Course: SWE-573-Software Development Practice

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Date: 05.04.2022

# Milestone-1

# Report for LetsColearn Project

This report shows the status of LetsColearn project for milestone 1 which is showed in the project plan in section 5. Deliveries of this milestone are defining product scope, mockup design, requirements specification, creation of software design model, creation of project plan, preparation of development environment and creation of project skeleton.

Project skeleton is created and development environment is prepared in ubuntu mate operating system. It is documented with all steps in project wiki.

Project Skeleton: https://github.com/fatihcirakoglu/bounswe573-2022
Project Initializationhttps://github.com/fatihcirakoglu/bounswe573-2022/wiki/ProjectInitialSetup

Django framework is selected for this project, besides that a scalable database type is selected which is MySql for this project.

# 1-Product Scope:

LetsColearn application is a web platform which creates a co-learning platform that connects the people who wants to teach anything to the people who like learning new things. This platform will completely have a organic process that means there will be no assessment of the content that is being teached by some body, in other means, users of the platform will determine the quality of content that is shared on the platform. So, users will score the content and provide useful feedbacks. So, the main aim of this application is to gain best information from one user to other users and inspire people to share valuable information on any topic.

# 2-Scenarios and Mockups:

Main page shows most popular categories that includes most viewed topics as shown in Figure-1. It also includes login, register, FAQs and help section on top right side. With explore more option, other categories could be viewed. There is a footer at bottom side that includes various links for statistics, privacy policy, content policy etc.
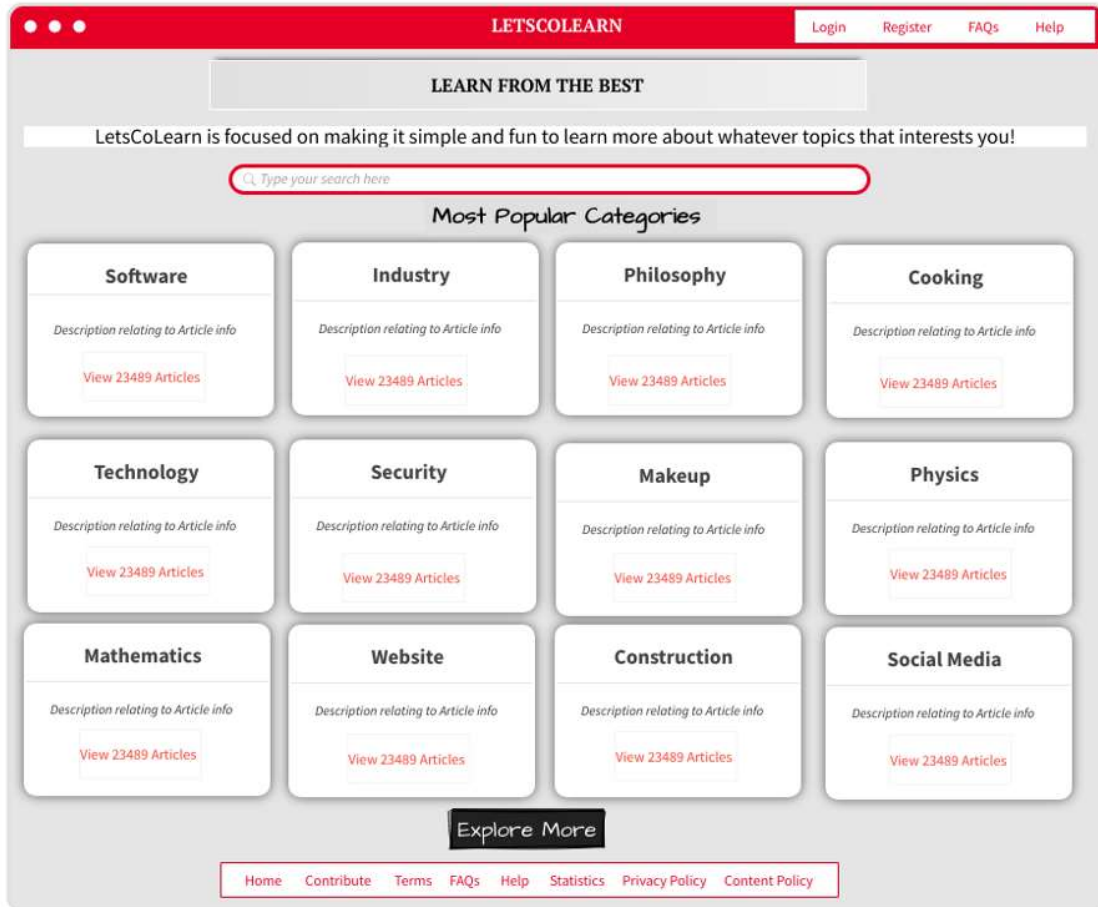
Figure-1 Main page of application

Main page after login shows favorite categories of user as shown in Figure-2. It also includes logout, FAQs and help section on top right side. With explore more option, other categories could be viewed. There is a footer at bottom side that includes various links for statistics, privacy policy, content policy etc.
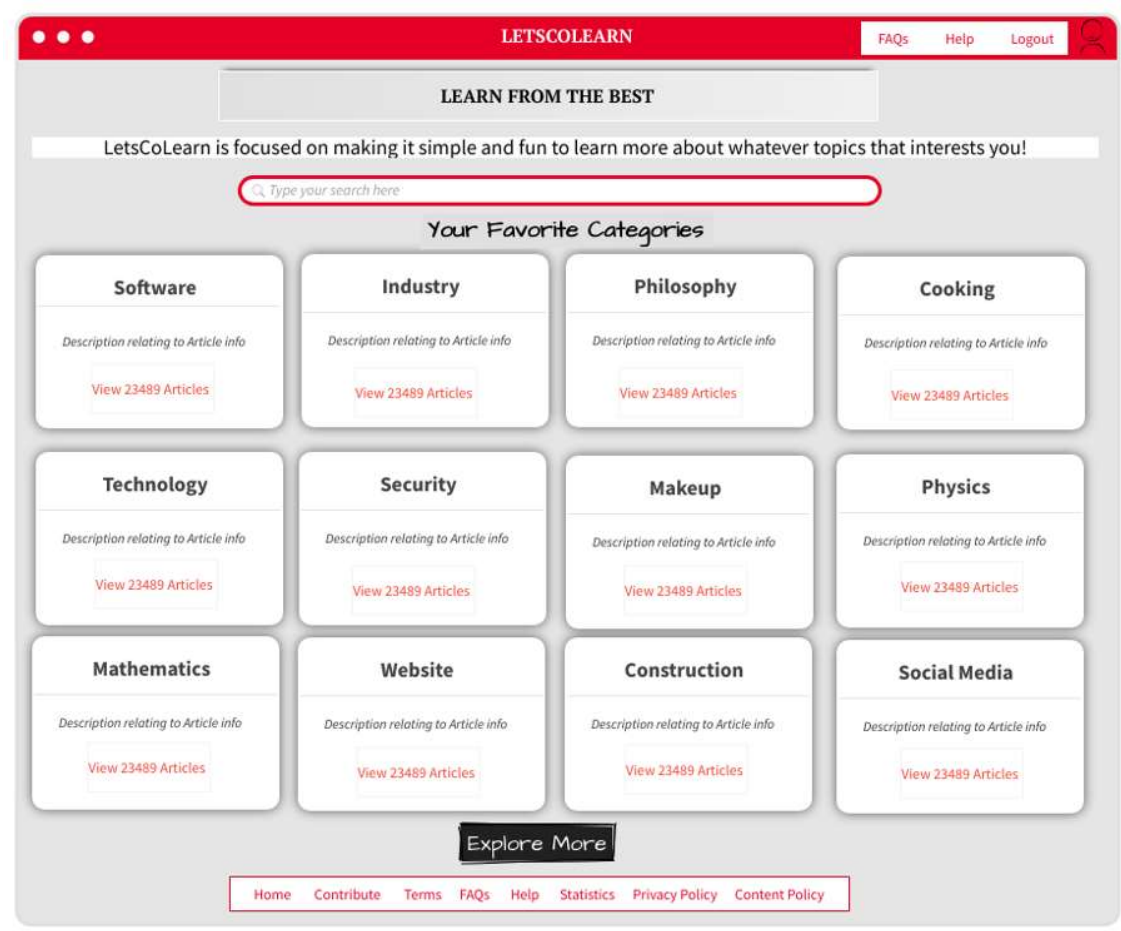


Figure-2 Main page of after user login to application

Login page after clicking login shows login steps as shown in Figure-3.



Figure-3 Login page after user clicks login button in application

Register page after clicking register button shows registration steps as shown in Figure-4, password will be requested twice.



Figure-4 Register page after user clicks login button in application

User profile page will display user photo, user name, user badge, user age, living place, created resources by the user, favorite categories of user and new content creation button as shown in Figure-5.
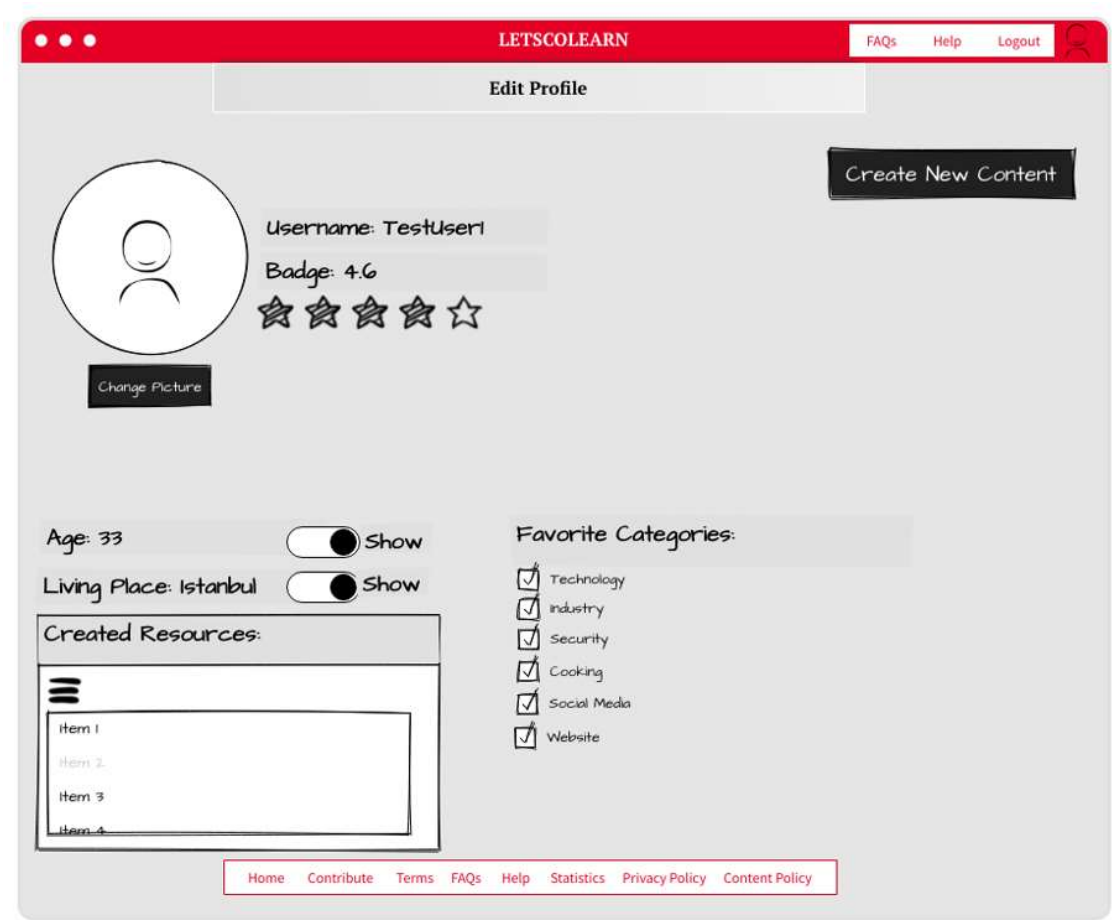


Figure-5 User profile page after user clicks avatar button in application

New content creation page will display a drop-down menu for category selection then it will display an empty page for content creation. This empty page will include three buttons on bottom that are close, save change and publish as shown in Figure-6. External videos will be embeddable in this page.
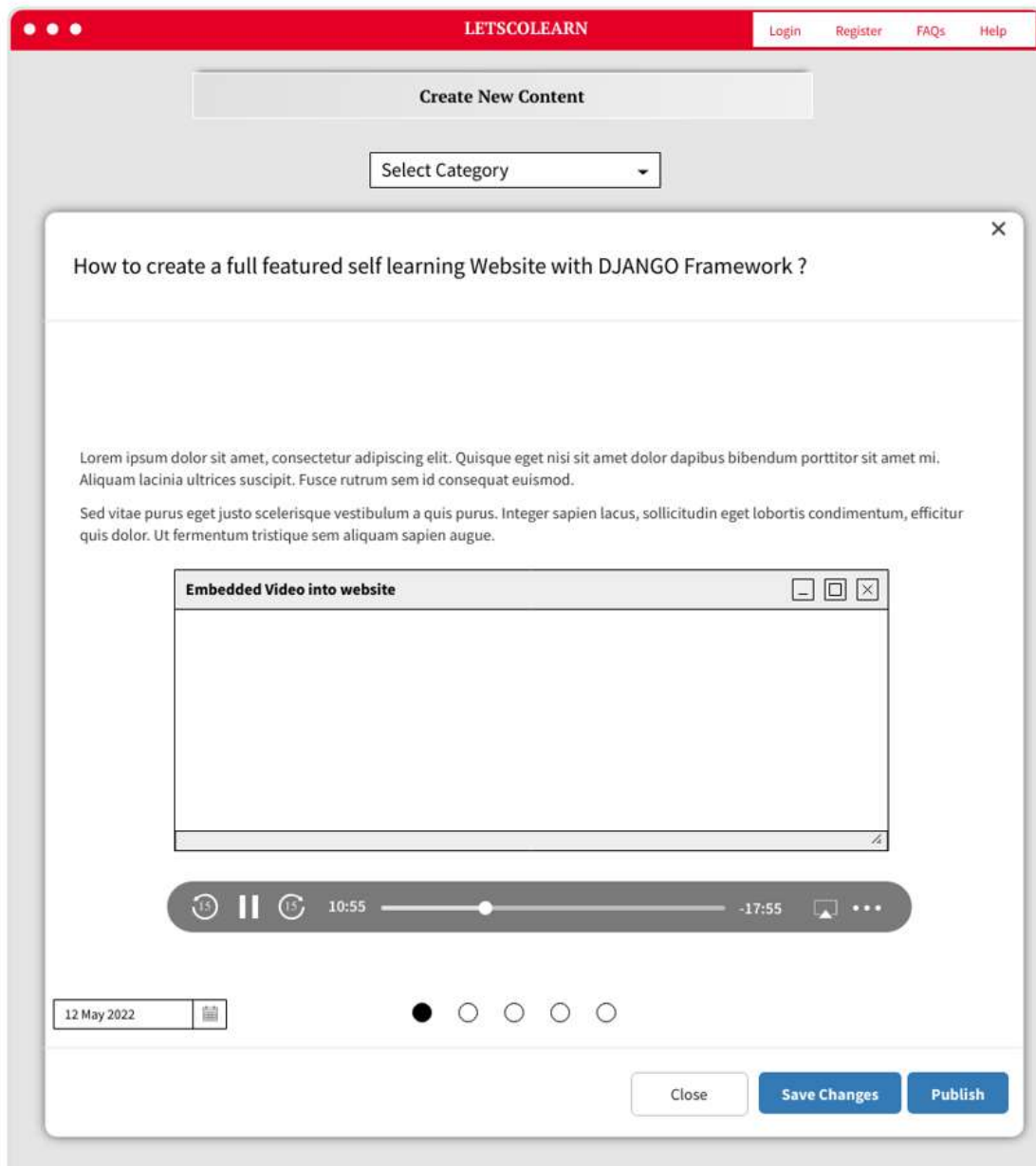


Figure-6 New content creation page after user clicks create new content button in his/her profile page in application

Co-learning content page will display content both in video and text forms. It will also show badge on top of page that shows the overall score of this content given by other users, on bottom of content there will be a curriculum to guide users about content as shown in Figure-7. Alo there will be a comment section for this content to get user feedbacks.
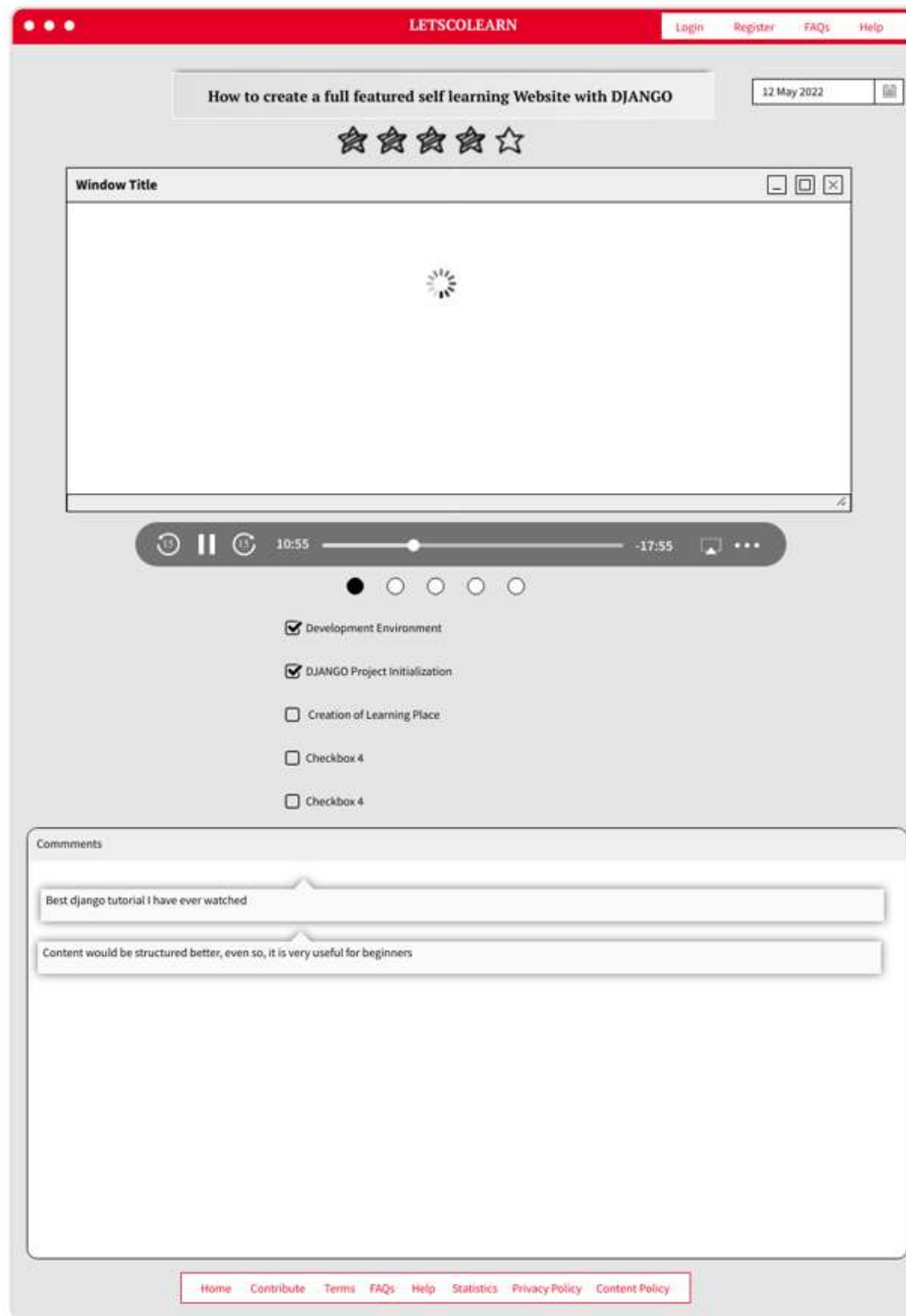


Figure-7 Content page when user displays a co-learning page

# 3-Requirements Specification:

This table shows the functional and non-functional requirements of Info-Exchange application where non-functional requirements are regarded as constraints.

| REQ-1 | NFR | Ubiquitous | LetsColearn shall support interface in only English language. |
|---|---|---|---|
| REQ-2 | NFR | Ubiquitous | LetsColearn shall support content in only English language. |
| REQ-3 | NFR | Ubiquitous | LetsColearn shall be available in worldwide. |
| REQ-4 | NFR | Ubiquitous | LetsColearn shall be available 7/24. |
| REQ-5 | FR | Ubiquitous | LetsColearn application shall have an admin user. |
| REQ-6 | FR | Ubiquitous | LetsColearn shall have an admin page for configuring settings of application. |
| REQ-7 | NFR | Ubiquitous | LetsColearn shall not violate GDPR compliances. |
| REQ-8 | FR | Ubiquitous | LetsColearn shall include a search box on top of main page. |
| REQ-9 | FR | Ubiquitous | LetsColearn shall show most popular categories that includes most viewed topics. |
| REQ-10 | FR | Ubiquitous | LetsColearn shall show login, register, FAQs and help buttons on top right side. |
| REQ-11 | FR | Ubiquitous | LetsColearn shall show explore more option to enable user viewing other categories. |
| REQ-12 | FR | Ubiquitous | LetsColearn shall show at bottom side that includes various links for home page, terms, FAQs, help, statistics, privacy policy and content policy. |
| REQ-13 | FR | Ubiquitous | LetsColearn shall show favorite categories of user on main page after login. |
| REQ-14 | FR | State Driven | LetsColearn shall navigate user to profile page when user clicks avatar. |
| REQ-15 | FR | Ubiquitous | LetsColearn shall enable users to register on the system via email. |
| REQ-16 | NFR | Ubiquitous | LetsColearn shall request password twice during registration. |
| REQ-17 | FR | Ubiquitous | LetsColearn shall enable users to login on the system via email. |
| REQ-18 | FR | Ubiquitous | LetsColearn shall create a user profile on the system for each user. |
| REQ-19 | FR | Ubiquitous | User profiles shall include user photo, user name, user badge, user age, living place, created resources by the user, favorite categories of user and new content creation button. |
| REQ-20 | NFR | Ubiquitous | Users shall be able to configure visibility of age and living place on profile page |
| REQ-21 | NFR | Ubiquitous | Users shall be able to configure their favorite categories on their profiles. |
| REQ-22 | FR | Ubiquitous | Users who create contents shall be scored by other users that this will define user badge. |
| REQ-23 | FR | Ubiquitous | Users shall be able to create a page to share some content on the system. |

| REQ-24 | FR | Ubiquitous | New content creation page shall display a drop-down menu for category selection |
|--------|----|-----------|------------------------------------------------------------------------|
| REQ-25 | FR | Ubiquitous | New content creation page shall display an empty page for content creation. |
|        |    |           | Content page shall include three buttons on bottom that are close, save change and publish. |
| REQ-26 | FR | Ubiquitous | External videos shall be embeddable in content page. |
| REQ-27 | FR | Ubiquitous | LetsColearn shall enable users to share text content on the pages. |
| REQ-28 | FR | Ubiquitous | Users shall be able to score created resources on the system. |
| REQ-29 | FR | Ubiquitous | Users shall be able to comment on created resources on the system. |
| REQ-30 | FR | Ubiquitous | Users shall be able to score each comment on the system. |
| REQ-31 | FR | Ubiquitous | Users shall be able to report inconvenient content on the system |
| REQ-32 | FR | Ubiquitous | Users shall be able to cancel his/her membership on the system. |
| REQ-33 | FR | Ubiquitous | Admin user shall have rights for removing inconvenient content. |

# 4-Design Models:

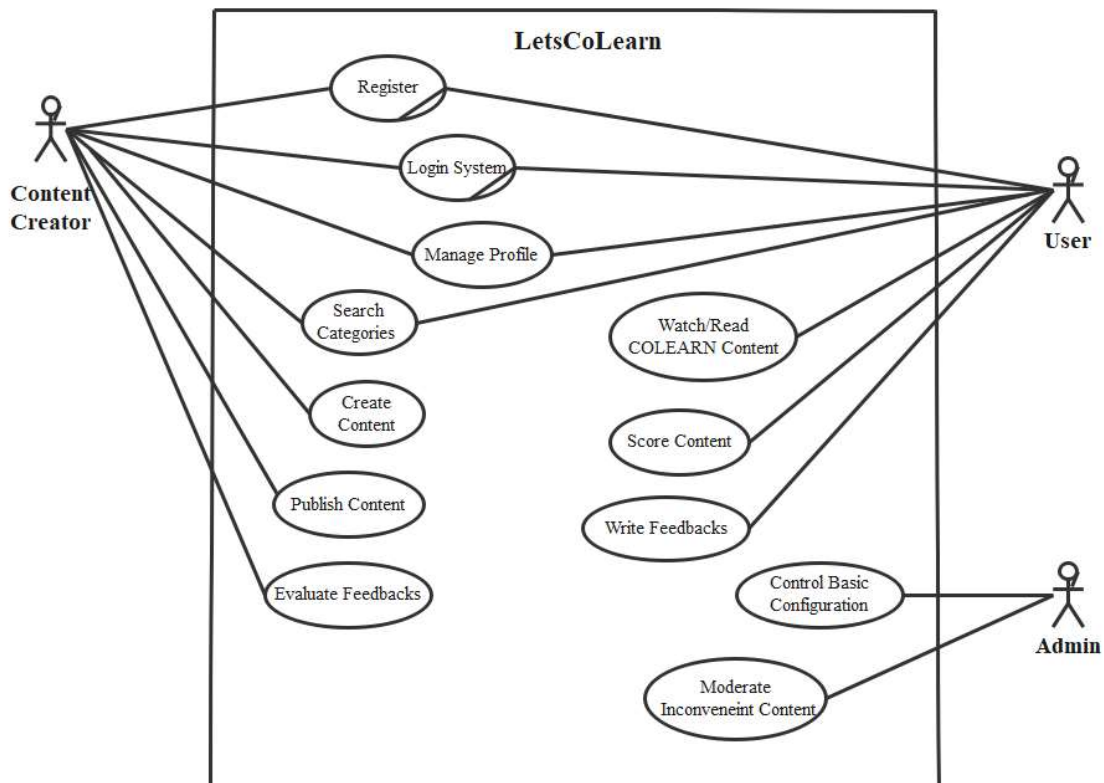LetsColearn project use case models are like below.



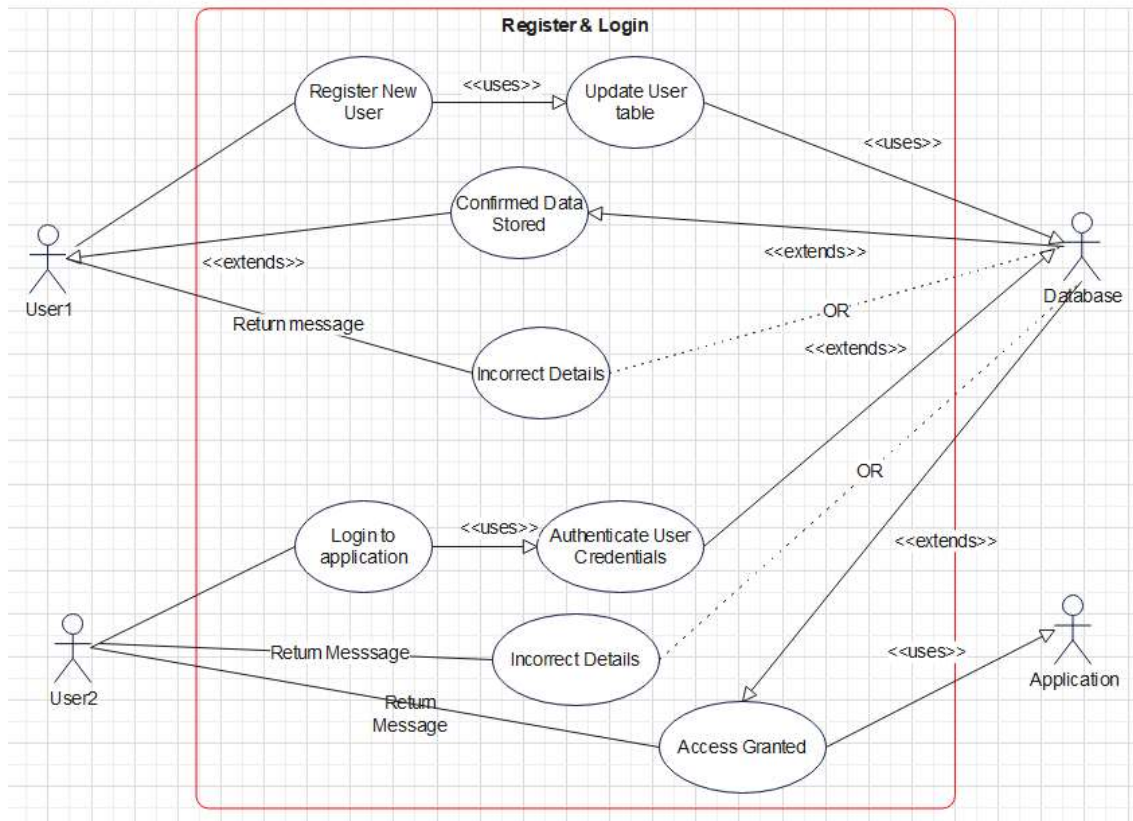Figure-8 LetsColearn application overall use case diagram

Figure-9 Login and Register process use case diagram
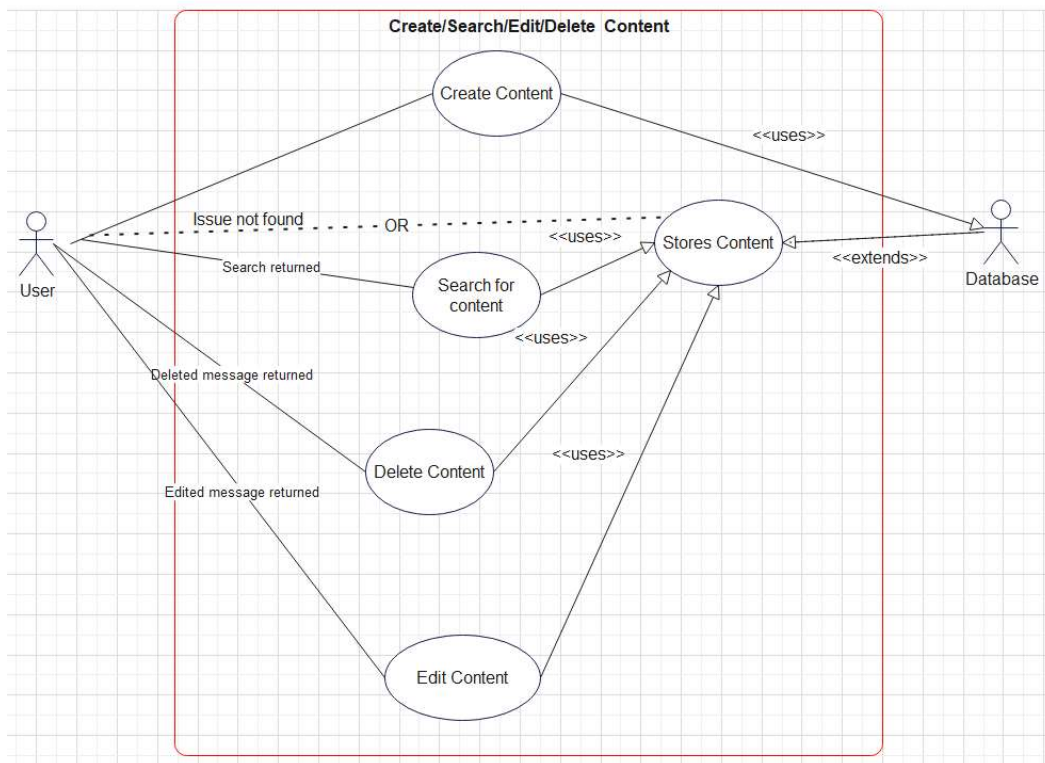


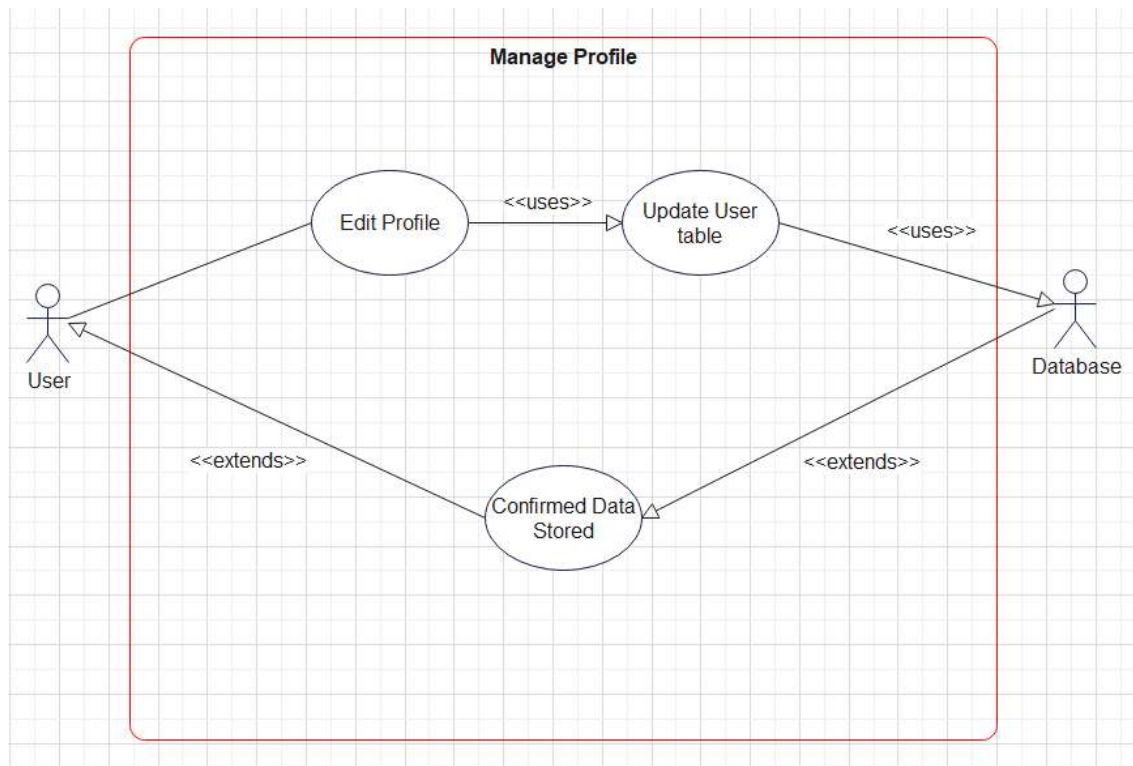Figure-10 Create/Search/Delete content use case diagram

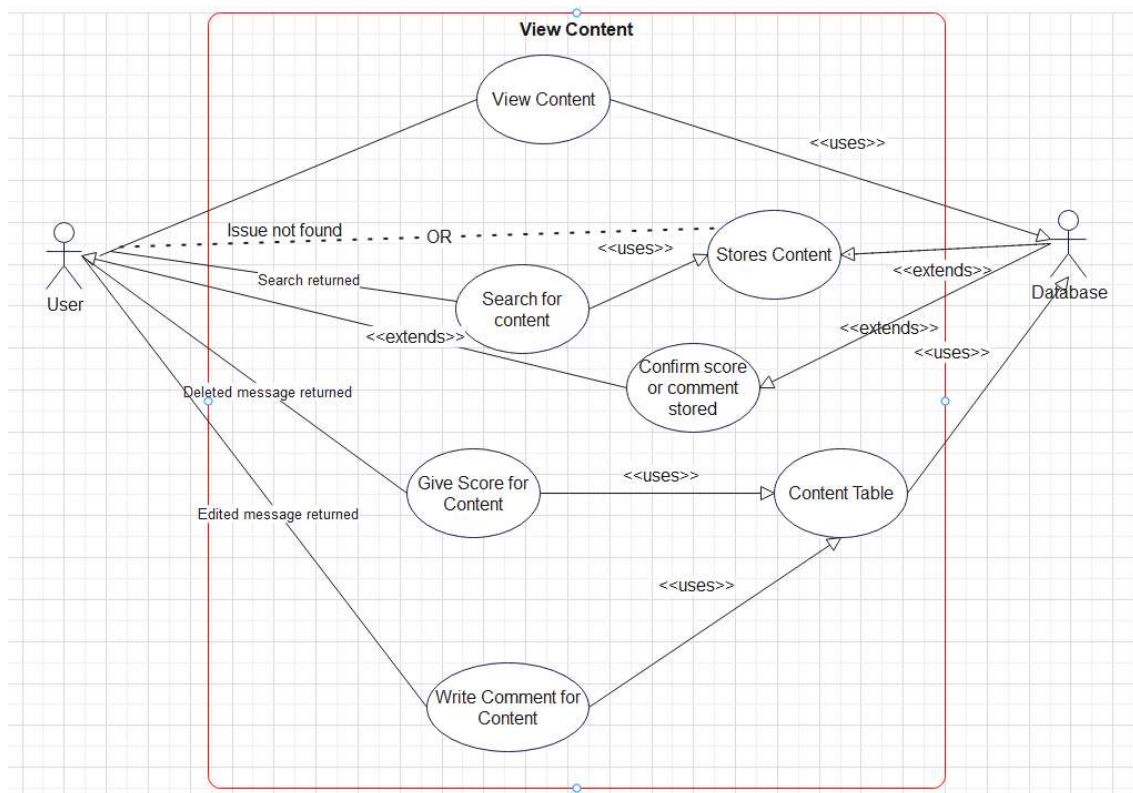Figure-11 Profile management use case diagram



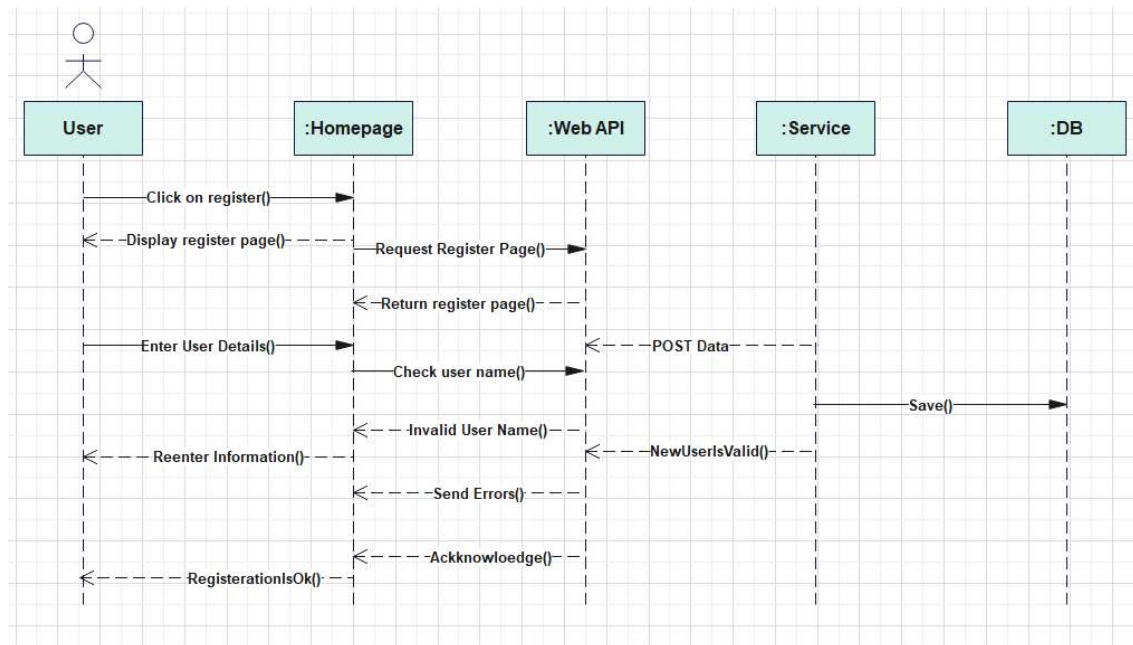Figure-12 Content management use case diagram

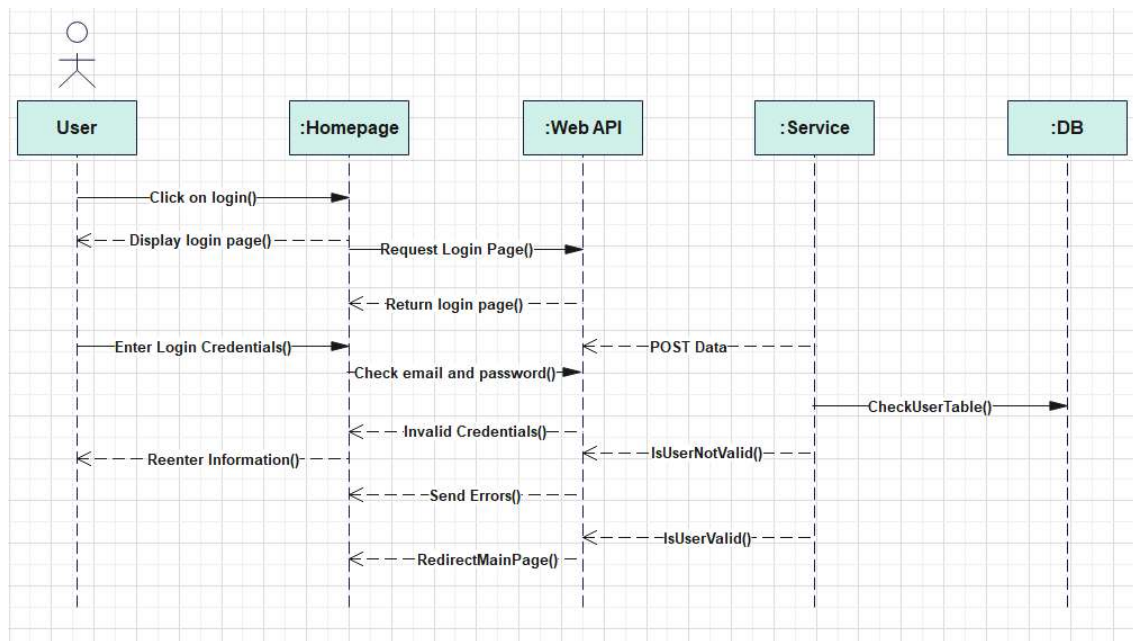Figure-13 Login process sequence diagram



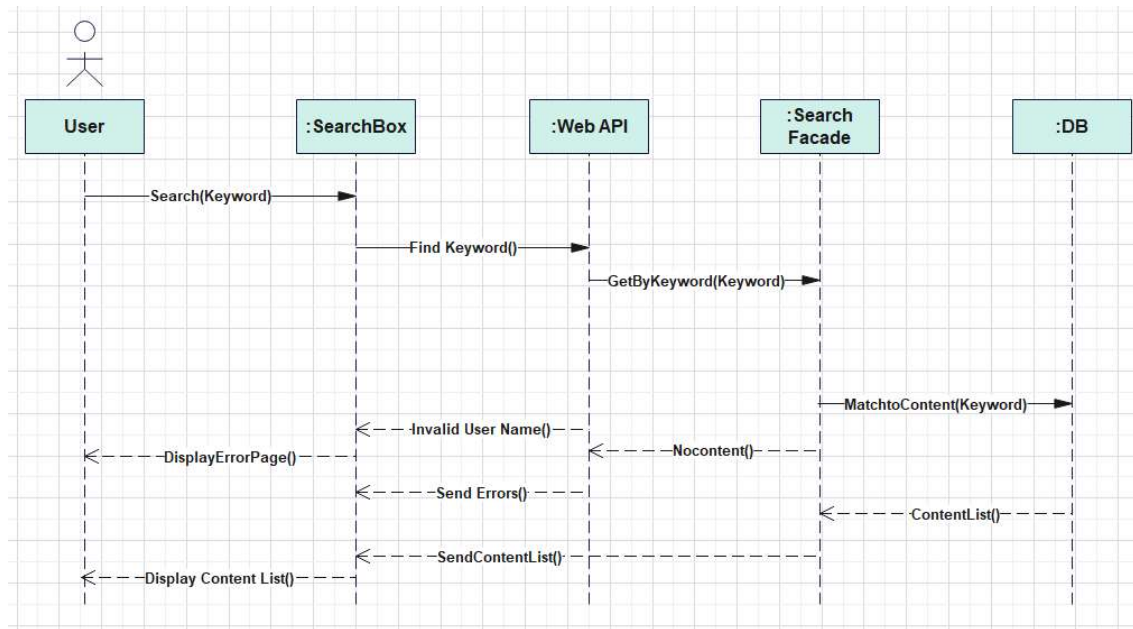Figure-14 Register process sequence diagram

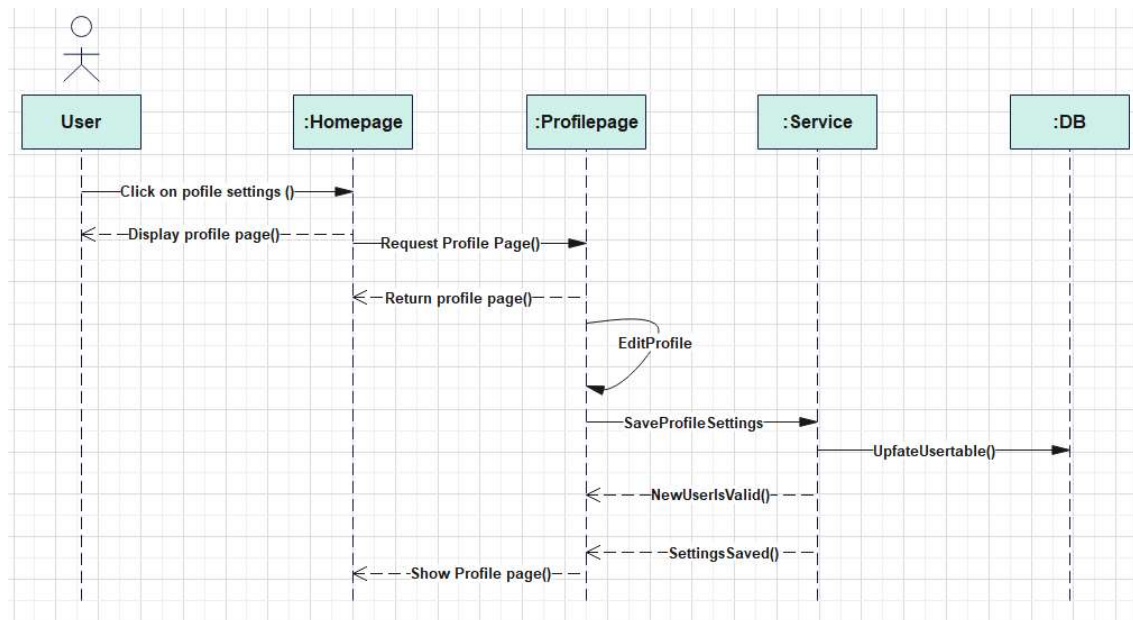Figure-15 Content search process sequence diagram



Figure-16 Profile management sequence diagram

# 5-Project Plan:

Project plan is like below. Milestones are defined according to crucial deliveries in some phases. In the plan, test implies both the unit test and functional test according to requirements. In Figure-17 and Figure-18, diamonds show the milestone points.
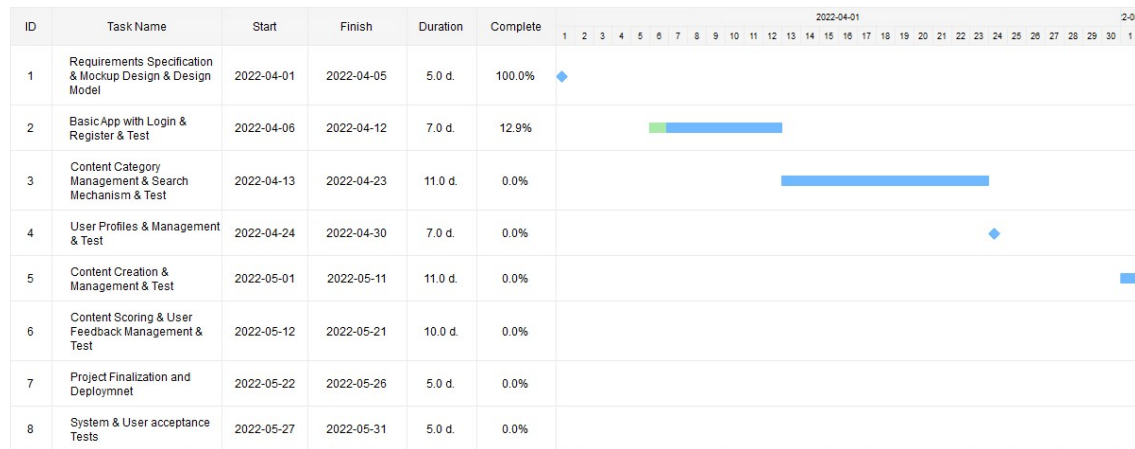
| ID | Task Name | Start | Finish | Duration | Complete | |
|----|-----------|-------|--------|----------|----------|---|
| 1 | Requirements Specification & Mockup Design & Design Model | 2022-04-01 | 2022-04-05 | 5.0 d. | 100.0% | |
| 2 | Basic App with Login & Register & Test | 2022-04-06 | 2022-04-12 | 7.0 d. | 12.9% | |
| 3 | Content Category Management & Search Mechanism & Test | 2022-04-13 | 2022-04-23 | 11.0 d. | 0.0% | |
| 4 | User Profiles & Management & Test | 2022-04-24 | 2022-04-30 | 7.0 d. | 0.0% | |
| 5 | Content Creation & Management & Test | 2022-05-01 | 2022-05-11 | 11.0 d. | 0.0% | |
| 6 | Content Scoring & User Feedback Management & Test | 2022-05-12 | 2022-05-21 | 10.0 d. | 0.0% | |
| 7 | Project Finalization and Deploymnet | 2022-05-22 | 2022-05-26 | 5.0 d. | 0.0% | |
| 8 | System & User acceptance Tests | 2022-05-27 | 2022-05-31 | 5.0 d. | 0.0% | |

Figure-17 LetsColearn application project plan and milestones

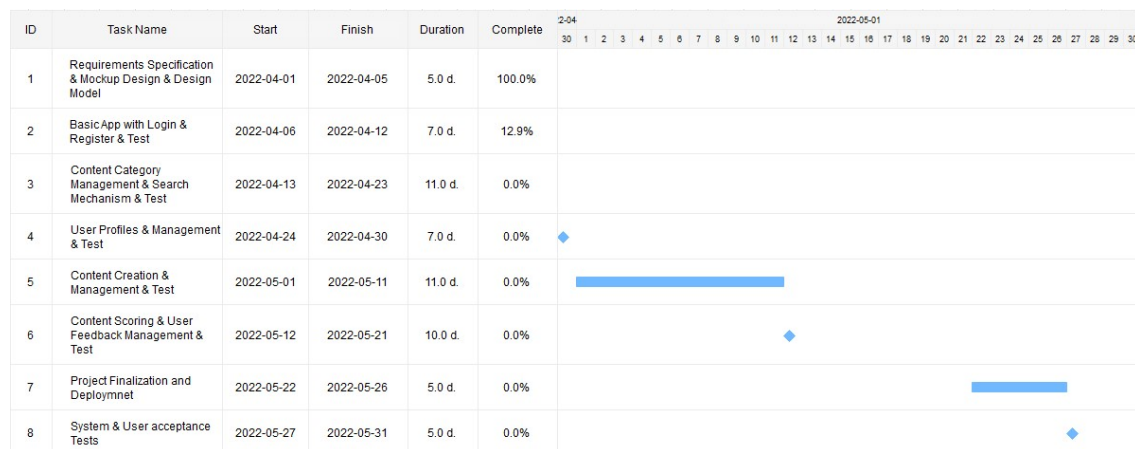| ID | Task Name | Start | Finish | Duration | Complete | |
|----|-----------|-------|--------|----------|----------|---|
| 1 | Requirements Specification & Mockup Design & Design Model | 2022-04-01 | 2022-04-05 | 5.0 d. | 100.0% | |
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| 4 | User Profiles & Management & Test | 2022-04-24 | 2022-04-30 | 7.0 d. | 0.0% | |
| 5 | Content Creation & Management & Test | 2022-05-01 | 2022-05-11 | 11.0 d. | 0.0% | |
| 6 | Content Scoring & User Feedback Management & Test | 2022-05-12 | 2022-05-21 | 10.0 d. | 0.0% | |
| 7 | Project Finalization and Deploymnet | 2022-05-22 | 2022-05-26 | 5.0 d. | 0.0% | |
| 8 | System & User acceptance Tests | 2022-05-27 | 2022-05-31 | 5.0 d. | 0.0% | |

Figure-18 LetsColearn application project plan and milestones