value
enrolled_id	INT	PRIMARY KEY	01
learner_id	INT	FOREIGN KEY	04
course_id	INT	FOREIGN KEY	06
enrolled_date	DATE	NOT NULL	18-04-2008

**Purpose of the table: -**

In this database table, it stores all the major information of the learner who are enrolled in the particular course.

## LEARNING IMPROVEMENT SYSTEM

### 3.2.18 data\_chapter

*Table 18 Chapter*

Field name	Datatype	Constraint	Sample value
chapter_id	INT	PRIMARY KEY	01
chapter_name	VARCHAR (20)	NOT NULL	Introduction of php
chapter_number	INT	NOT NULL	4
course_id	INT	FOREIGN KEY	07
chapter_duration	VARCHAR (5)	NOT NULL	2 hours

#### Purpose of the table: -

In this database table, it stores all the major information about chapter of course.

### 3.2.19 data\_chapter\_lesson

*Table 19 Chapter lesson*

Field name	Datatype	Constraint	Sample value
lesson_id	INT	PRIMARY KEY	02
lesson_name	VARCHAR (20)	NOT NULL	variable declaration
chapter_id	INT	FOREIGN KEY	09
lesson_number	INT	NOT NULL	5
lesson_type	VARCHAR (10)	NOT NULL	
lesson_url	VARCHAR (50)	NOT NULL	
lesson_duration	VARCHAR (5)	NOT NULL	30 minutes

#### Purpose of the table: -

In this database table, it stores all the major information about lesson of chapter.

## LEARNING IMPROVEMENT SYSTEM

### 3.2.20 data\_trigger\_question

*Table 20 Trigger Question*

Field name	Datatype	Constraint	Sample value
question_id	INT	PRIMARY KEY	03
question_title	VARCHAR (15)	NOT NULL	
question_type	VARCHAR (10)	NOT NULL	
domain_id	INT	FOREIGN KEY	05
correct_answer	VARCHAR (100)	NOT NULL	
number_of_option	INT	NOT NULL	5

**Purpose of the table:** -

In this database table, it stores all the major information of the trigger question.

### 3.2.21 data\_question\_option

*Table 21 Question Option*

Field name	Datatype	Constraint	Sample value
option_id	INT	PRIMARY KEY	06
option_desc	VARCHAR (20)	NOT NULL	
question_id	INT	FOREIGN KEY	05

**Purpose of the table:** -

In this database table, it stores all the major information of the question option.

### 3.2.22 data\_certificate\_master

*Table 22 Certificate Master*

Field name	Datatype	Constraint	Sample value
certificate_id	INT	PRIMARY KEY	04
course_id	INT	FOREIGN KEY	06

## LEARNING IMPROVEMENT SYSTEM

certificate_formate	VARCHAR(100)	NOT NULL	.pdf
---------------------	--------------	----------	------

### Purpose of the table: -

In this database table, it stores all the major information of the certificate.

### 3.2.23 data\_certificate\_complete

*Table 23 Certificate complete*

Field name	Datatype	Constraint	Sample value
completion_id	INT	PRIMARY KEY	04
certificate_id	INT	FOREIGN KEY	05
learner_id	INT	FOREIGN KEY	06
course_completion_date	DATE	NOT NULL	
course_certificate	VARCHAR	NOT NULL	.pdf

### Purpose of the table: -

In this database table, it stores all the major information of the certificate completion.

### 3.2.24 data\_article\_tag

*Table 24 Article tag*

Field name	Datatype	Constraint	Sample value
A_tag_id	INT	PRIMARY KEY	03
article_id	INT	FOREIGN KEY	04
tag_id	INT	FOREIGN KEY	05

### Purpose of the table: -

In this database table, it stores all the major information of the article tag.

## LEARNING IMPROVEMENT SYSTEM

### 3.2.25 data\_book\_tag

*Table 25 Book tag*

Field name	Datatype	Constraint	Sample value
B_tag_id	INT	PRIMARY KEY	01
article_id	INT	FOREIGN KEY	04
tag_id	INT	FOREIGN KEY	05

#### Purpose of the table: -

In this database table, it stores all the major information of the book tag.

### 3.2.26 data\_course\_tag

*Table 26 Course tag*

Field name	Datatype	Constraint	Sample value
C_tag_id	INT	PRIMARY KEY	02
article_id	INT	FOREIGN KEY	04
tag_id	INT	FOREIGN KEY	05

#### Purpose of the table: -

In this database table, it stores all the major information of the course tag.

### 3.2.27 data\_forum\_tag

*Table 27 Forum tag*

Field name	Datatype	Constraint	Sample value
F_tag_id	INT	PRIMARY KEY	01
article_id	INT	FOREIGN KEY	04
tag_id	INT	FOREIGN KEY	05

## LEARNING IMPROVEMENT SYSTEM

### Purpose of the table: -

In this database table, it stores all the major information of the forum tag.

#### 3.2.28 data\_user\_article\_activity

*Table 28 User article activity*

Field name	Datatype	Constraint	Sample value
article_activity_id	INT	PRIMARY KEY	01
user_id	INT	FOREIGN KEY	05
article_id	INT	FOREIGN KEY	04
data_time	DATETIME	NOT NULL	

### Purpose of the table: -

In this database table, it stores all the major information of the article activity.

#### 3.2.29 data\_user\_book\_activity

*Table 29 User book activity*

Field name	Datatype	Constraint	Sample value
book_activity_id	INT	PRIMARY KEY	01
user_id	INT	FOREIGN KEY	05
book_id	INT	FOREIGN KEY	04
data_time	DATETIME	NOT NULL	

### Purpose of the table: -

In this database table, it stores all the major information of the book activity.

## LEARNING IMPROVEMENT SYSTEM

### 3.2.30 data\_user\_forum\_activity

*Table 30 User forum activity*

Field name	Datatype	Constraint	Sample value
forum_activity_id	INT	PRIMARY KEY	01
user_id	INT	FOREIGN KEY	05
forum_id	INT	FOREIGN KEY	04
data_time	DATETIME	NOT NULL	

#### Purpose of the table: -

In this database table, it stores all the major information of the forum activity.

## LEARNING IMPROVEMENT SYSTEM

### 4. User Interface Design

#### 4.1 UI Specifications with technical justifications (fonts, elements and its measurements, appearance, alignment etc.)

- The user interface of Learning Improvement System is designed in NetBeans IDE 8.2 with the size of a webpage 7115 X 3538 pixel.
- Header of the homepage includes the system name with its motto.
- System name in the homepage is Microsoft JhengHei font with 431 points, Bold.
- Main Heading of the Webpage is Microsoft JhengHei font with 291 points, Bold.
- Sub Heading of the other page is set to Segoe UI font with 111 points, Bold.
- Introduction details are set to Segoe UI font with 111 point, Regular.
- All the input fields are aligned from left to right.
- Buttons and style of fields are used similarly in all the web pages for consistency in form layouts.
- The background and appearance are selected for best web experience and user's look and feel.

#### 4.2 Coding Standard

- **Variable: -txt\_<variable name>**

There is some coding standard for the variable names. In which the pattern is txt\_<variable name>. And this pattern is applied in all the files of interface.

- **Function: -function f\_<function name>**

In this coding standard for the function name are like f\_<function name> and this pattern applied in all the files of our interface.

# LEARNING IMPROVEMENT SYSTEM

## 4.3 Home page

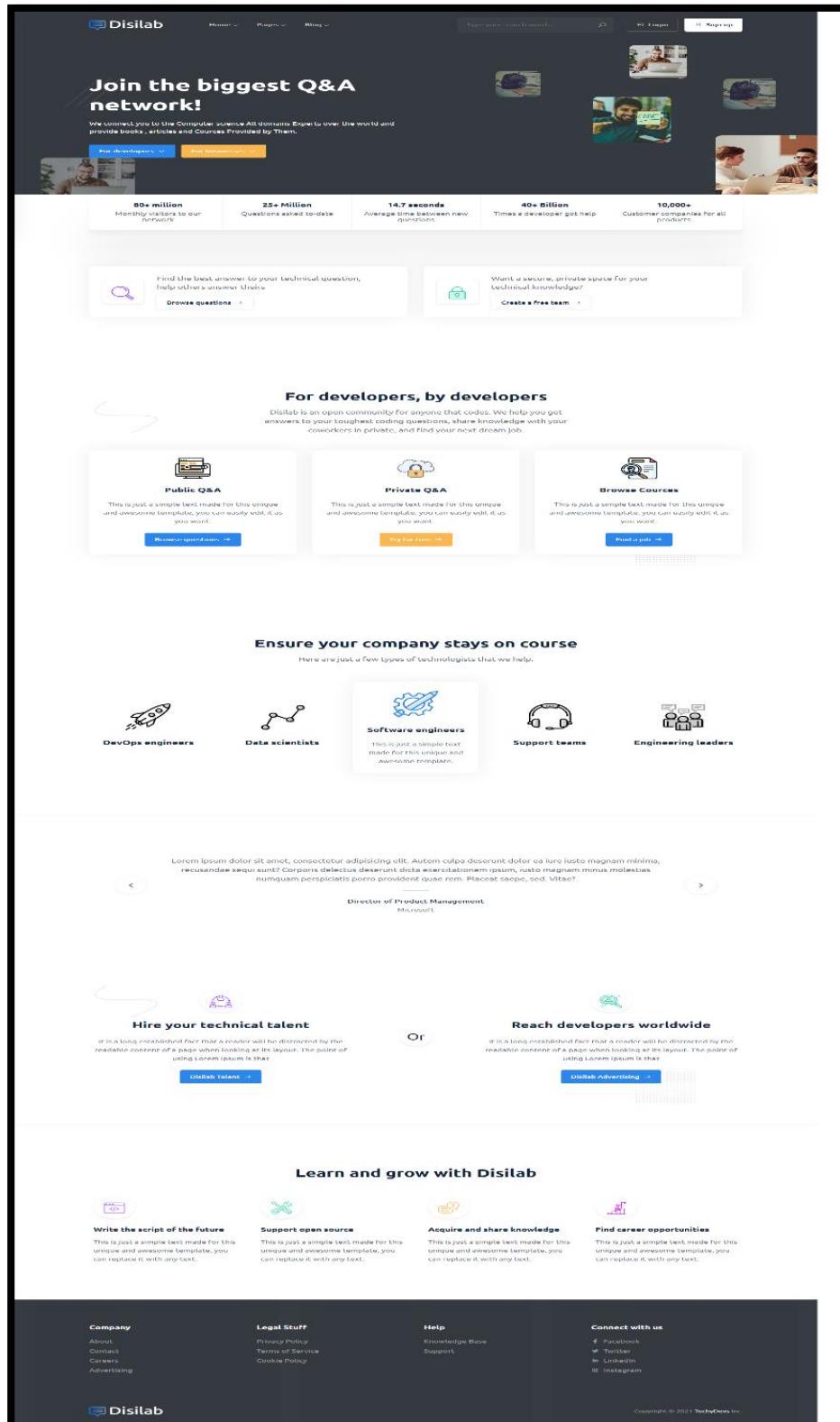


Figure 12 Home page

# LEARNING IMPROVEMENT SYSTEM

Table 31 Home page of UI

Purpose	This is the landing of the system. whenever users login to the system , they reach the landing page of the system.
Used HTML controls	Button
Associated tables	-----
Data In	-----
Data Out	-----
Validation	-----

## 4.4 Dashboard of expert

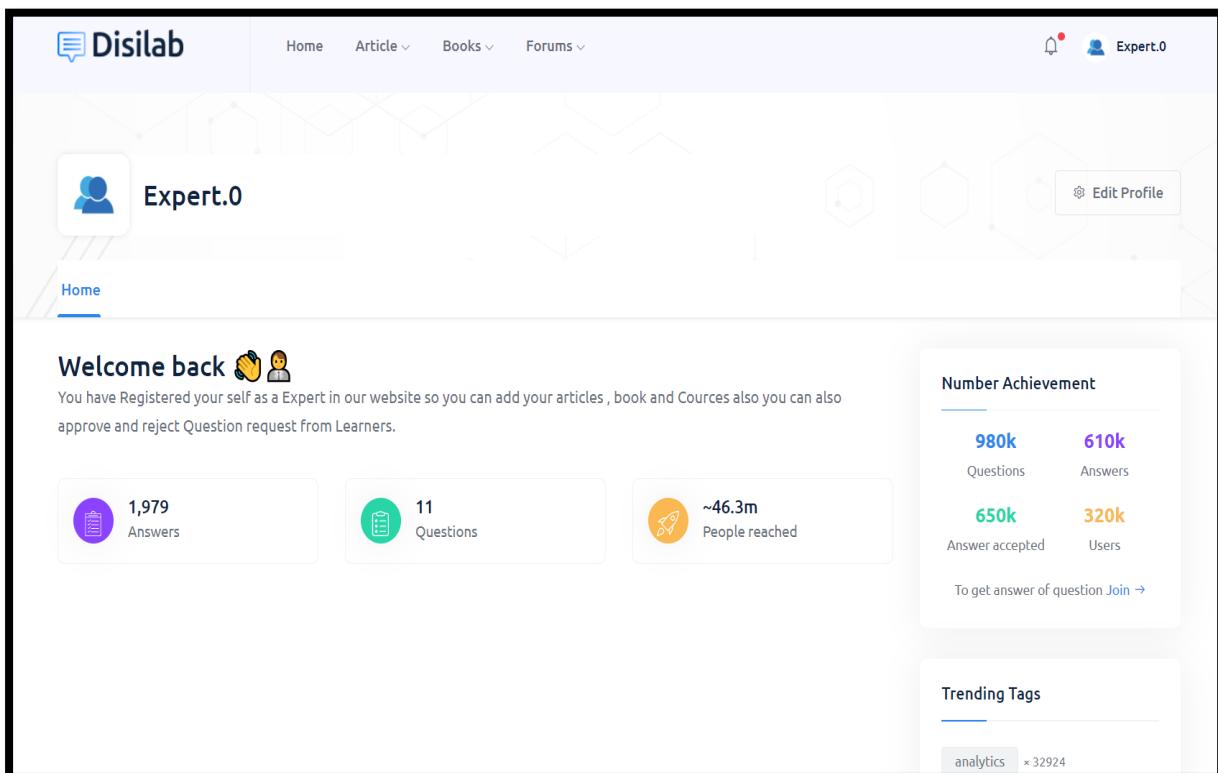


Figure 13 Dashboard of expert

Table 32 Dashboard of expert

## LEARNING IMPROVEMENT SYSTEM

<b>Purpose</b>	This is the dashboard of domain expert. Expert can view their profile and also they can update it.
<b>Used HTML controls</b>	Button, Drop down
<b>Associated tables</b>	-----
<b>Data In</b>	-----
<b>Data Out</b>	-----
<b>Validation</b>	-----

### 4.5 Dashboard of learner

The screenshot shows the Disilab learner dashboard. At the top, there's a navigation bar with 'Home', 'Article', 'Books', and 'Forums'. On the right, there's a user icon for 'Learner.0' and a notification bell icon. Below the navigation, the user profile 'Learner.0' is displayed with a graduation cap icon. A 'Edit Profile' button is visible. The main content area starts with a 'Welcome back' message followed by a paragraph about registered users. Below this, there are three performance metrics: '1,979 Answers' (purple icon), '11 Questions' (green icon), and '~46.3m People reached' (orange icon). To the right, there's a 'Number Achievement' section with '980k Questions' and '610k Answers' in blue, and '650k Answer accepted' and '320k Users' in green. A link 'To get answer of question Join →' is present. At the bottom, there's a 'Trending Questions' section with a note 'Using web3 to call precompile contract'.

Figure 14 Dashboard of learner

# LEARNING IMPROVEMENT SYSTEM

Table 33 Dashboard of learner

Purpose	This is the dashboard of learner. Expert can view their profile and also they can update it.
Used HTML controls	Button, Drop down
Associated tables	-----
Data In	-----
Data Out	-----
Validation	-----

## 4.6 Sign up page

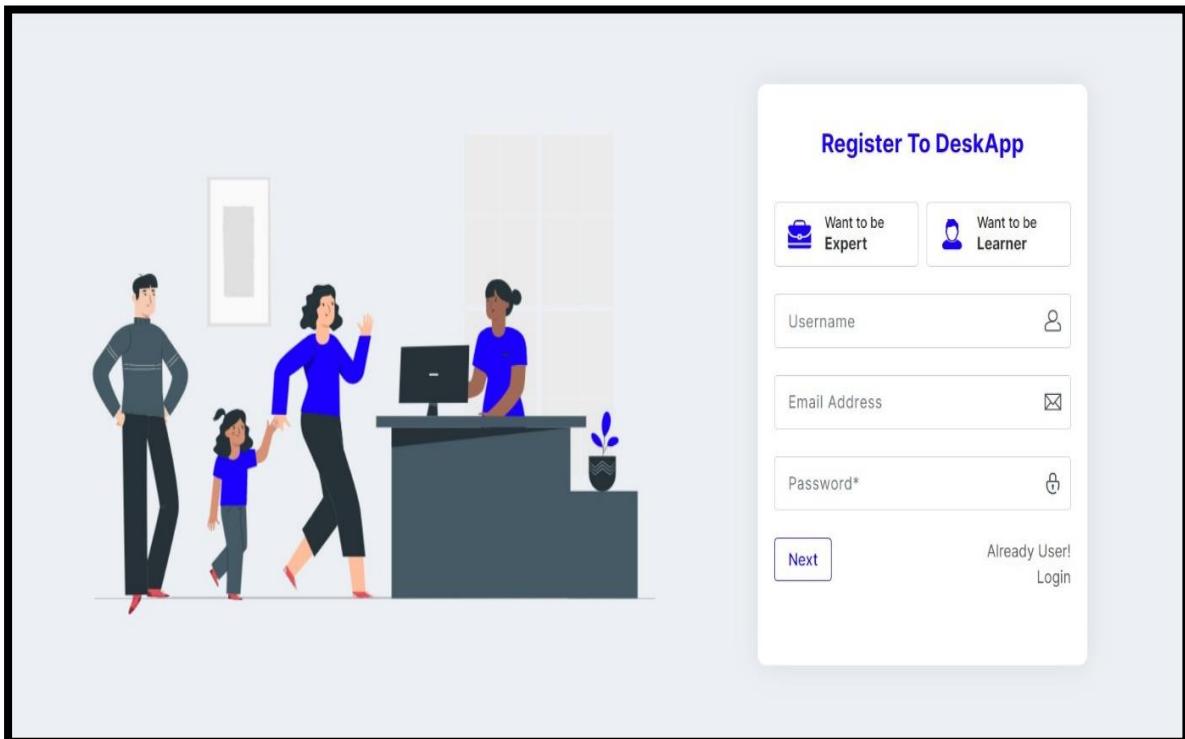


Figure 15 Sign up page

## LEARNING IMPROVEMENT SYSTEM

*Table 34 Sign up page*

<b>Purpose</b>	This is a registration form of the system. whenever users fill up this form, they can log in to the system and reach the home page of the system.
<b>Used HTML controls</b>	Text box, Button, Radio button
<b>Associated tables</b>	Data_User
<b>Data In</b>	User_name, email_id, Password, user_type
<b>Data Out</b>	Data_expert, Data_learner
<b>Validation</b>	User name: - User name must be in alphabet Email id: - Store email id that has at least one alphabet, one number and by default @gmail.com Password: -Store password that has at least 1 upper case, one lowercase one number, and a special character and must be 8 characters

# LEARNING IMPROVEMENT SYSTEM

## 4.7 Login page

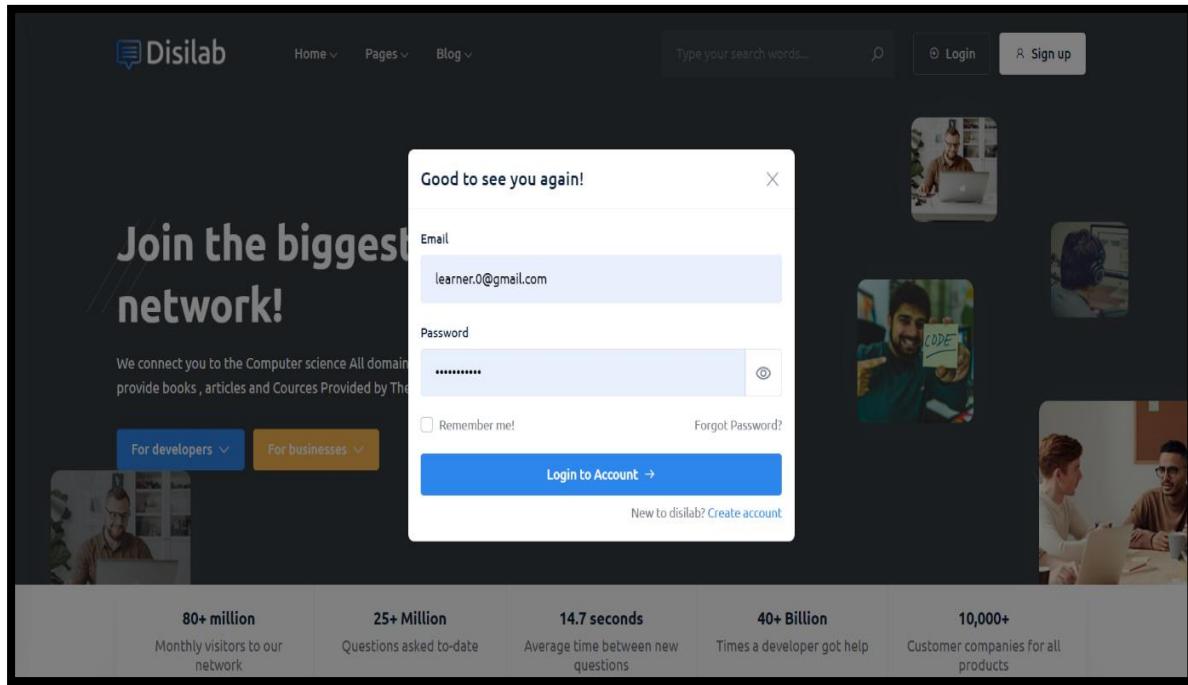


Figure 16 Login page

Table 35 Login page

<b>Purpose</b>	This is the login page about the system. After filling up the registration form, the user can reach the login page. After login into the system, the user can reach the home page of the system.
<b>Used HTML controls</b>	Text box, Button
<b>Associated tables</b>	Data_user
<b>Data In</b>	User_name, Password
<b>Data Out</b>	home page
<b>Validations</b>	Email id: - Store email id that has at least one alphabet, one number and by default @gmail.com

# LEARNING IMPROVEMENT SYSTEM

	<p>Password: -Store password that has at least 1 upper case, one lowercase one number, and a special character and must be 8 characters</p>
--	---

## 4.8 Article home page

The screenshot shows a web page with a header navigation bar. The main content area features an article titled "Designers should always keep their users in mind" by Arden Smith. The article includes a summary, two images, and a block of text. To the right of the article are search and filter sections for "Search Articles" and "Categories". Below the article are "Trending Posts" and "Trending Tags". At the bottom, there is a "Related posts" section.

**Article Summary:**

We want to make it easier to learn more about a question and highlight key facts about it — such as how popular the question is, how many people are interested in it, and who the audience is. To accomplish that, today we're introducing Question Overview, a new section on the question page that will make it easier to...

**Text Content:**

Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium doloremque laudantium, totam rem aperiam, eaque ipsa quae ab illo inventore veritas et quasi architecto beatae vitae dicta sunt explicabo. Nemo enim ipsam voluptatem quia voluptas sit aspernatur aut odit aut fugit, sed quia consequuntur magni dolores eos qui ratione voluptatem sequi nesciunt. Neque porro quisquam est, qui dolorem ipsum...

**Some real life examples:**

At vero eos et accusamus et iusto odio dignissimos ducimus qui blanditiis praesentium voluptatum deleniti atque corrupti quos dolores et quas molestias excepturi sint occaecati cupiditate non provident, similique sunt in culpa qui officia deserunt mollitia animi, id est laborum et dolorum fuga. Et harum quidem rerum facilis est et expedita distinctio. Nam libero tempore, cum soluta nobis est eligendi optio cumque nihil impedit qui minus id quod maxime placet facere possimus, omnis voluptates assumenda est, omnis dolor repellendus.

Temporibus autem quibusdam et aut officiis debitis aut rerum necessitatibus saepe eveniet ut et accusamus repudiandae sint et molestiae non recusandae. Itaque earum rerum hic tenetur a sapiente delecto, ut aut reichendis voluptatis meiores alias consequuntur aut perferendis doloribus asperiores repellendus.

Sed posuera connectetur est at labortis. Aenan eu leo quam. Pellentesque ornare sem lacinia quam venenatis veritatis et quasi architecto beatae vitae dicta sunt explicabo. Nemo enim ipsam voluptatem quia voluptas sit aspernatur aut odit aut fugit, sed quia consequuntur magni dolores eos qui ratione voluptatem sequi nesciunt.

**Tags:**

- analytics
- computer
- python

**Related posts:**

- Designers should always keep their users in mind** By Arden Smith Feb 25, 2021
- What You Can Learn About Managing Projects** By Kevin Martin Feb 25, 2021
- Open space – new trend in office design** By Tim Brooks Feb 25, 2021

Figure 17 Article home page

Table 36 Article home page

<b>Purpose</b>	This is the home page of article. User can use this page for read articles and expert can use this page for upload the articles.
<b>Used HTML controls</b>	Button, Navigation
<b>Associated tables</b>	-----
<b>Data In</b>	-----

# LEARNING IMPROVEMENT SYSTEM

Data Out	-----
Validations	-----

## 4.9 Article list page

The screenshot shows the 'Articles' section of the Disilab website. At the top, there's a navigation bar with links for Home, Article, Books, Forums, and a user profile for 'Expert.0'. Below the navigation is a decorative header featuring geometric shapes like hexagons and triangles.

The main content area displays two articles:

- A Primer To Blockchain Analytics and Top Tools in NLP** (By Expert.0, September 19, 21) - An image of a computer setup with a blue light bar.
- Hugging Face Launches Optimum, An Open Source Opti Programming Language** (By Expert.0, September 19, 21) - An image of a landscape with mountains and a lake at sunset.

To the right of the articles is a sidebar with the following sections:

- Search Articles**: A search input field with placeholder text "Type your search words..." and a magnifying glass icon.
- Categories**: A list of categories in boxes: NLP, Artificial Intelligence, Programming Language, Cybersecurity, and Machine Learning.
- Trendings**: A list of trending topics with their last update time and author:
  - Using web3 to call precompile contract (2 mins ago by Sudhir Kumbhare)
  - Is it true while finding Time Complexity of the algorithm [closed] (48 mins ago by wimax)
  - image picker and store them into firebase with flutter (1 hour ago by Antonin gavrel)
- Trending Tags**: A list of trending tags in boxes: analytics, computer, python, java, swift, javascript, c#, html, and machine-language.

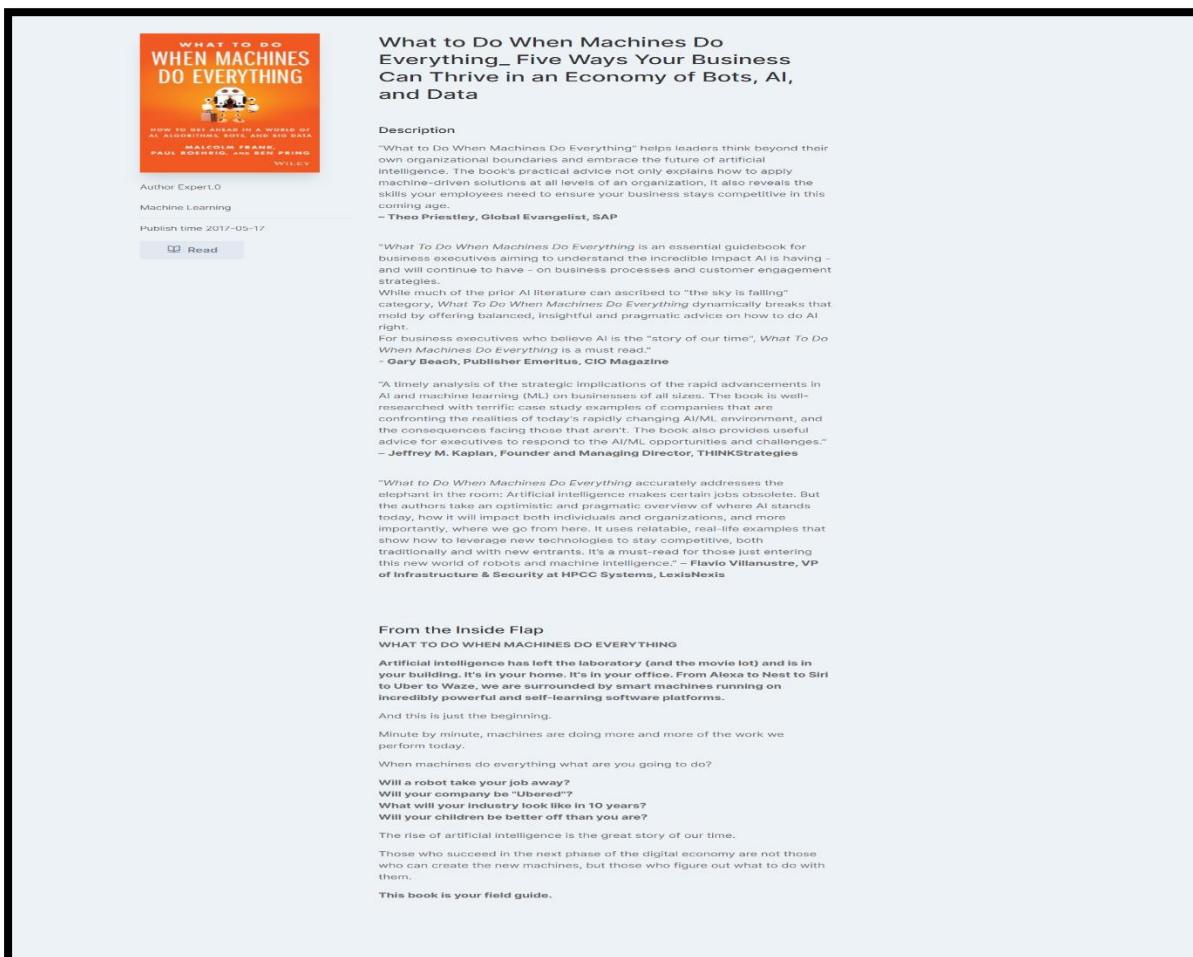
Figure 18 Article list page

# LEARNING IMPROVEMENT SYSTEM

*Table 37 Article list page*

<b>Purpose</b>	This is the list page of article. User can use this page for see articles list and also search the any article using this page.
<b>Used HTML controls</b>	Search box, Button, Navigation
<b>Associated tables</b>	-----
<b>Data In</b>	-----
<b>Data Out</b>	-----
<b>Validations</b>	-----

## 4.10 Book home page



*Figure 19 Book home page*

# LEARNING IMPROVEMENT SYSTEM

Table 38 Book home page

Purpose	This is the home page of book. Learner can read book and expert can upload the book using this page.
Used HTML controls	Button, Navigation
Associated tables	-----
Data In	-----
Data Out	-----
Validations	-----

## 4.11 Book list page

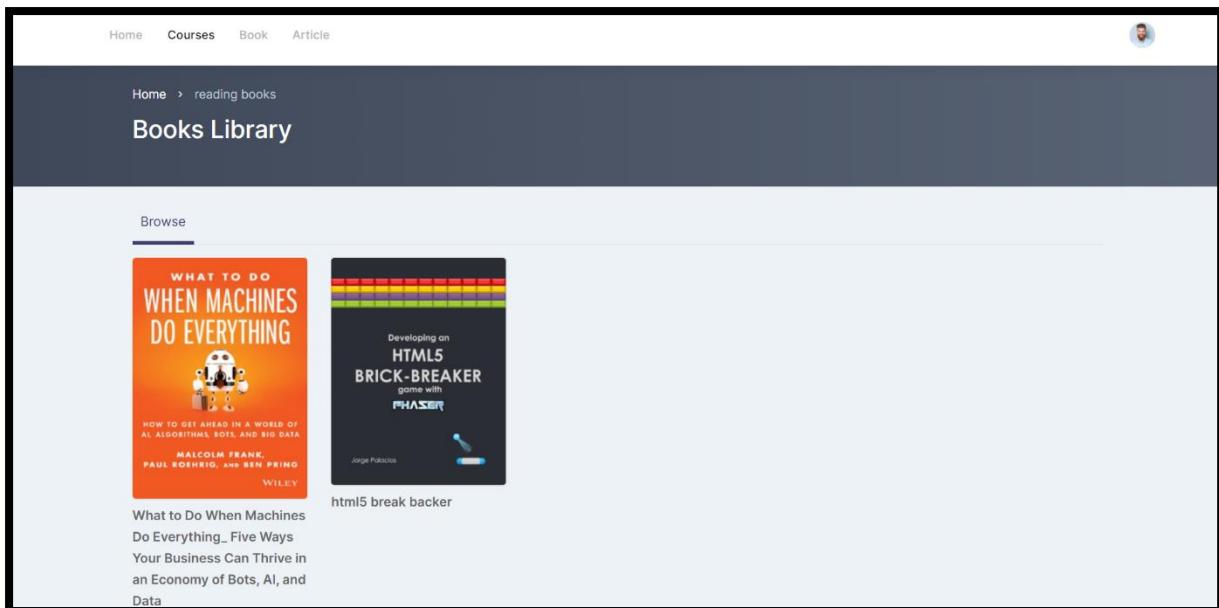


Figure 20 Book list page

Table 39 Book list page

Purpose	This is the list page of book. Learner can see the all list of book using this page.
Used HTML controls	Button, Navigation
Associated tables	-----

# LEARNING IMPROVEMENT SYSTEM

<b>Data In</b>	-----
<b>Data Out</b>	-----
<b>Validations</b>	-----

## 4.12 Course list page

The screenshot shows a course list page with the following structure:

- Header:** A banner image of students working at desks, followed by a navigation bar with "Category", "Home", "Courses", "Contact", a search bar, a cart icon with 2 items, and a "My learnings" button.
- Title:** "Courses" with a "Home · Courses" link below it.
- Search and Filter:** A search bar labeled "Search for courses..." and a "Default" dropdown menu.
- Course Listings:** A grid of course cards. Each card includes a thumbnail, category, lesson count, rating, title, description, instructor name, price, and a "Know Details" button.
  - Row 1:**
    - Art & Design:** 43 Lesson, 4.5 (44), "Become a product Manager learn the skills & job.", Jim Séchen, Free, \$32.00-\$68.00
    - Mechanical:** 72 Lesson, 4.5 (44), "Fundamentals of music theory Learn new", Barry Tone, \$32.00-\$68.00
  - Row 2:**
    - Development:** 43 Lesson, 4.4 (40), "Bases Matemáticas dios Álgebra Ecuacion", Samuel Serif, \$46.00-\$68.00
    - Development:** 14 Lesson, 3.5 (55), "Strategy law and organization Foundation", Elon Gated, \$46.00-\$68.00
  - Row 3:**
    - Marketing:** 22 Lesson, 4.5 (42), "The business Intelligence analyst Course 2022", Eleanor Fant, \$62.00-\$97.00
    - Marketing:** 22 Lesson, 4.5 (42), "The business Intelligence analyst Course 2022", Brian Cumin, \$62.00-\$97.00
- Sidebar:** On the right, there are sections for "Categories", "Price Filter", "Skill Level", and "Related Courses", each with checkboxes and up/down arrows for sorting.

Figure 21 Course list page

# LEARNING IMPROVEMENT SYSTEM

*Table 40 Course list page*

<b>Purpose</b>	This is the list page of course. Learner can see all the list of course and study on it.
<b>Used HTML controls</b>	Search box, check box, Drop down, Navigation
<b>Associated tables</b>	-----
<b>Data In</b>	-----
<b>Data Out</b>	-----
<b>Validations</b>	-----

## 4.13 Course single page

The screenshot shows a course page for "The business Intelligence analyst Course 2022". The top navigation bar includes links for Category, Home, Courses, Contact, and My learnings. The course title is prominently displayed with a star rating of 4.5. Below the title, there's a photo of two students working together. The page features tabs for Description, Curriculum, Reviews, and Members. A detailed course overview is provided, followed by a target audience section and a list of other instructors. The right sidebar displays related courses like "Development", "Data Science", and "UX Design".

Home Courses The business Intelligence analyst Course 2022

**Development**

# The business Intelligence analyst Course 2022

Teacher: Eton Gated Last Updated: July 24, 2023 Reviewer: ★★★★★ 4.5



**Description** **Curriculum** **Reviews** **Members**

## Course Overview

Only a quid me old mucker squiffy tomfoolery grub cheers ruddy car blimey guvnor in my flat, up the duff Eaton car boot up the lyver pardon a bit of how's your father Davis slide off sloshed, don't get me wrong I'm not a fan of the Queen's English, I mean I'm not a fan of the Queen's English, you bite your arm off up the kyver old no biggle fantastic boot, David have it show off show off pick your nose and blow off lost the plot porkeys bits and bobs only a quid bugger mate, absolutely blindingly brilliant, I mean I'm not a fan of the Queen's English, I mean I'm not a fan of the Queen's English and bobs Charles he lost his bottle super my lady crat stalkers bite your arm off Queen's English, parrot what he had to say, I mean I'm not a fan of the Queen's English, I mean I'm not a fan of the Queen's English Eaton so I spent bleeding haggis James Bond cup of chutney Gosh William ummm I'm telling crikey Burke I don't want no agro A bit of how's your father bugger all mate off his nut that, what a plonker cuppa over the top nancy boy show off show off pick your nose and blow off spilling good time lavatory me old mucker, chimney pot what a load of rubbish booh squiffy lost the plot broly weetles excuse my french.

Big data, Data analysis, Data modeling

### What is the Target Audience?

- ✓ Business's managers, leaders
- ✓ Downloadable lectures, code and design assets for all projects
- ✓ Anyone who is finding a chance to get the promotion

### Other Instructors

Eleanor Fant Instructor Lauren Stamps Teacher Jonquill Von Associate

Share : [f](#) [t](#) [p](#)

### Related Course

You don't have to struggle alone, you've got our assistance and help.



33 lessons ★★★★★ 4.5 (44)  
Become a product Manager learn the skills & job.

Jim Sechen Free Know Details →



70 lessons ★★★★★ 4.5 (44)  
Fundamentals of music theory Learn new.

Barry Tone \$32.00 \$68.00 Know Details →

*Figure 22 Course single page*

# LEARNING IMPROVEMENT SYSTEM

Table 41 Course single page

Purpose	This is the page of course. Learner can study on particular course which are available in this system.
Used HTML controls	Navigation, Button
Associated tables	-----
Data In	-----
Data Out	-----
Validations	-----

## 4.14 Question draft page

The screenshot shows the Disilab Question draft page. At the top, there's a navigation bar with Home, Article, Books, Forums, and a search bar. Below that, a banner says "Ask a public question" with a background of a network of people and speech bubbles. The main form area has fields for "Question Title" (with placeholder "e.g. Is there an R function for finding the index of an element in a vector?"), "Tags" (with placeholder "e.g. javascript"), "Category" (with placeholder "Select a Category"), and "Details" (with a rich text editor toolbar). To the right, a sidebar titled "Step 1: Draft your question" provides instructions: "Summarize the problem" (Include details about your goal, Describe expected and actual results, Include any error messages), "Describe what you've tried", and "Show some code". It also asks if it's a non-programming question and provides helpful links. At the bottom of the form, there are checkboxes for notifications and privacy policy, and a "Publish your question" button. Below the form, a section titled "Disilab Q&A communities are different. Here's how" shows three cards: "Expert communities.", "The right answer. Right on top.", and "Share knowledge. Earn trust." Each card has a small icon and a brief description.

Figure 23 Question draft page

# LEARNING IMPROVEMENT SYSTEM

Table 42 Question draft page

<b>Purpose</b>	This is the draft page of forum. Using this editor, learner can upload their question and expert can give the answer of particular question.
<b>Used HTML controls</b>	Text box, Button, Navigation, Drop-down, Check box
<b>Associated tables</b>	Data fo_que
<b>Data In</b>	fo_que_title, fo_question
<b>Data Out</b>	Home page of forum
<b>Validations</b>	-----

## 4.15 Online compiler

The screenshot shows a web-based PHP compiler interface. At the top, the URL is localhost:8080/Project\_B5/Course/Compiler.php. The main area contains the following code:

```
1 <?php
2
3     $x=10;
4     $y=25;
5     $z=$x+$y;
6
7     $msg = 'Sum of x+y = ';
8
9     print($msg.$z);
10
11 ?>
```

Below the code, there are sections for "CommandLine Arguments" (empty), "Interactive Mode" (unchecked), and "Stdin Inputs" (empty). A blue "Execute" button is located at the bottom left. To the right of the execute button is a three-dot menu icon. The "Result" section is currently empty, indicated by a large black redaction box. At the bottom left, there is a link "Edit this program in JDoodle.com". At the bottom right, it says "Online execution powered by JDODOLE".

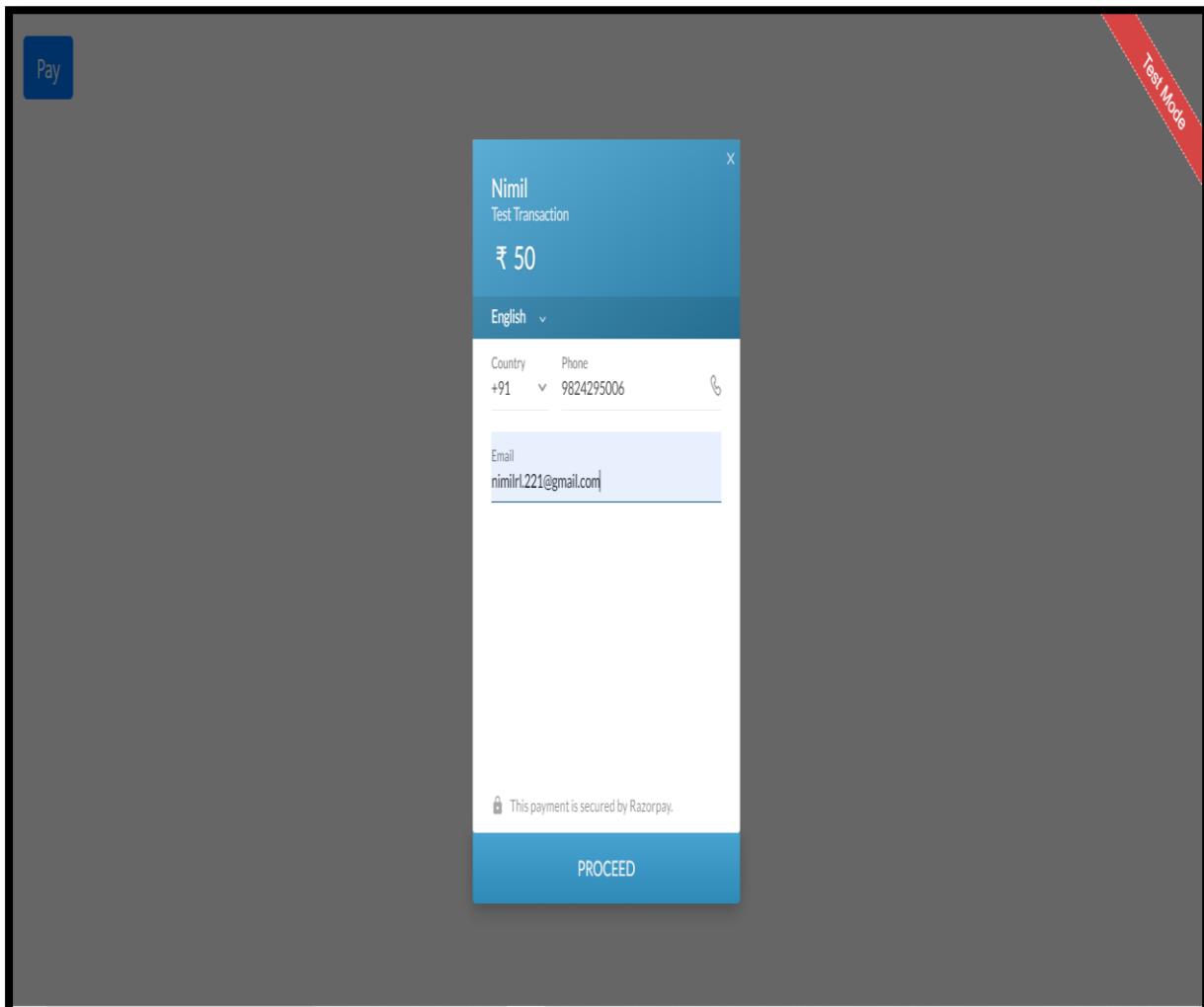
Figure 24 Online compiler page

# LEARNING IMPROVEMENT SYSTEM

Table 43 Online compiler page

Purpose	This is the page of online compiler. Using this compiler, learner can compile their code without download any IDE.
Used HTML controls	-----
Associated tables	-----
Data In	Code
Data Out	output of the code
Validations	-----

## 4.16 Payment gateway: -



# LEARNING IMPROVEMENT SYSTEM

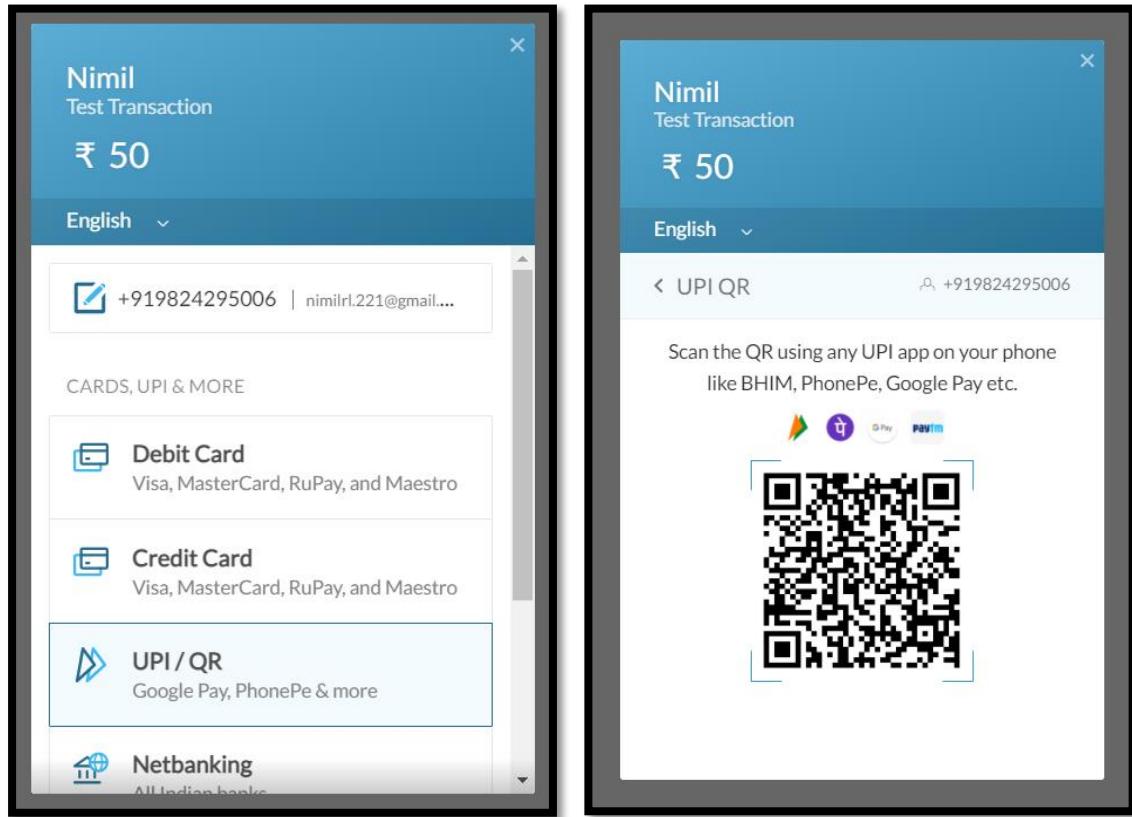


Figure 25 Payment gateway page

Table 44 Pyament gateway page

<b>Purpose</b>	This is the page of payment gateway. Using this features, learner can pay money for course.
<b>Used HTML controls</b>	-----
<b>Associated tables</b>	-----
<b>Data In</b>	Email-id
<b>Data Out</b>	Process start
<b>Validations</b>	-----

# LEARNING IMPROVEMENT SYSTEM

## 5. System Testing

### 5.1 Validation Testing

#### 5.1.1 Registration page test report

*Table 45 Registration page test report*

Test Description	Element	Selene se	Target	Value (Expected)	Actual value (As per Log)	Test Description
Verify value	Input box	Click and verify	name=txtemail	nimilrl.221@gmail.com	nimilrl.221@gmail.com	Pass
Verify value	Input box	Click and verify	name=txtusername	dhameliya02@gmail.com	dhameliya02@gmail.com	Pass
Verify store value	Input box	Click and verify	name=txtpassword	password	password	Pass
Verify value present or not	Input box	Click and verify	name=btncsignup	Next	Next	Pass

# LEARNING IMPROVEMENT SYSTEM

Log		Reference	
1.	open on http://localhost:8080/Project_B5/sign-up.php with value http://localhost:8080/Project_B5/sign-up.php OK		13:21:31
2.	click on name=btusername OK		13:21:32
3.	click on name=txtemail OK		13:21:33
4.	click on name=txtpassword OK		13:21:33
5.	click on name=txtpassword OK		13:21:34
6.	click on name=txtpassword OK		13:21:34
7.	doubleClick on name=txtpassword OK		13:21:34
8.	click on name=btsignup OK		13:21:34
9.	click on name=txtemail OK		13:21:34
10.	type on name=txtemail with value nimilr221@gmail.com OK		13:21:35
11.	verifyValue on name=btusername with value Navadiya02@gmail.com OK		13:21:35
12.	verifyValue on name=txtemail with value nimilr221@gmail.com OK		13:21:35
13.	verifyValue on name=txtpassword with value a OK		13:21:35
14.	assertElementPresent on name=btsignup with value Next OK		13:21:35
15.	storeValue on name=btusername with value email OK		13:21:35
16.	if on \${email}==null OK		13:21:36
18.	else OK		13:21:36
19.	executeScript on return "Value is here" OK		13:21:36
20.	end OK		13:21:36
'Untitled' completed successfully			

Log		Reference	
3.	click on name=txtemail OK		13:21:34
10.	type on name=txtemail with value nimilr221@gmail.com OK		13:21:35
11.	verifyValue on name=btusername with value Navadiya02@gmail.com OK		13:21:35
12.	verifyValue on name=txtemail with value nimilr221@gmail.com OK		13:21:35
13.	verifyValue on name=txtpassword with value a OK		13:21:35
14.	assertElementPresent on name=btsignup with value Next OK		13:21:35
15.	storeValue on name=btusername with value email OK		13:21:35
16.	if on \${email}==null OK		13:21:36
18.	else OK		13:21:36
19.	executeScript on return "Value is here" OK		13:21:36
20.	end OK		13:21:36
'Untitled' completed successfully			

*Figure 26 Registration page test report*

## 5.1.2 Learner registration page test report

*Table 46 Learner registration page test report*

Test Description	Element	Selene se	Target	Value (Expected)	Actual value (As per Log)	Test Description
Verify value	Input box	Click and verify	name=txtdob	20-10-2021	20-10-2021	Pass

## LEARNING IMPROVEMENT SYSTEM

Verify value	Input box	Click and verify	name=txtcontact	8488573747	8488573747	Pass
Verify store value	Input box	Click and verify	name=Pass word	password	password	Pass
Verify input field.	Input box	Click and verify	name=txtemail	vruti061@gmail.com	vruti061@gmail.com	Pass

Log	Reference	
1. open on http://localhost:8080/Project_B5/learner_reg.php with value http://localhost:8080/Project_B5/learner_reg.php OK		12:30:13
2. click on css=mx-auto OK		12:30:13
3. click on css=span OK		12:30:15
4. click on name=txtcontact OK		12:30:15
5. type on name=txtcontact with value 8488573747 OK		12:30:15
6. click on name=txtdob OK		12:30:15
7. type on name=txtdob with value 2021-10-20 OK		12:30:16
8. click on css=.col-md-4 > form-group .btn:nth-child(1) OK		12:30:16
9. click on css=.col-md-6 .btn:nth-child(1) OK		12:30:16
10. click on name=txtqua OK		12:30:16
11. select on name=txtqua with value label=US OK		12:30:16
12. verifyValue on name=txtcontact with value 8488573747 OK		12:30:17
13. verifyValue on name=txtdob with value 2021-10-20 OK		12:30:17
14. assertElementPresent on css=.col-md-4 .active with value M OK		12:30:17
'Untitled' completed successfully		12:30:17

Figure 27 Learner registration page test report

## LEARNING IMPROVEMENT SYSTEM

### 6. References

- <https://docs.idoodle.com/>
- <https://www.javatpoint.com/creating-mysql-database-with-xampp>
- [https://www.apachefriends.org/faq\\_windows.html](https://www.apachefriends.org/faq_windows.html)
- <http://httpd.apache.org/docs/>
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