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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 (20190310011006 1),Nimil Rameshbhai Lathiya (20190310011009 1)** for 5th semester as a partial fulfilment for the degree of Bachelor of Computer Application during the academic year 2021-2022.

Mr. Amish Patel	Dr. Jikitsha Sheth	Dr.Kalpesh Lad
Guide	**Co-Guide**	**Programme Coordinator**

Date: November 2021
Place: UTU

.....

For External Exam

Name of External Examiner **Signature**

1.

2.

PROJECT

Learning Improvement System

Submitted by

Vruti Dhameliya (201903100110061)

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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.

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
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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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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.

- **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.

- **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.

- 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)

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.

- **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.

2. System Process Flow

2.1 Use-Case Diagram: -

- **Admin**

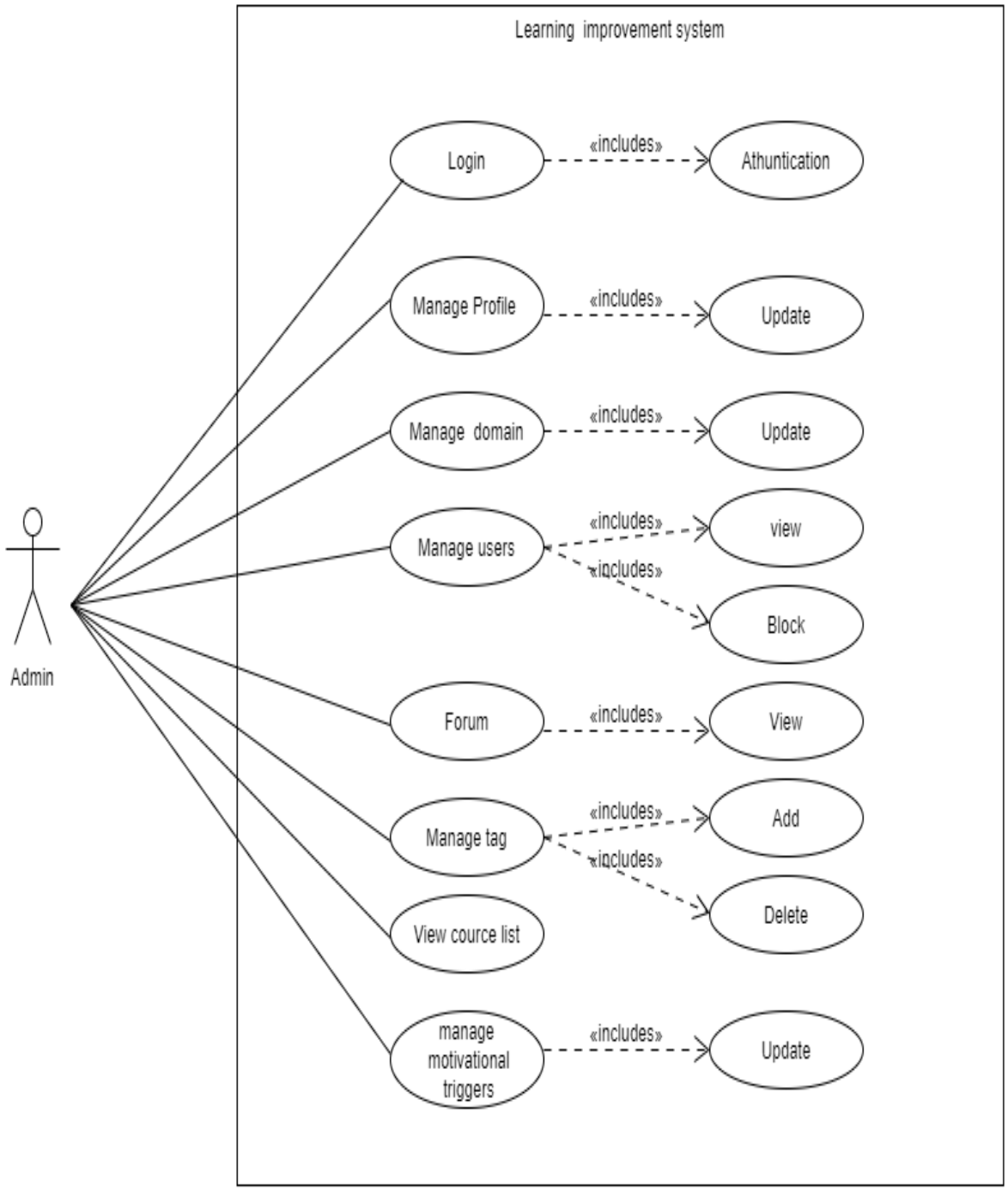


Figure 1 Use-case of Admin

- **Domain Expert**

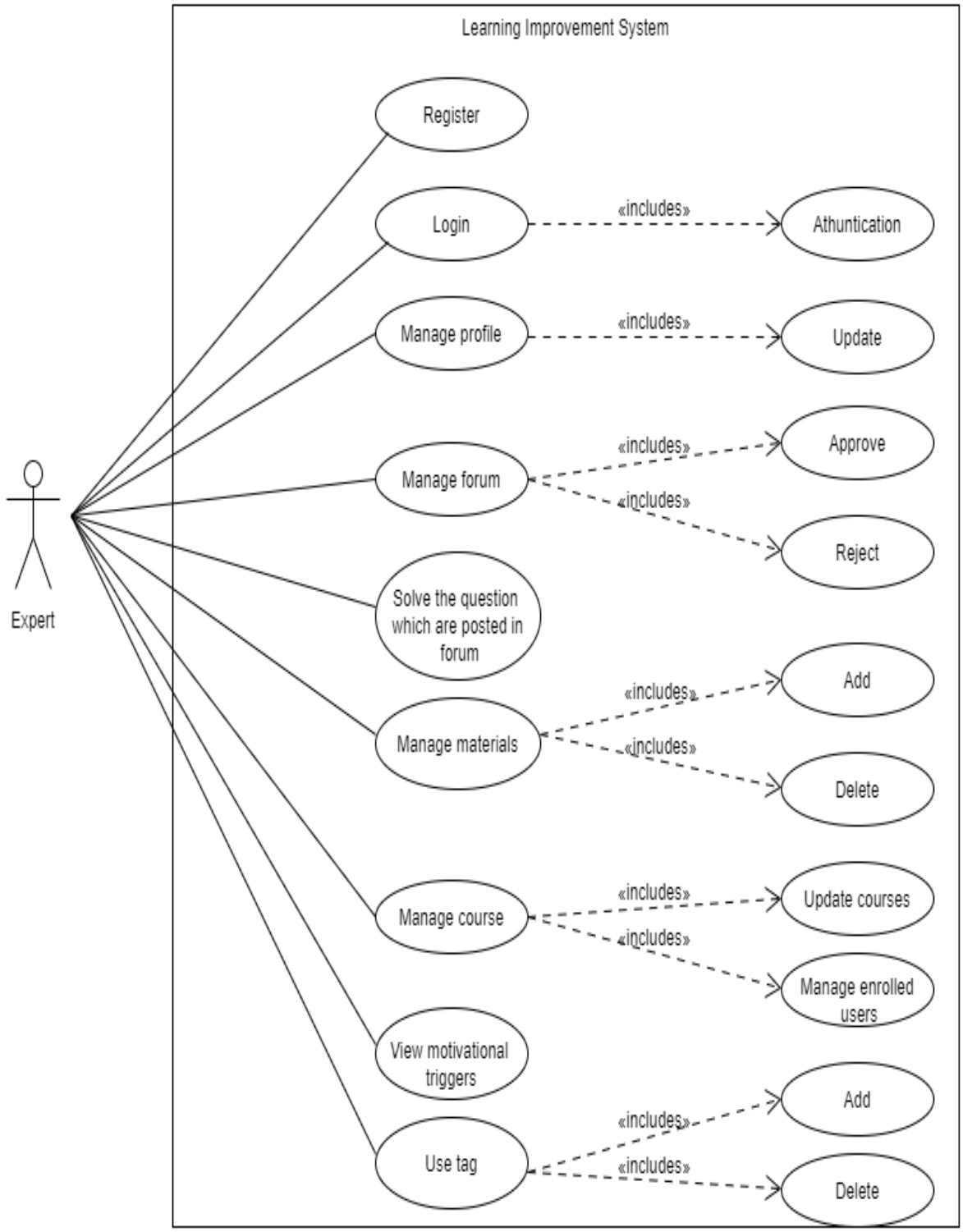


Figure 2 Use-case of Domain expert

- **Learner**

Figure 3 Use-case of Learner

2.2 Activity Diagram: -

- **Login activity**

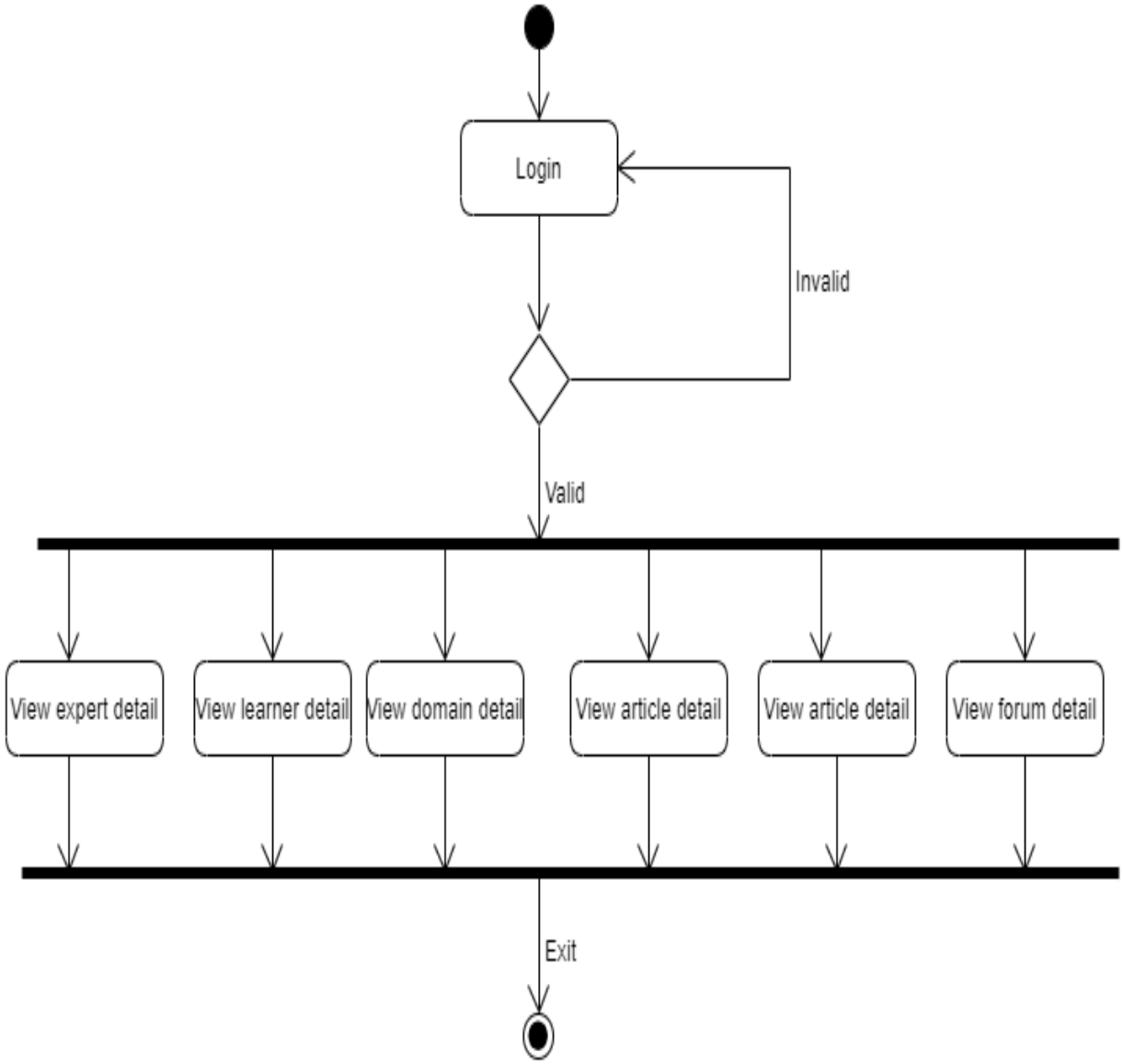


Figure 4Login activity

- **Article activity**

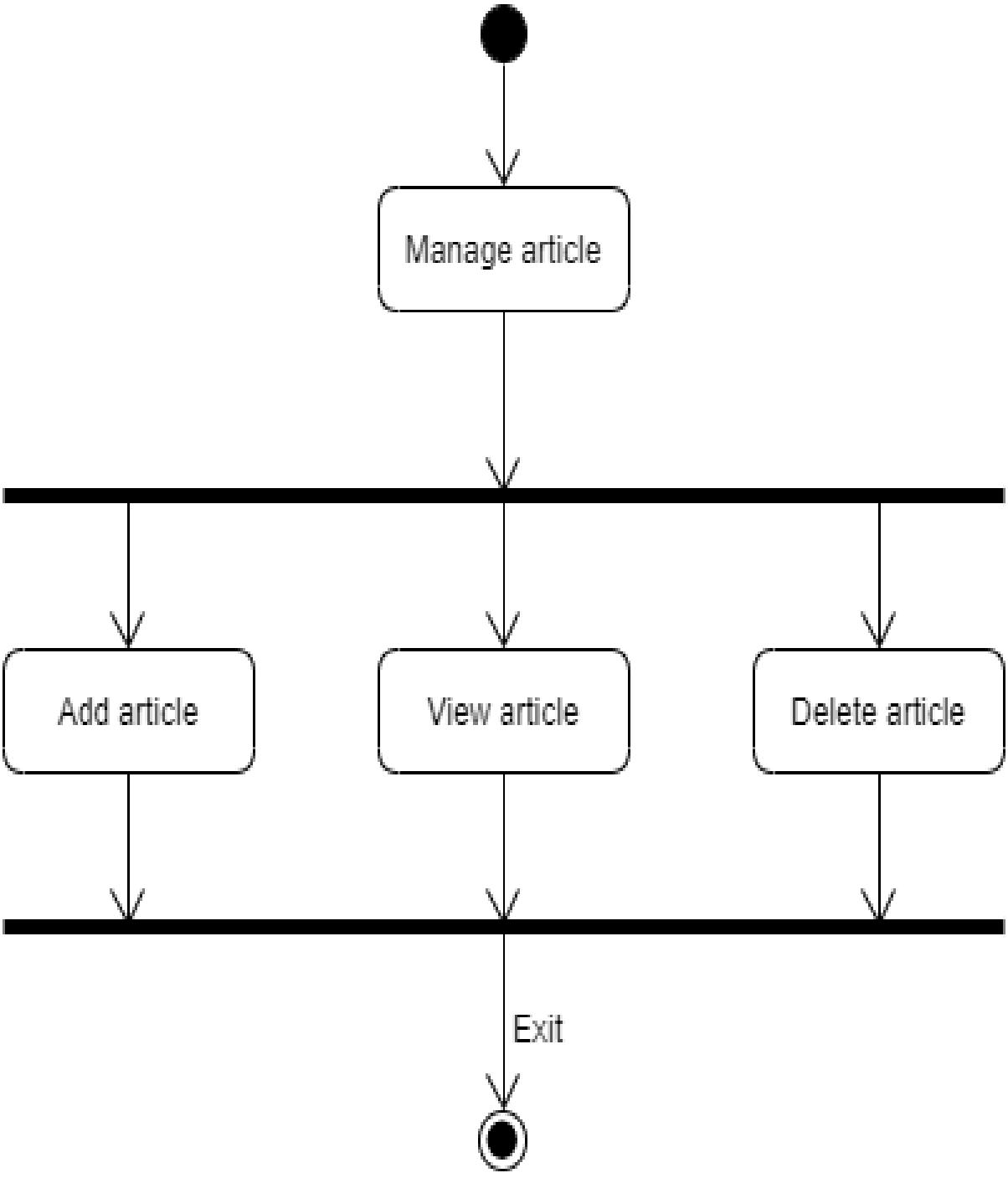


Figure 5 Manage article activity

- **Book activity**

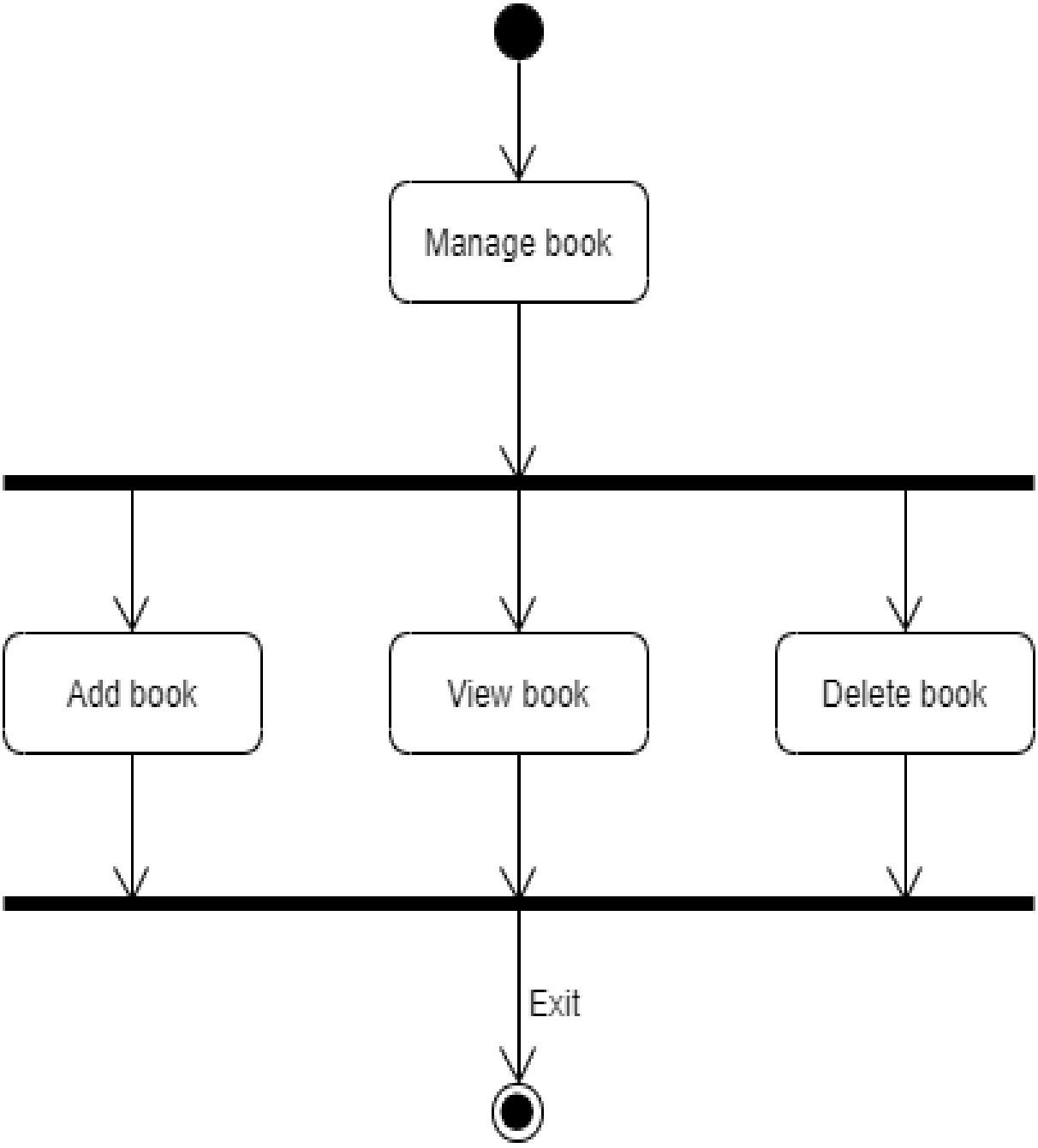


Figure 6 Manage book activity

- **Course activity**

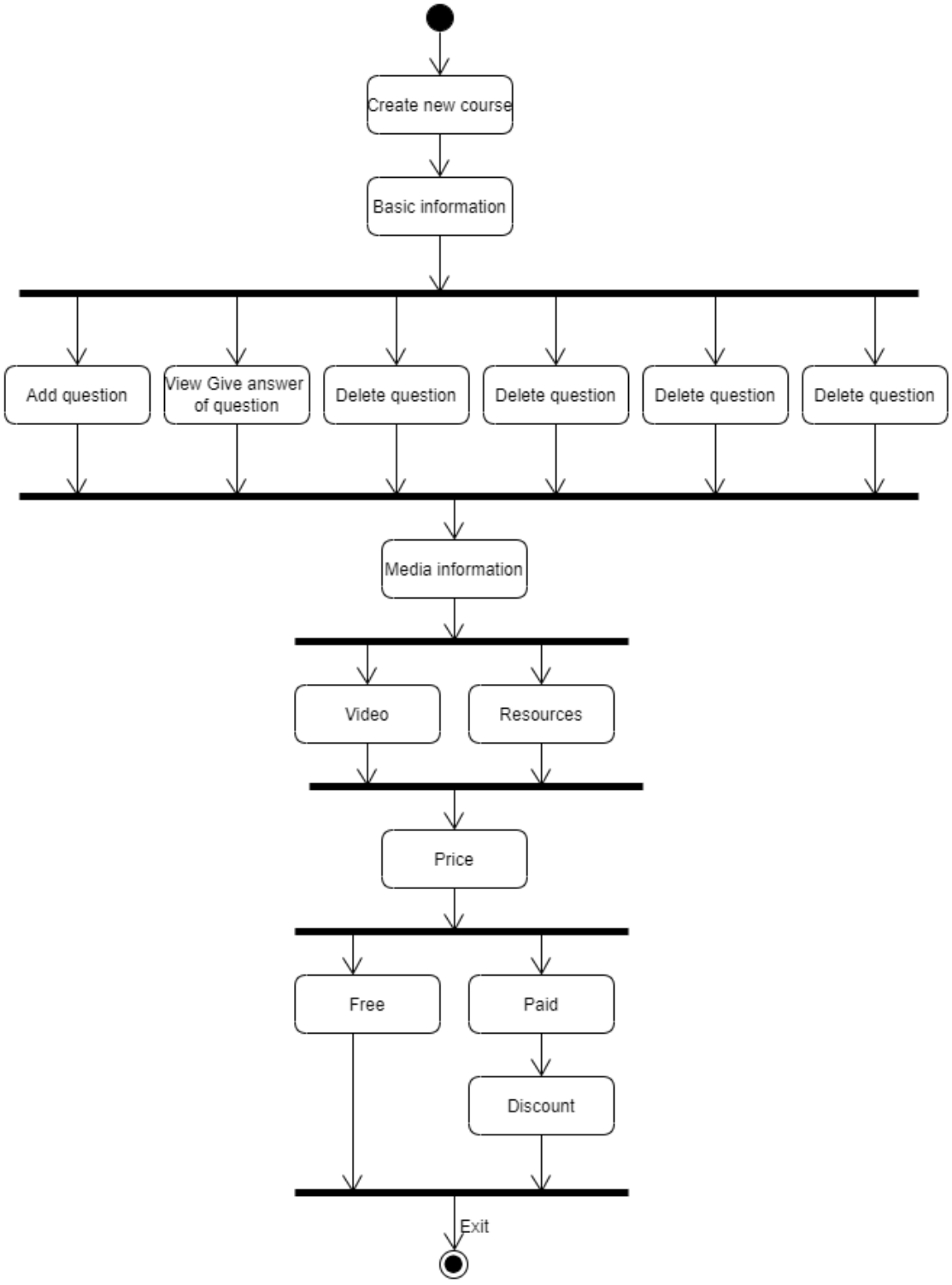


Figure 7 Manage course activity

- **Domain activity**

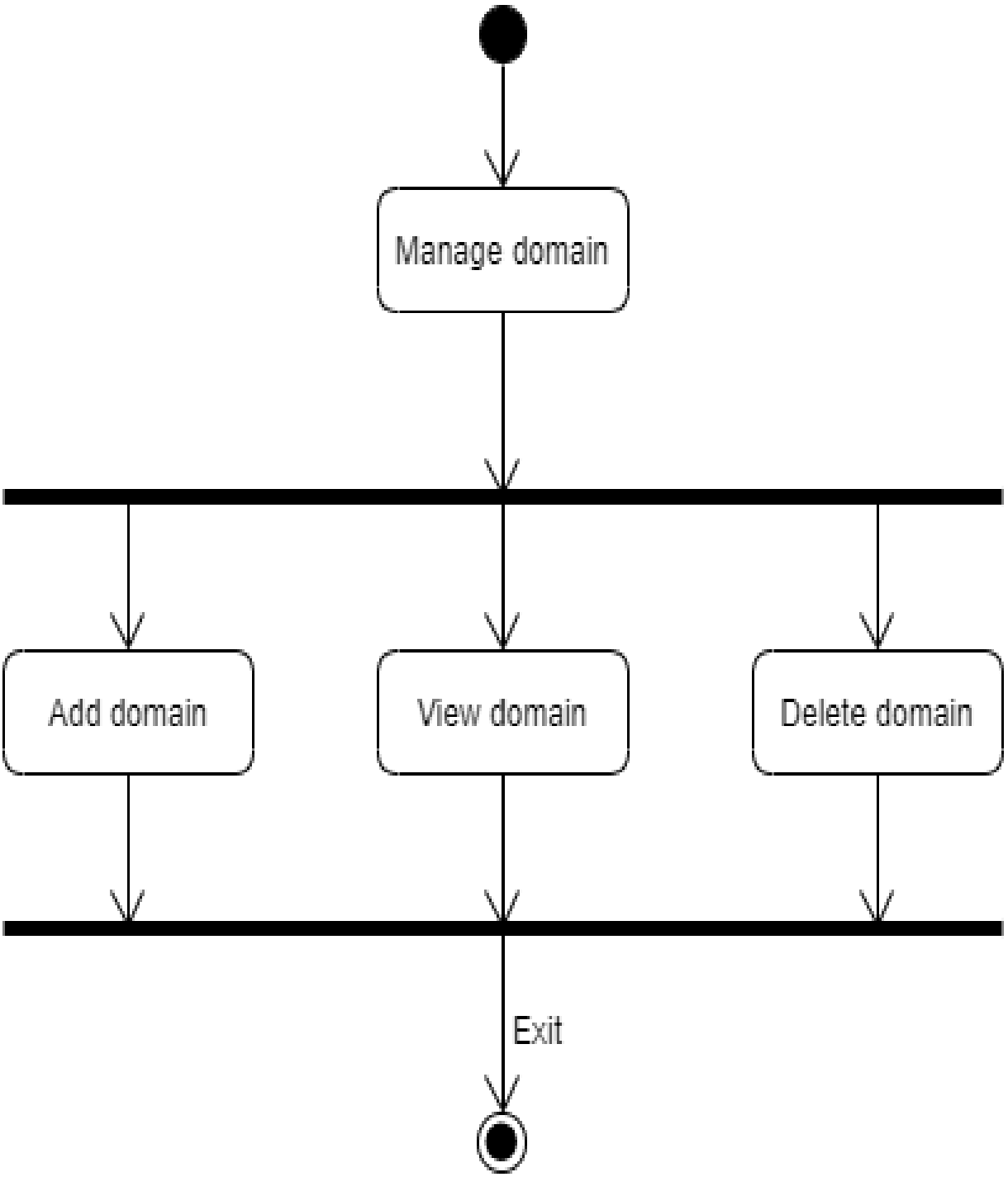


Figure 8 Manage domain activity

- **Forum activity**

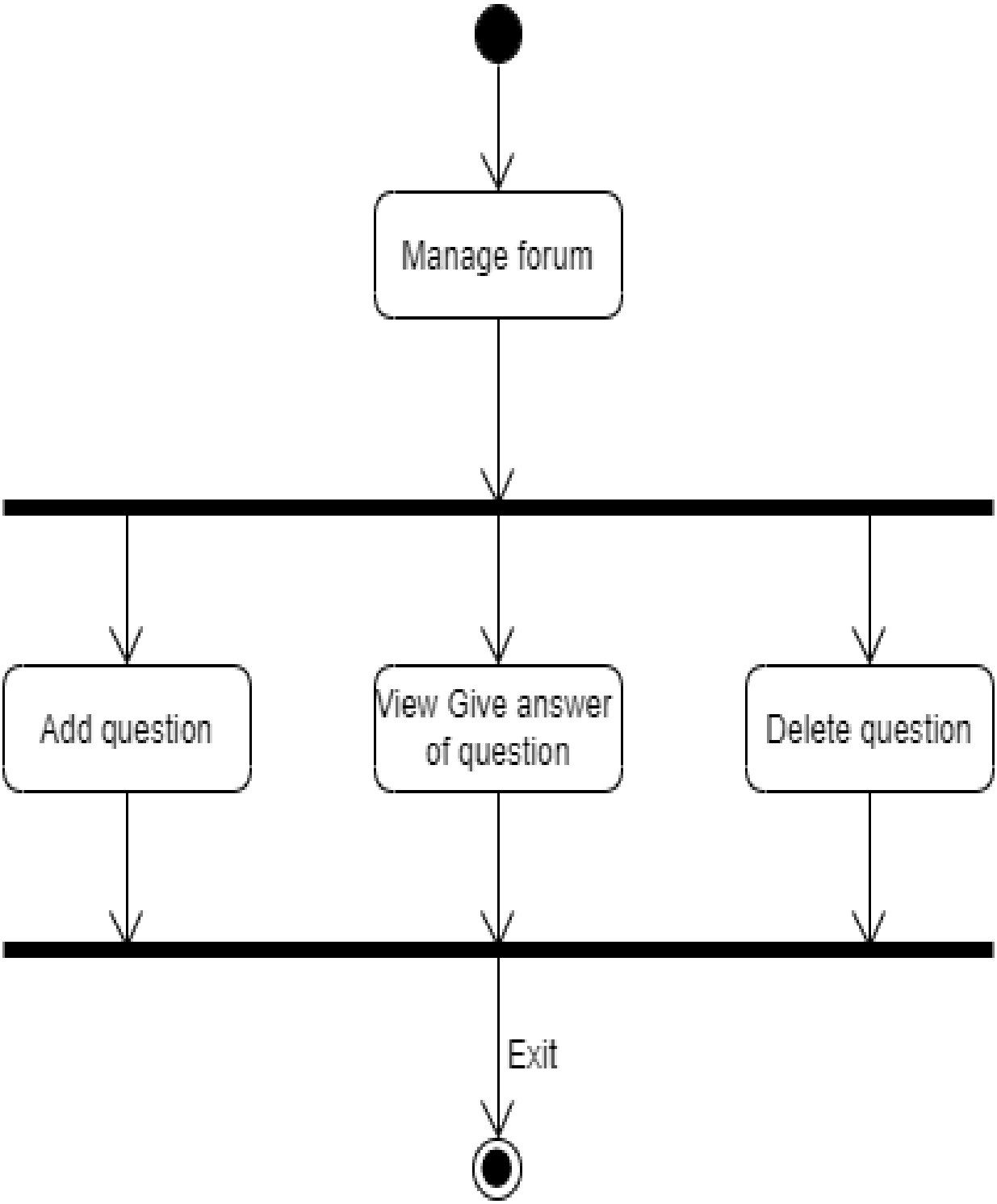


Figure 9 Manage forum activity

- **Online payment activity**

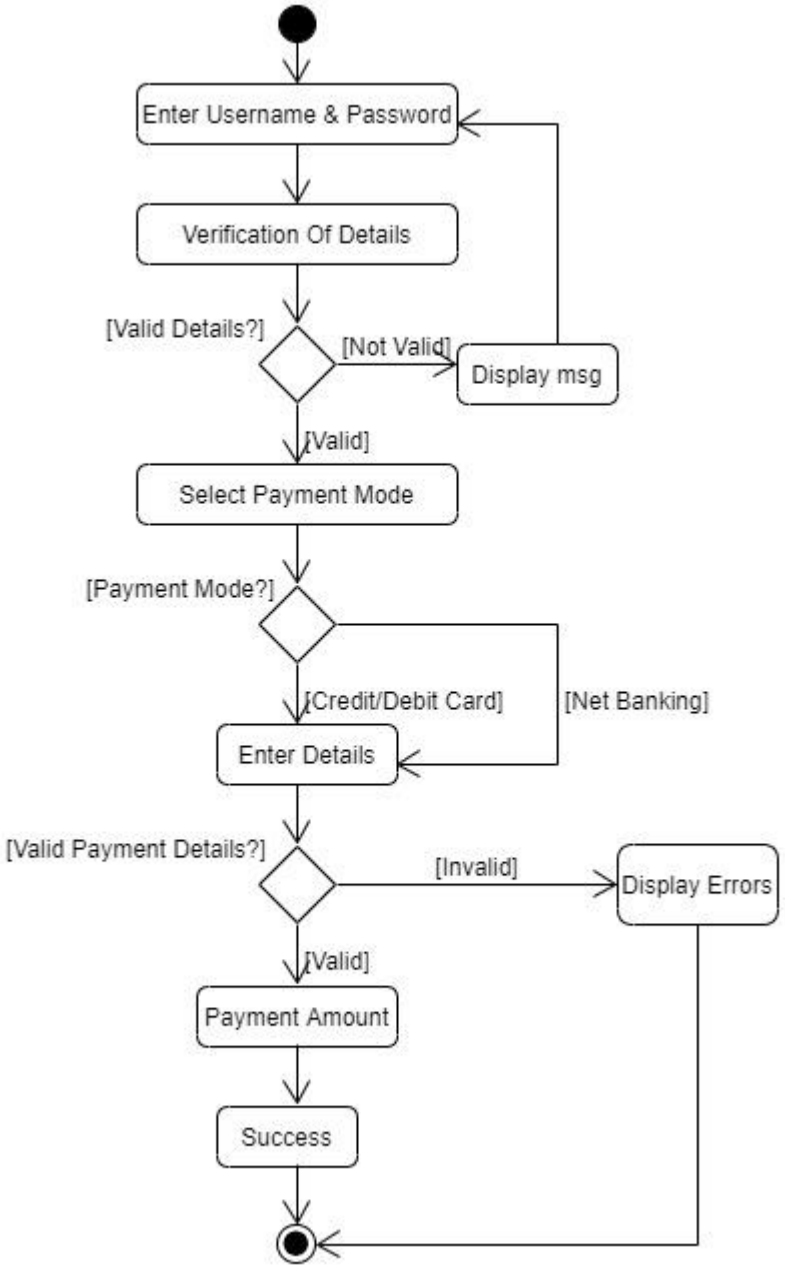


Figure 10 Online payment activity

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.

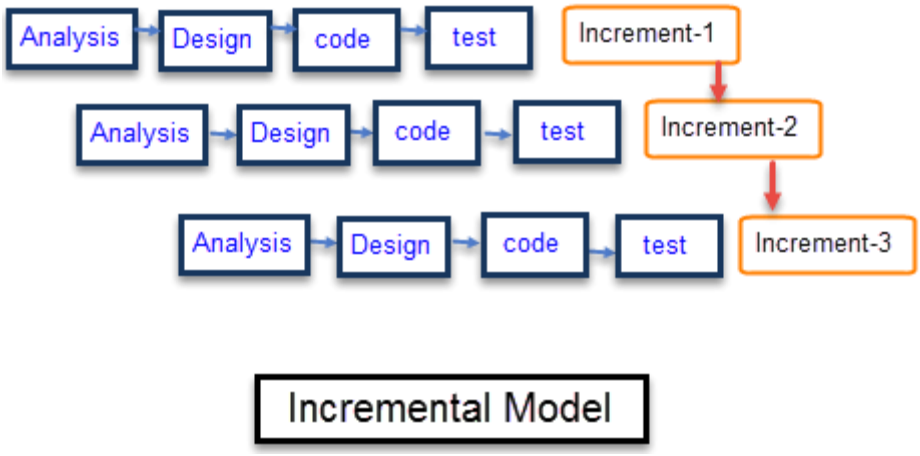


Figure 11 Incremental model

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

Second Module of this system contains fixing of some errors of 1st 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.com_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

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 inteligence

Purpose of the table: -

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

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.

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.

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.

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.

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

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

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_chepter	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.

3.2.18 data_chepter

Table 18 Chepter

Field name	Datatype	Constraint	Sample value
chepter_id	INT	PRIMARY KEY	01
chepter_name	VARCHAR (20)	NOT NULL	Introducation of php
chepter_number	INT	NOT NULL	4
course_id	INT	FOREIGN KEY	07
chepter_duration	VARCHAR (5)	NOT NULL	2 hours

Purpose of the table: -

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

3.2.19 data_chepter_lesson

Table 19 Chepter lesson

Field name	Datatype	Constraint	Sample value
lesson_id	INT	PRIMARY KEY	02
lesson_name	VARCHAR (20)	NOT NULL	variable declaration
chepter_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 chepter.

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

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.

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

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	DATATIME	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	DATATIME	NOT NULL	

Purpose of the table: -

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

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	DATATIME	NOT NULL	

Purpose of the table: -

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

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.

4.3 Home page

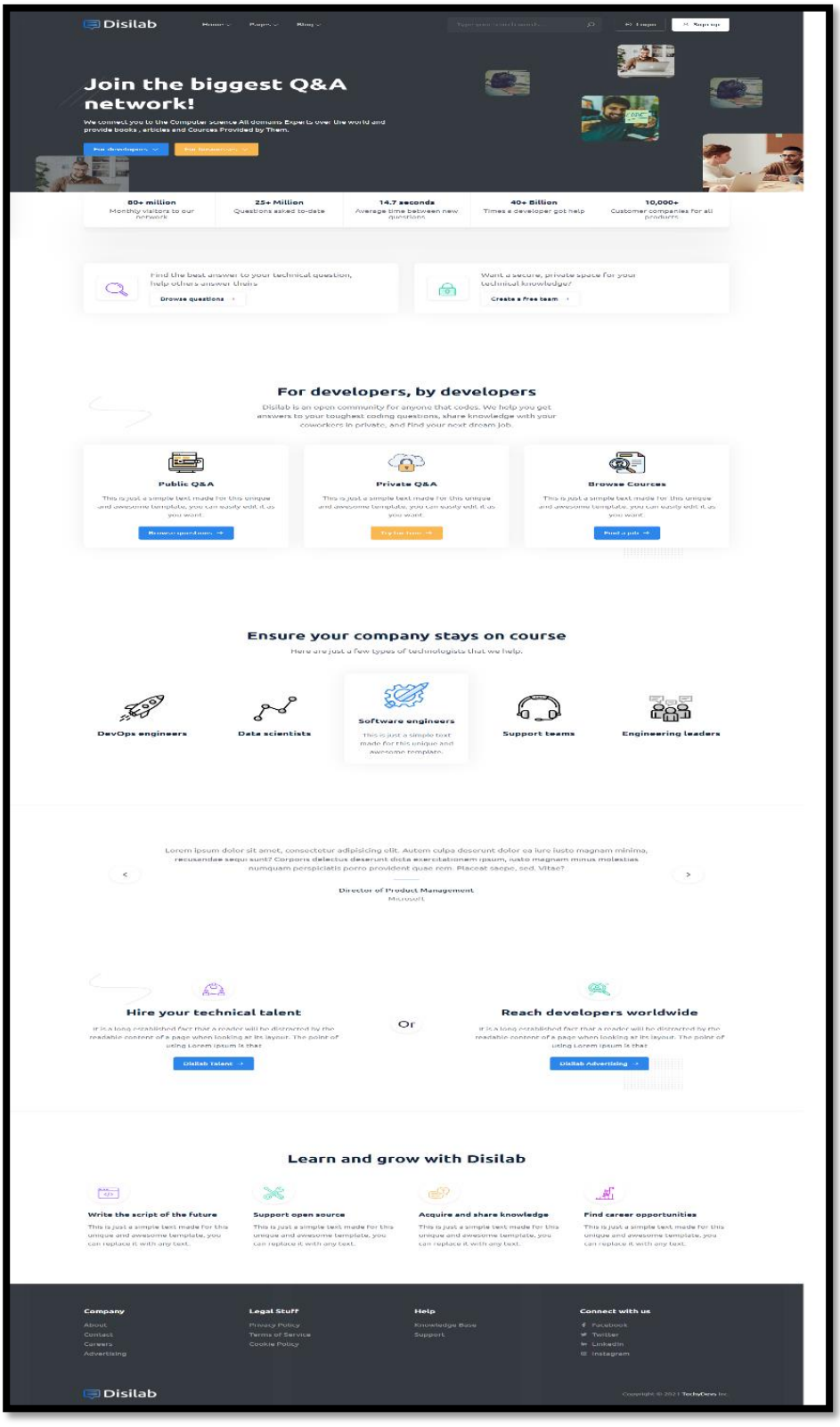


Figure 12 Home page

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

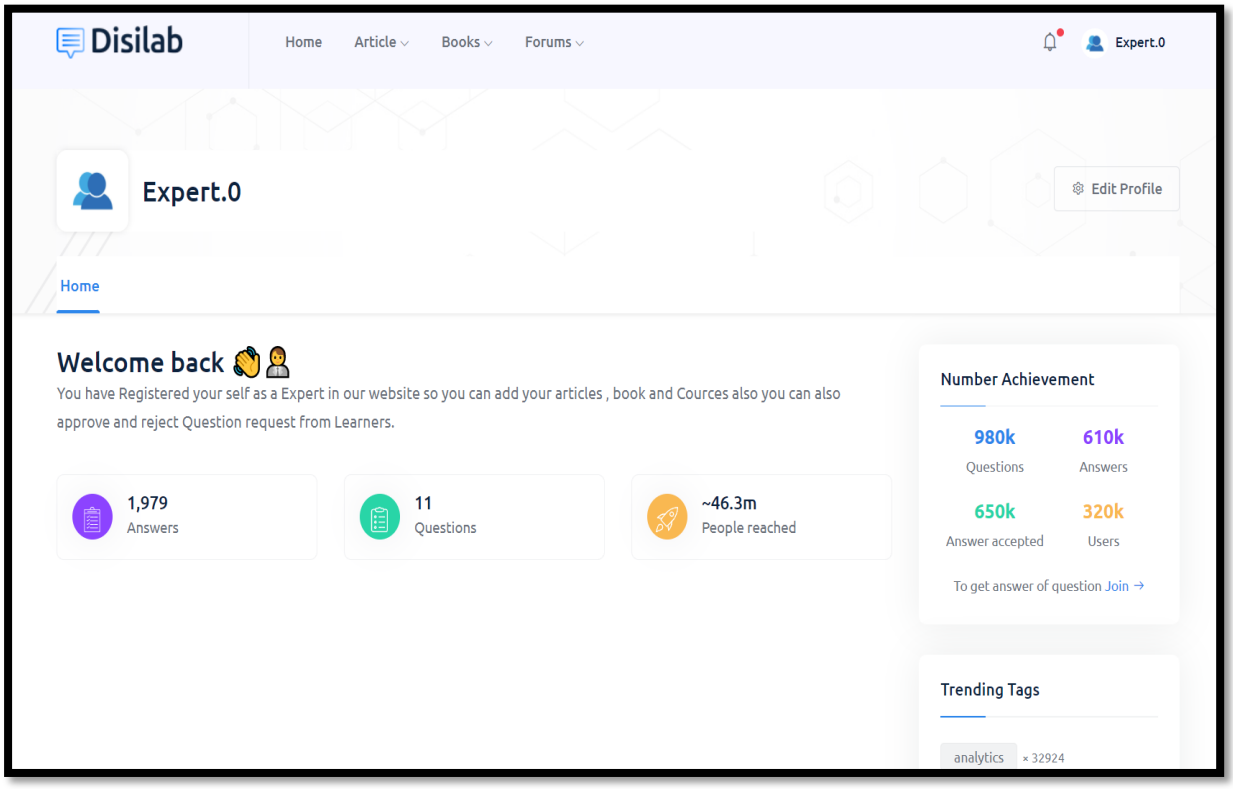


Figure 13 Dashboard of expert

Table 32 Dashboard of expert

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

4.5 Dashboard of learner

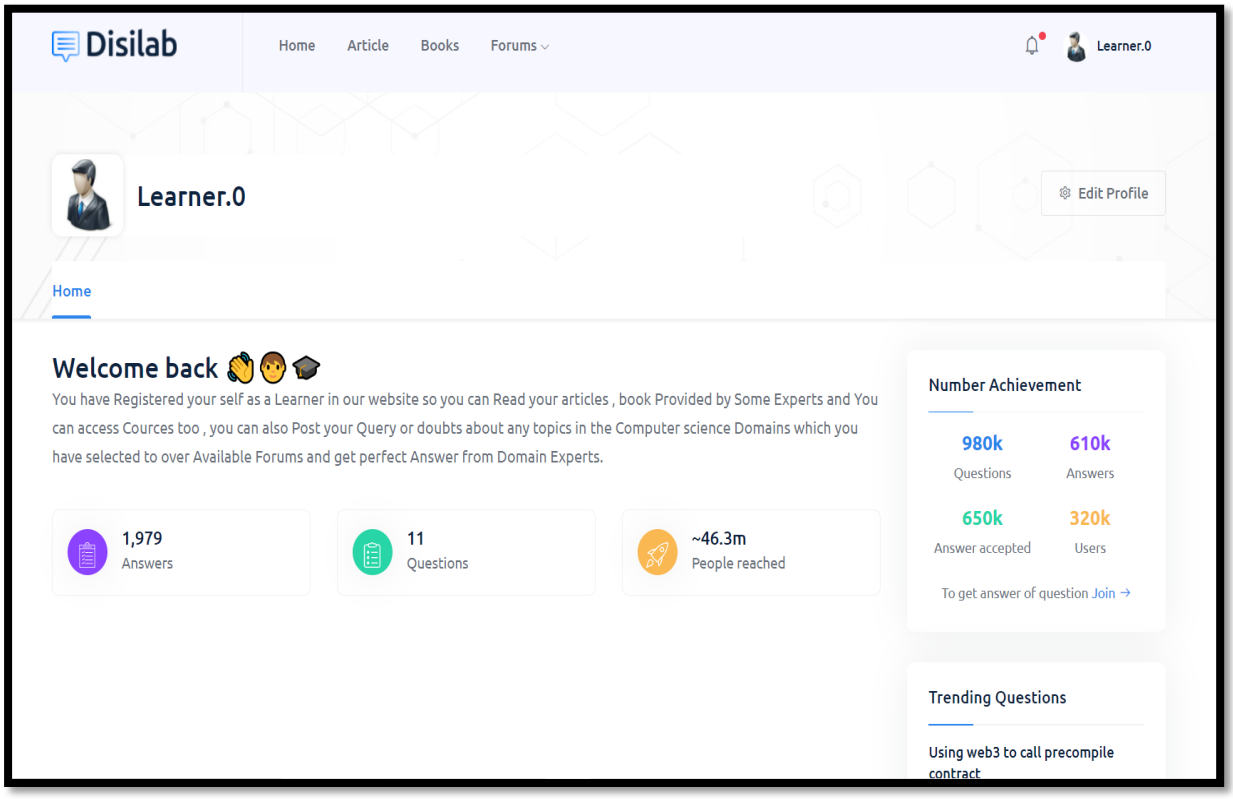


Figure 14 Dashboard of learner

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

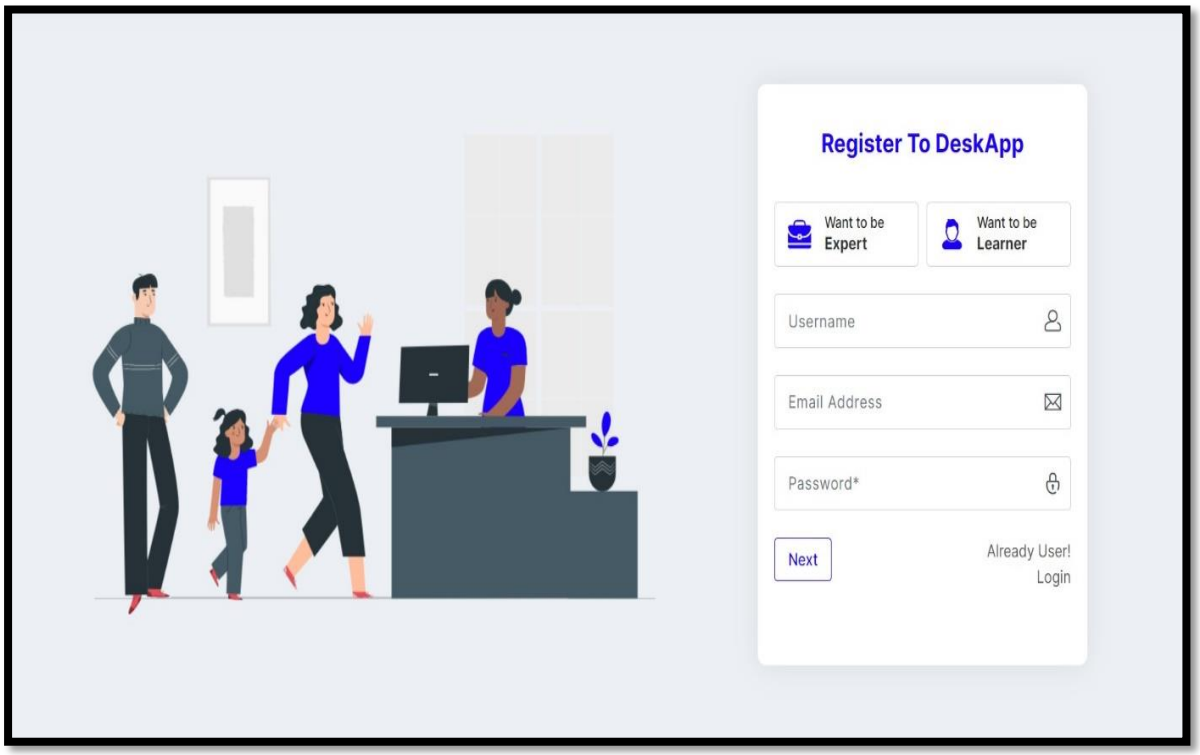


Figure 15 Sign up page

Table 34 Sign up page

Purpose	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.
Used HTML controls	Text box, Button, Radio button
Associated tables	Data_User
Data In	User_name, email_id, Password, user_type
Data Out	Data_expert, Data_learner
Validation	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

4.7 Login page

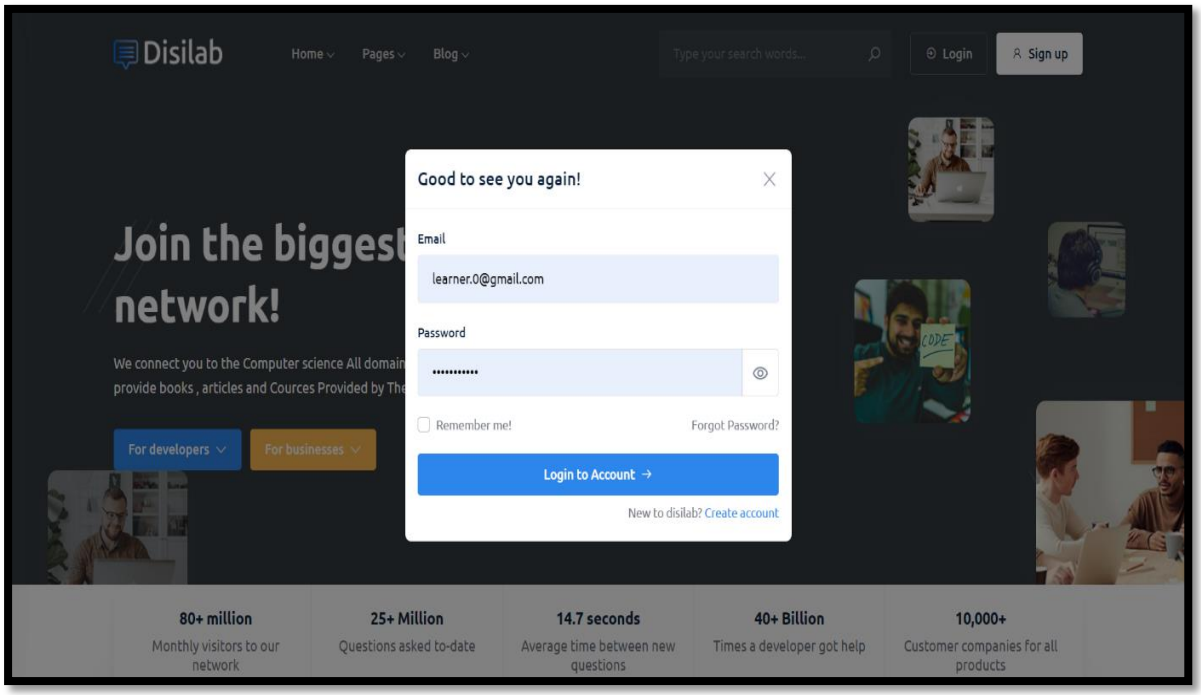


Figure 16 Login page

Table 35 Login page

Purpose	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.
Used HTML controls	Text box, Button
Associated tables	Data_user
Data In	User_name, Password
Data Out	home page
Validations	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

4.8 Article home page

Figure 17 Article home page

Table 36 Article home page

Purpose	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.
Used HTML controls	Button, Navigation
Associated tables	----------
Data In	----------

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

4.9 Article list page

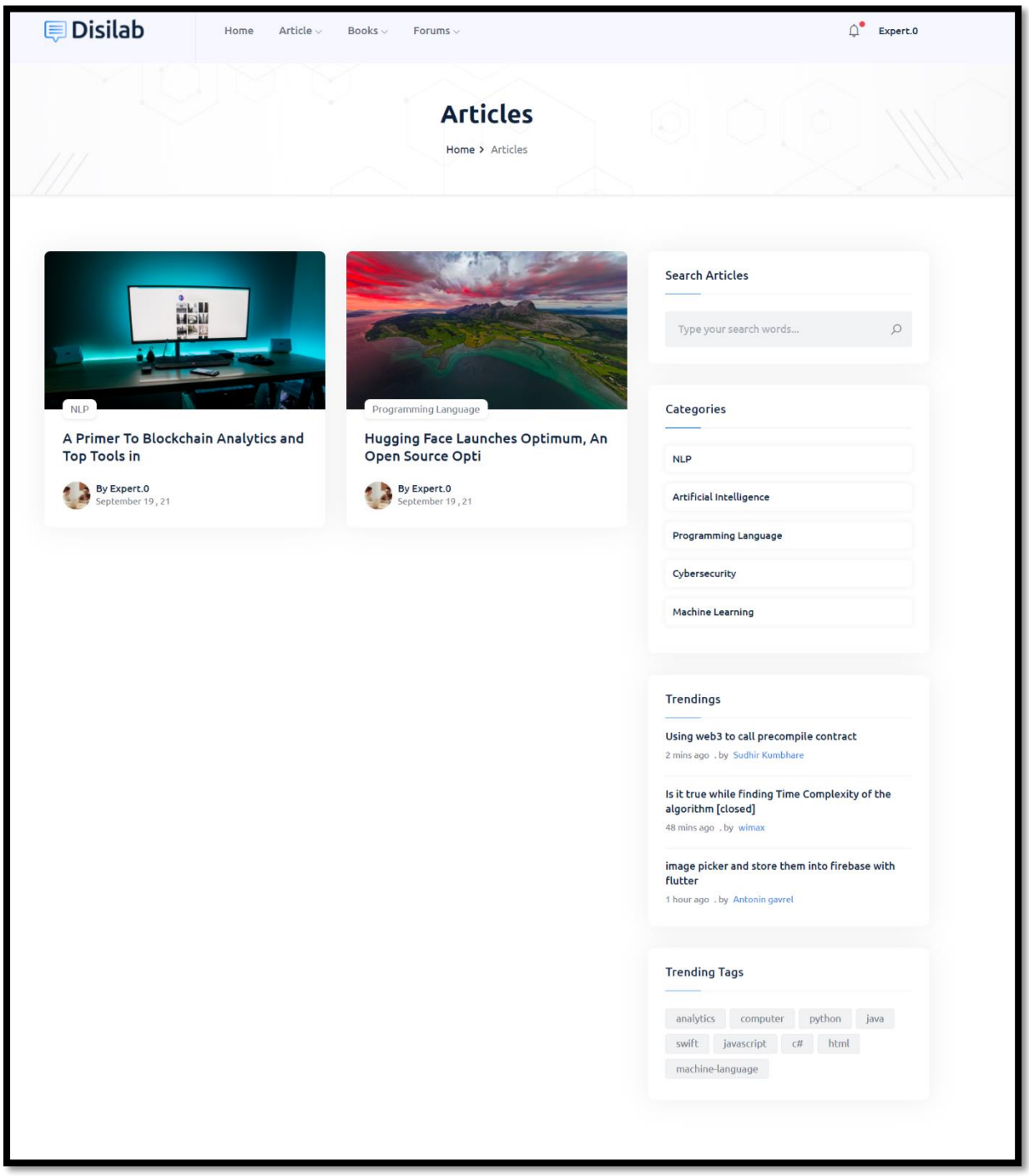


Figure 18 Article list page

Table 37 Article list page

Purpose	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.
Used HTML controls	Search box, Button, Navigation
Associated tables	----------
Data In	----------
Data Out	----------
Validations	----------

4.10 Book home page

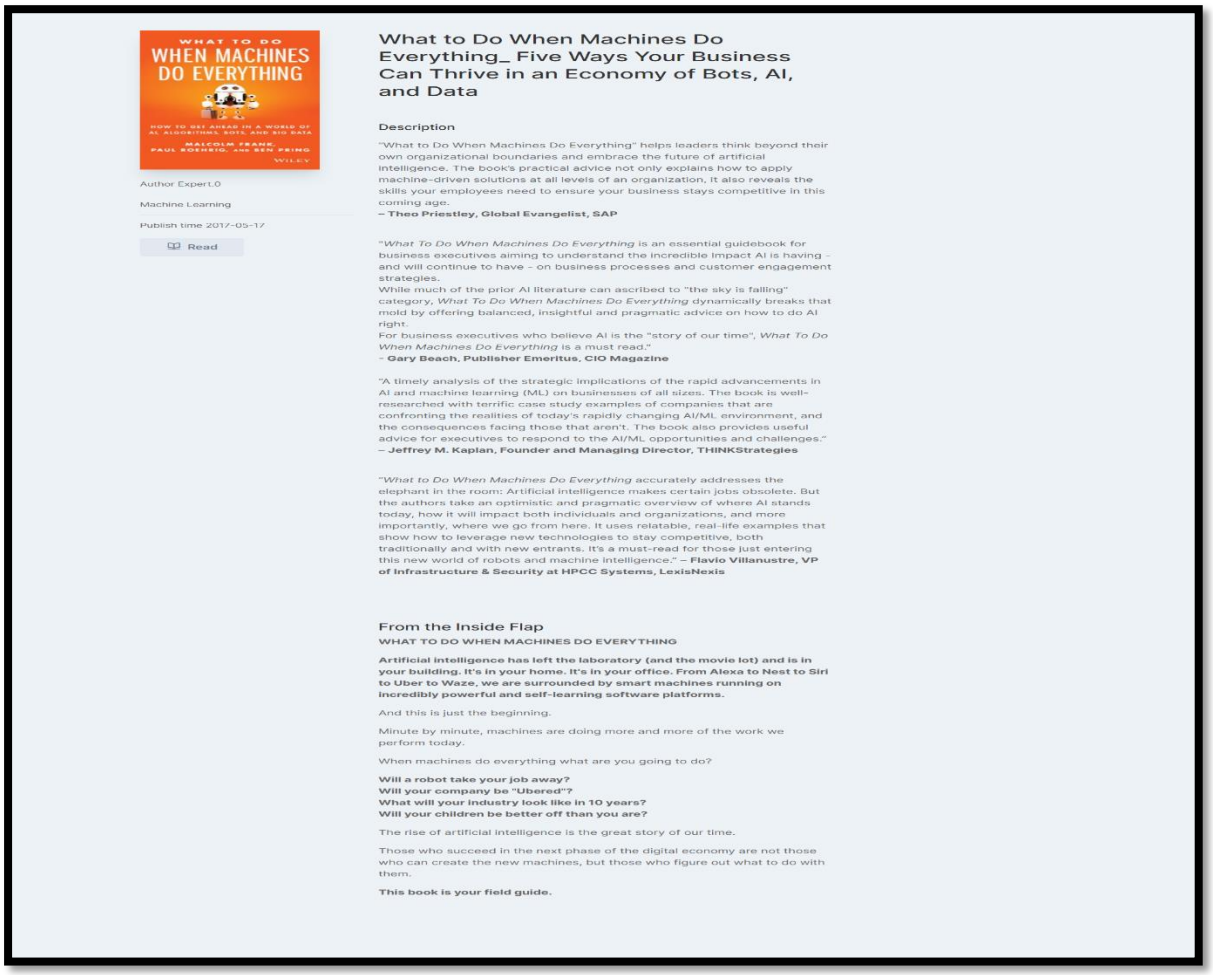


Figure 19 Book home page

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

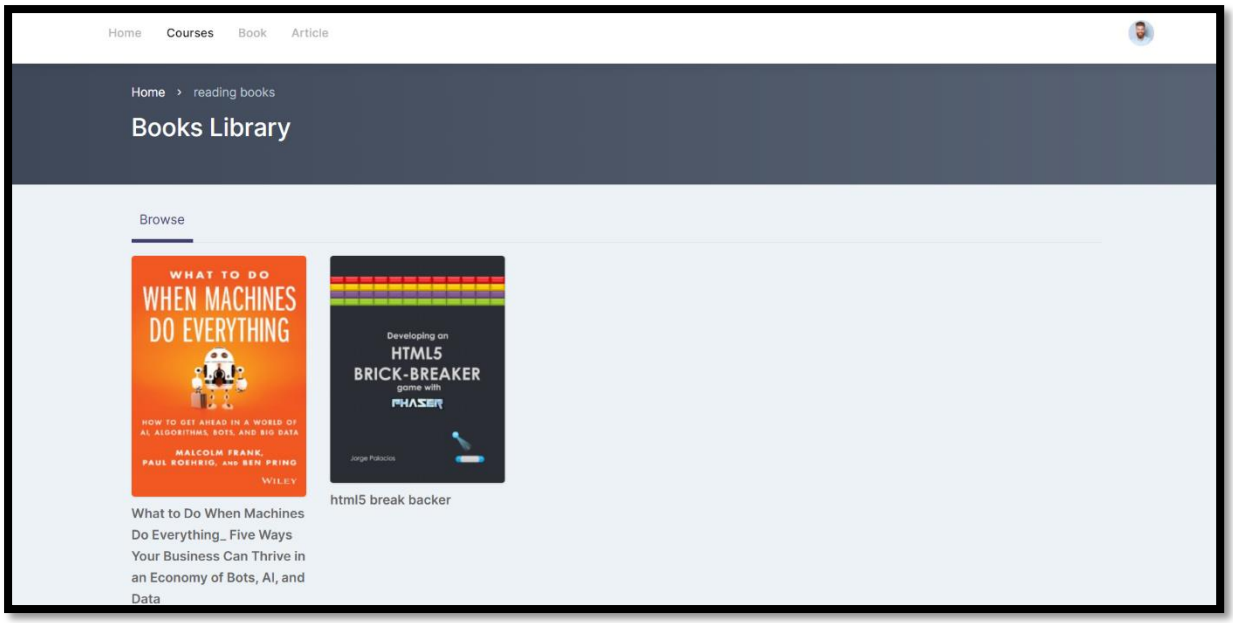


Figure 20 Book list page

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	----------

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

4.12 Course list page

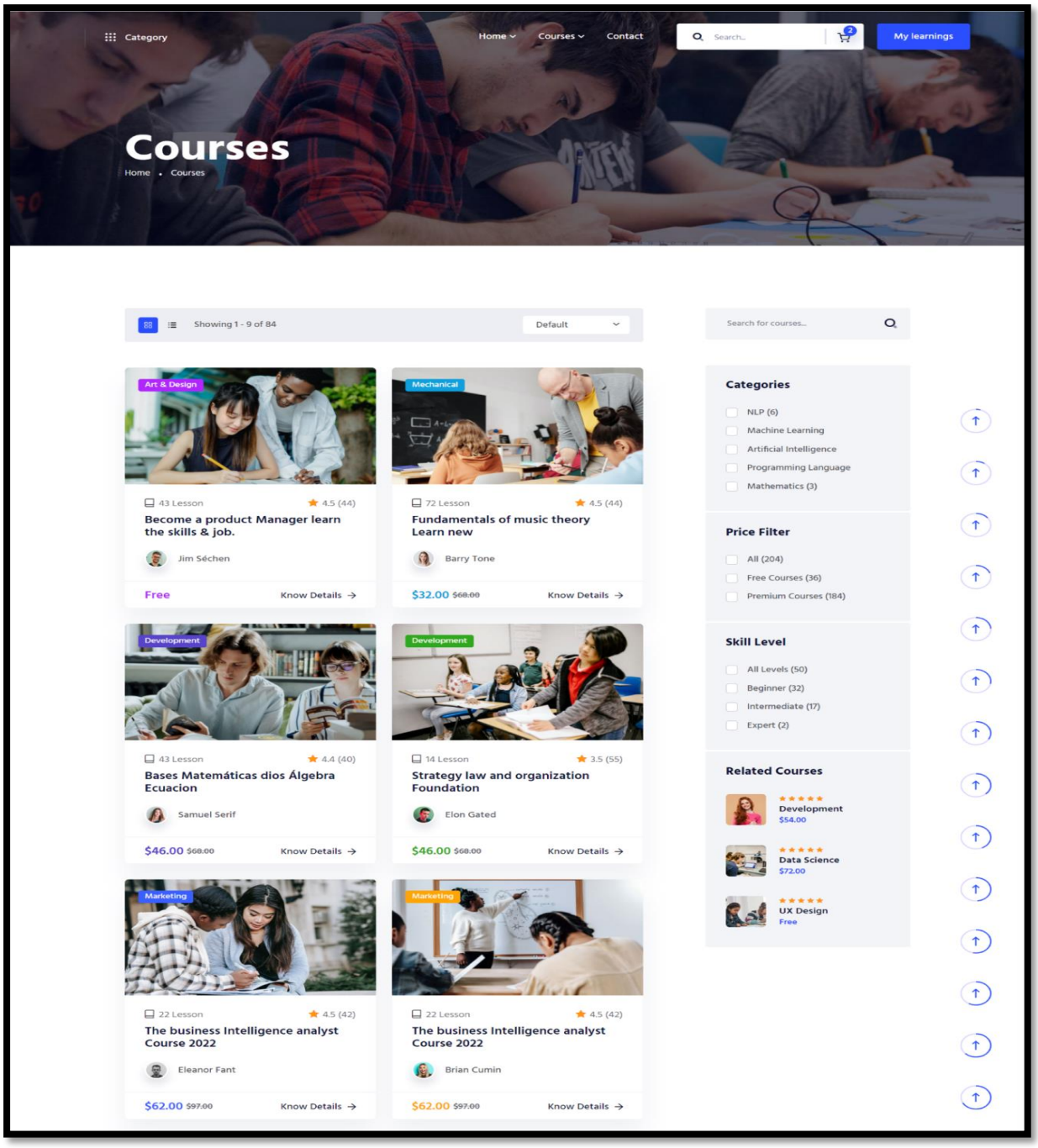


Figure 21 Course list page

Table 40 Course list page

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

4.13 Course single page

Figure 22 Course single page

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

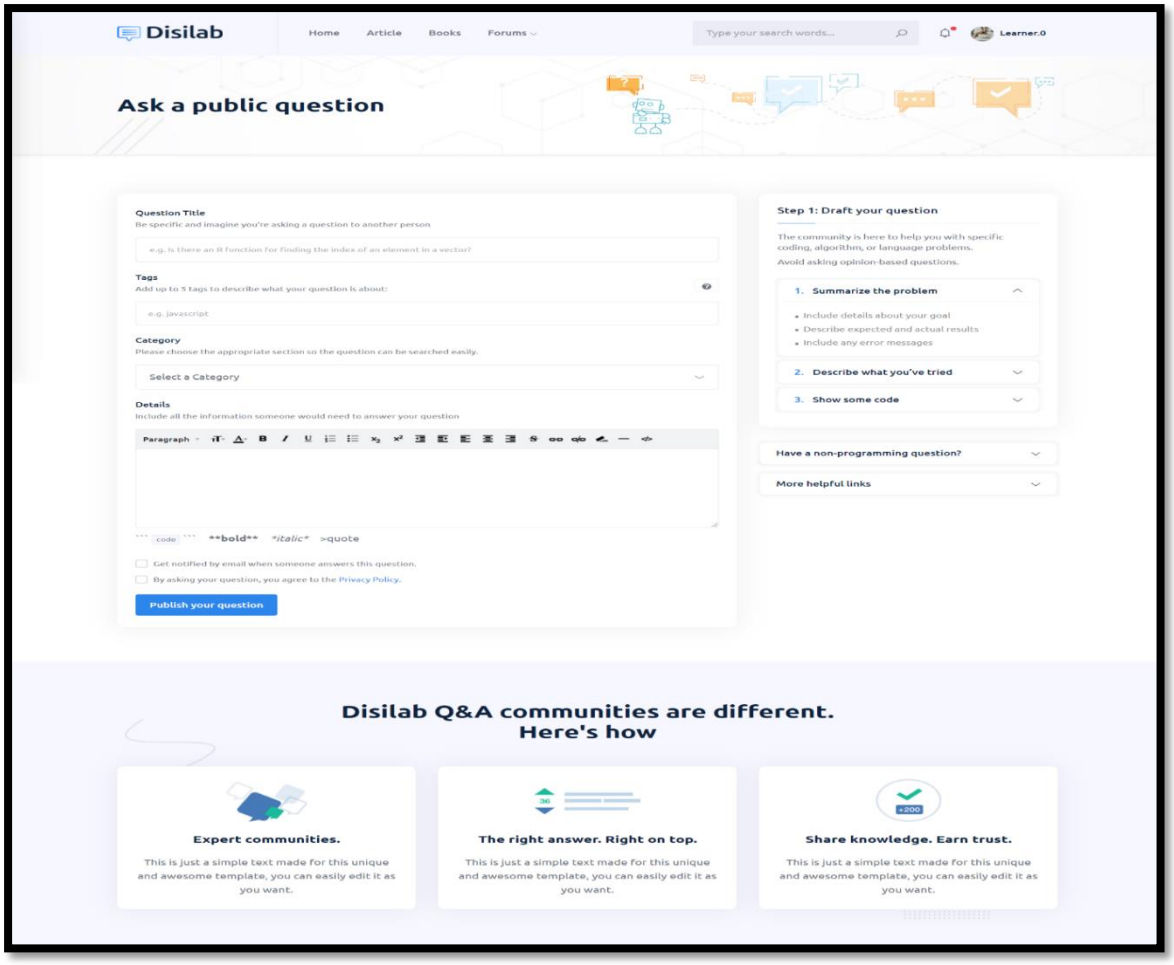


Figure 23 Question draft page

Table 42 Question draft page

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

4.15 Online compiler

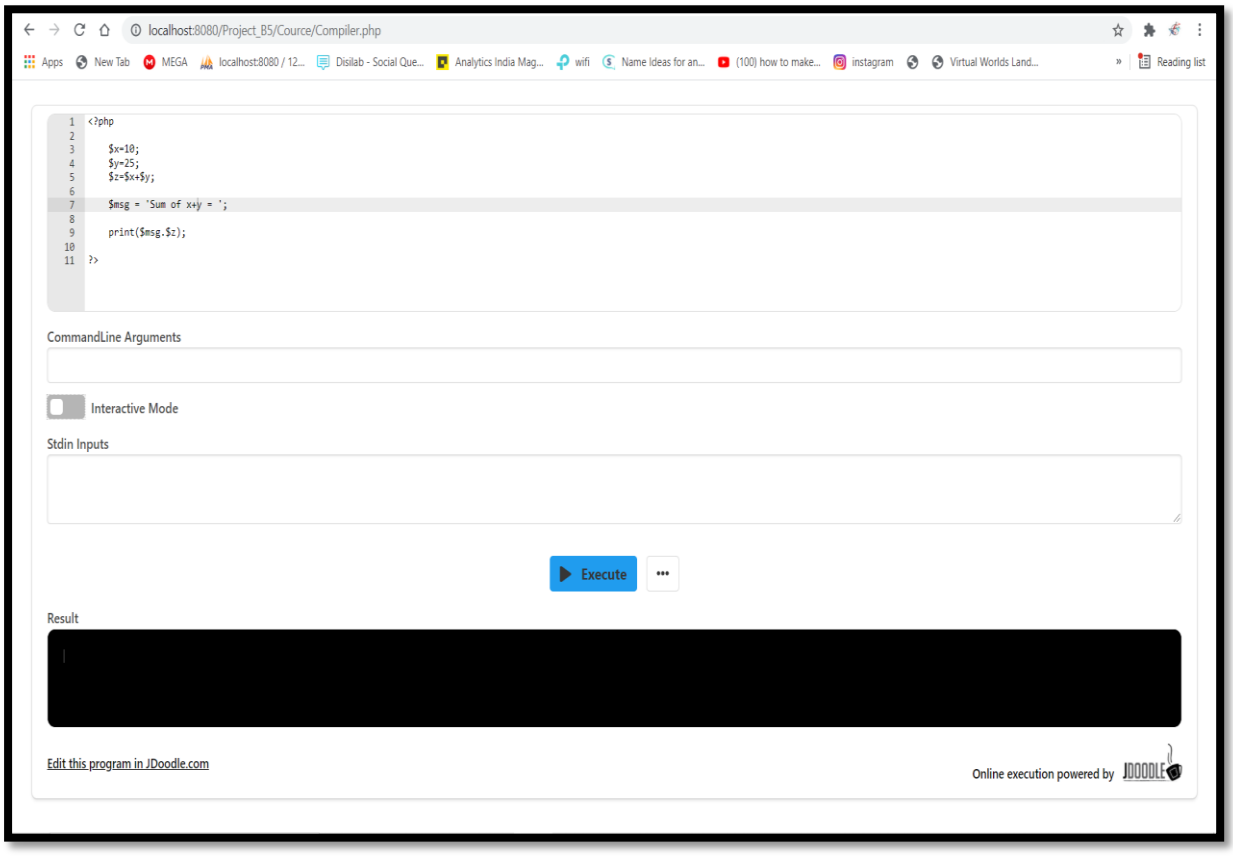
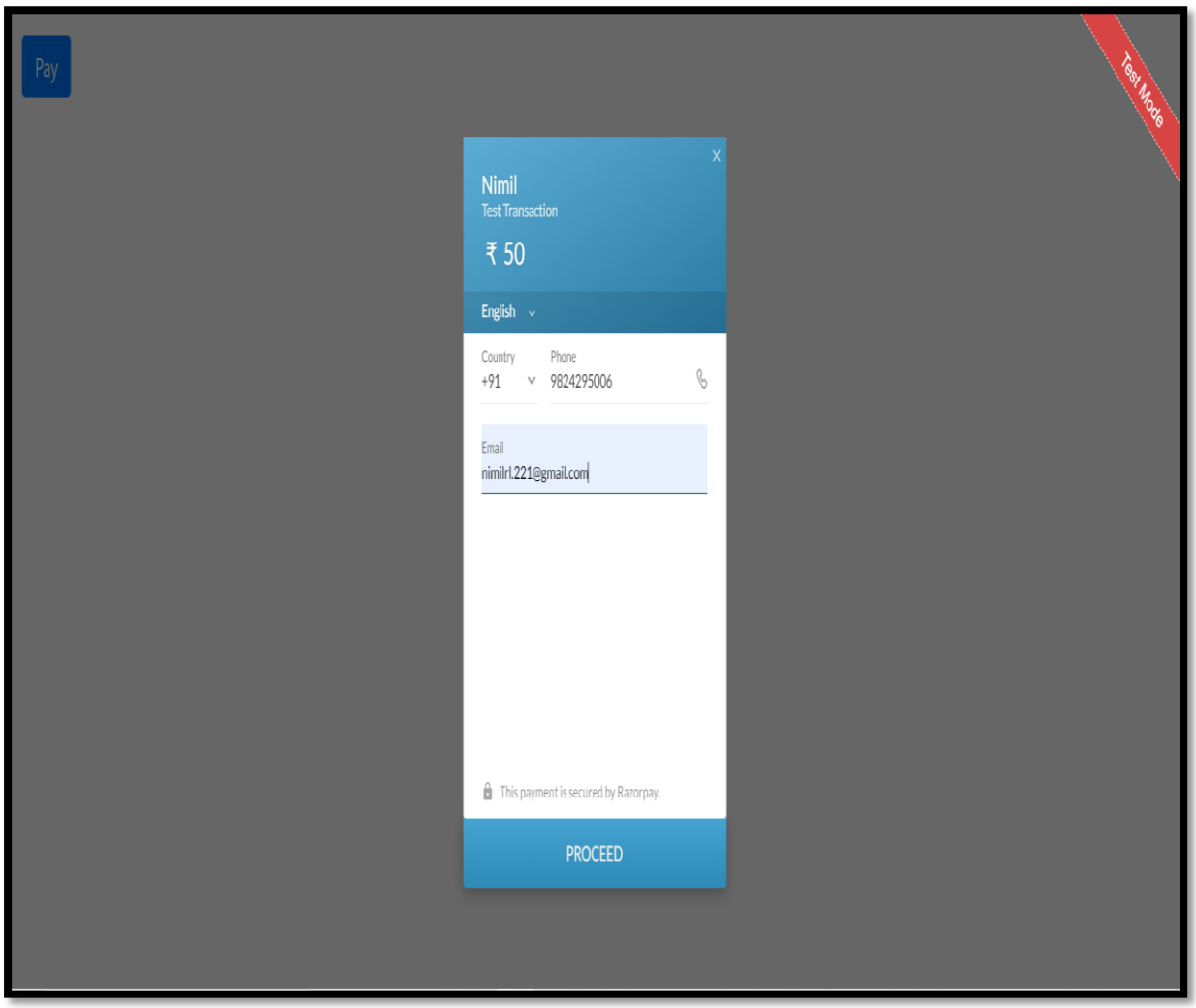


Figure 24 Online compiler page

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: -



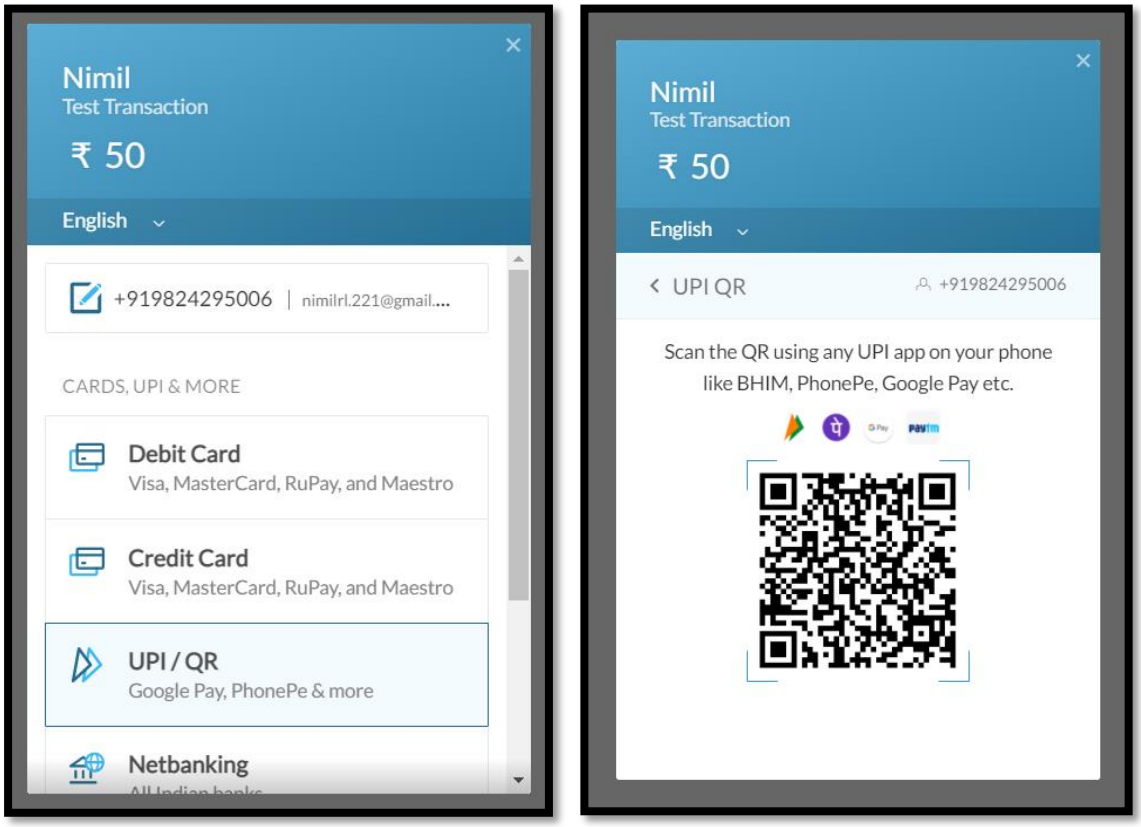


Figure 25 Payment gateway page

Table 44 Pyament gateway page

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

5. System Testing

5.1 Validation Testing

5.1.1 Registration page test report

Table 45 Registration page test report

Test Description	Element	Selenese	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=btnsignup	Next	Next	Pass

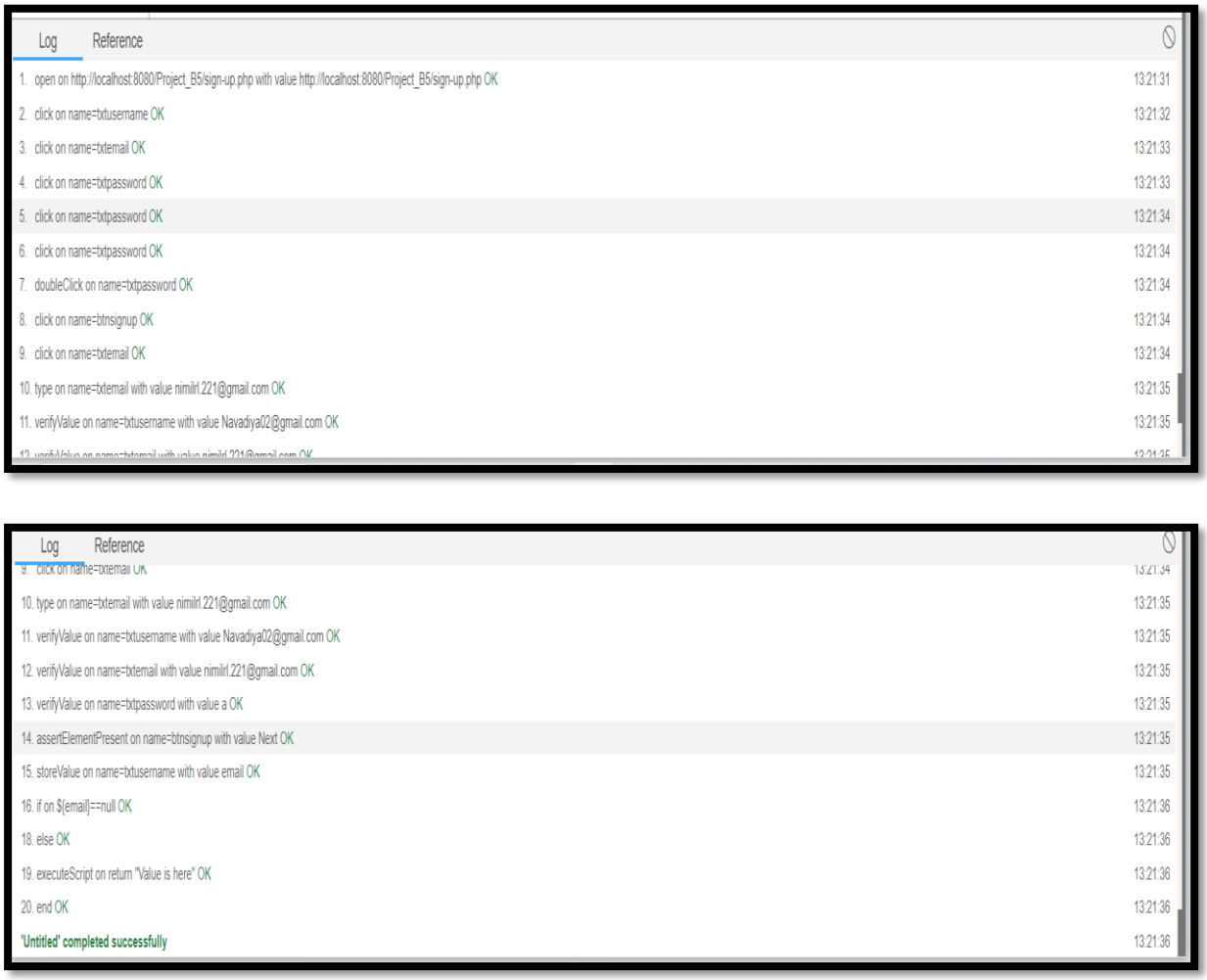


Figure 26 Registration page test report

5.1.2 Learner registration page test report

Table 46 Learner registration page test report

Test Description	Element	Selenese	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

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

Figure 27 Learner registration page test report

6. References

- https://docs.jdoodle.com/
- https://www.javatpoint.com/creating-mysql-database-with-xampp
- https://www.apachefriends.org/faq_windows.html
- http://httpd.apache.org/docs/
- https://www.php.net/docs.php
- https://developer.mozilla.org/en-US/docs/Web/HTML
- https://dev.mysql.com/doc/