

CollaPod - A Collaborative Learning App

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SWE573
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Git Repository:
<https://github.com/bharaddur/bounswe573-2022>

Git Tag Version:
v0.9

Deployment URI:
<https://orca-app-ah2ap.ondigitalocean.app/>

HONOR CODE

Related to the submission of all the project deliverables for the Swe573 2022 Spring semester project reported in this report, I, Mert Can Geyik declare that:

- I am a student in the Software Engineering MS program at Bogazici University and am registered for Swe573 course during the 2022 Spring semester.
- All the material that I am submitting related to my project (including but not limited to the project repository, the final project report, and supplementary documents) have been exclusively prepared by myself.
- I have prepared this material individually without the assistance of anyone else with the exception of permitted peer assistance which I have explicitly disclosed in this report.

Mert Can Geyik

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1. Overview

In this project we have developed a Django app using python, html and css. While developing this project we have used GitHub as a version management system. And Docker to containerize our app to deploy to live environment. The project name is CollaPod

CollaPod is a collaborative learning platform that enable users to share their existing knowledge in publicly created spaces called Pods. Users can register and enroll to these pods and learn new things. There is no specific topic in CollaPod. The topic or area selection is purely depends on user's preference. Every user can log in to this platform and they can join to existing Pods or create their own.

2. Software Requirements Specification

Requirements	Status
System shall have one user subscription type.	Completed
After a user is subscribed he/she will be able to take learning spaces.	Completed
Users should be able to give learning space on this platform.	Completed
System should provide main page.	Completed
System should be able to stream videos	Completed
System should be able to assess quizzes	Not Completed
System should be able to provide written documentations	Completed
Users who are giving learning space will be able to create chapters in their learning spaces	Completed
Users who are giving learning space will be able to structurise their content in chapters (e.g. video fist then written material and quiz at the end.)	Completed
In order to motivate users there should be badges.	Not Completed
System should calculate the learning space taken and give reward points to users who are taking learning space.	Not Completed
Users should be able to get badges with their reward points.	Not Completed
Users who are taking learning space should be able to give evaluation and feedback comments to instructors.	Completed
System should be able to give tags to learning space contents	Completed
System should provide tag search functionality to users.	Completed
System should enable users to search desired learning spaces.	Completed
System should provide my learning spaces page to the users.	Completed
My learning spaces page should consists learning spaces taken and learning spaces which are in progress.	Completed
Learning spaces which are in progress should show the % of the progress	Not Completed
Users who are taking a learning space should be able to write messages to instructor.	Not Completed
System should provide learning space creation page to the users.	Completed
Users should be able to define their learning spaces in learning space creation page	Completed
System should provide profile page to the users.	Not Completed

Profile page should provide a facility to add/remove profile picture and personal data such as name, surname, mail address, website (if any) , biography and Social media URLS.	Not Completed
Profile page should provide privacy settings. (TBD).	Not Completed
Main page should have most popular learning spaces according the user's interests	Not Completed
System shall ask interests of users while signing up	Not Completed
Learning space page will have chapter list	Completed
Users will be able to see other users who are taking the same learning space	Not Completed
Users should be able to follow each other	Not Completed
Chapters should have prerequisite chapter information	Not Completed
Learning spaces should have like functionality	Completed
Users should be able to start discussions under learning spaces	Completed

3. Design

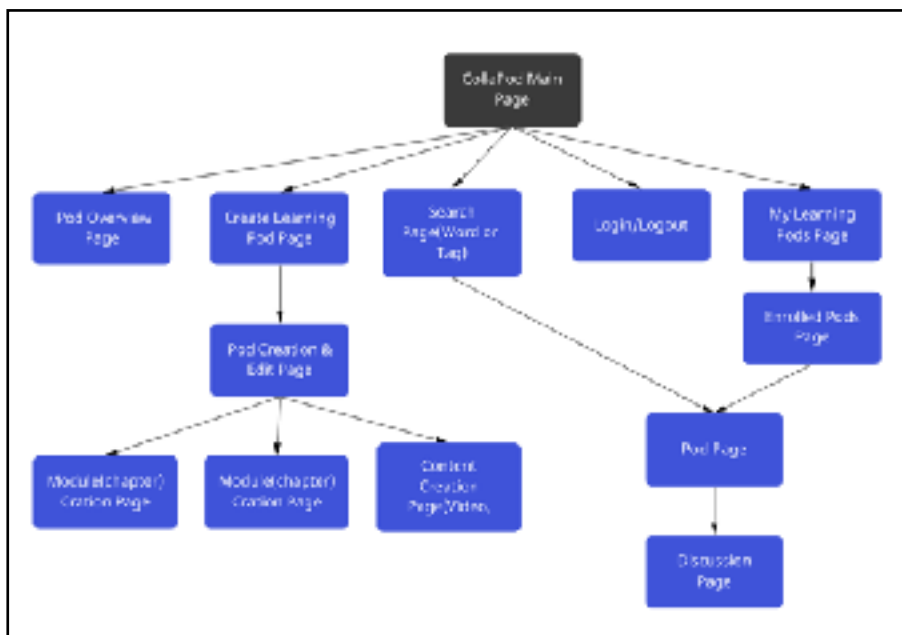
3.1. Initial Mockup Screens



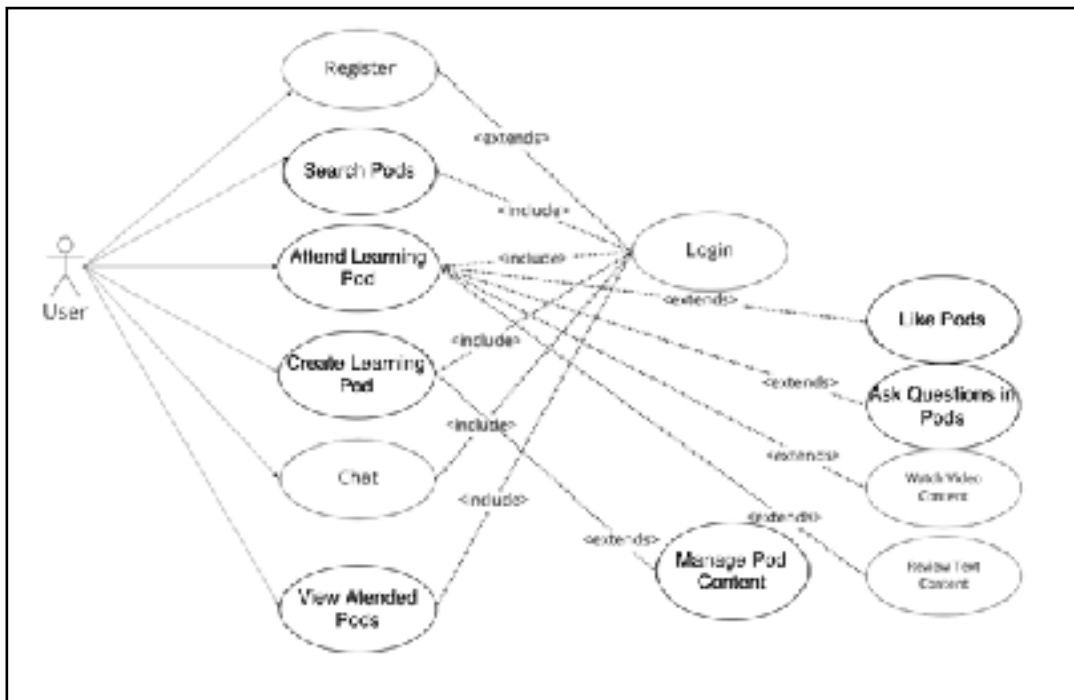


3.1. UML Diagrams

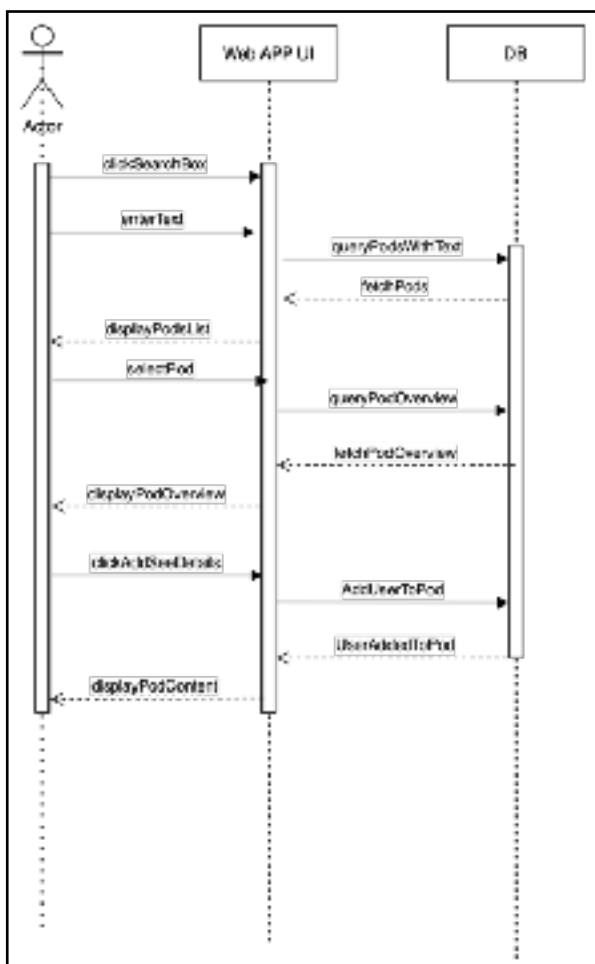
Tree Architecture of Web App



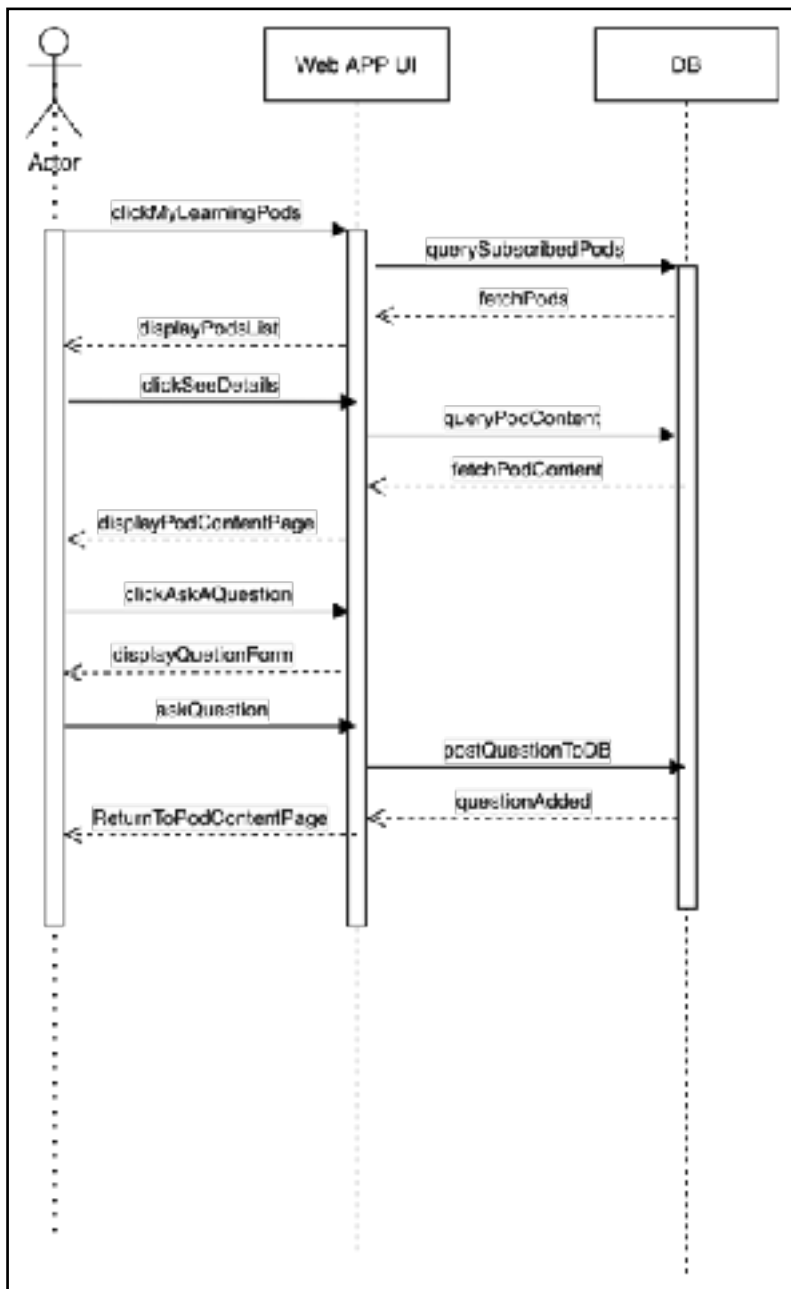
Use Case diagram of the web app



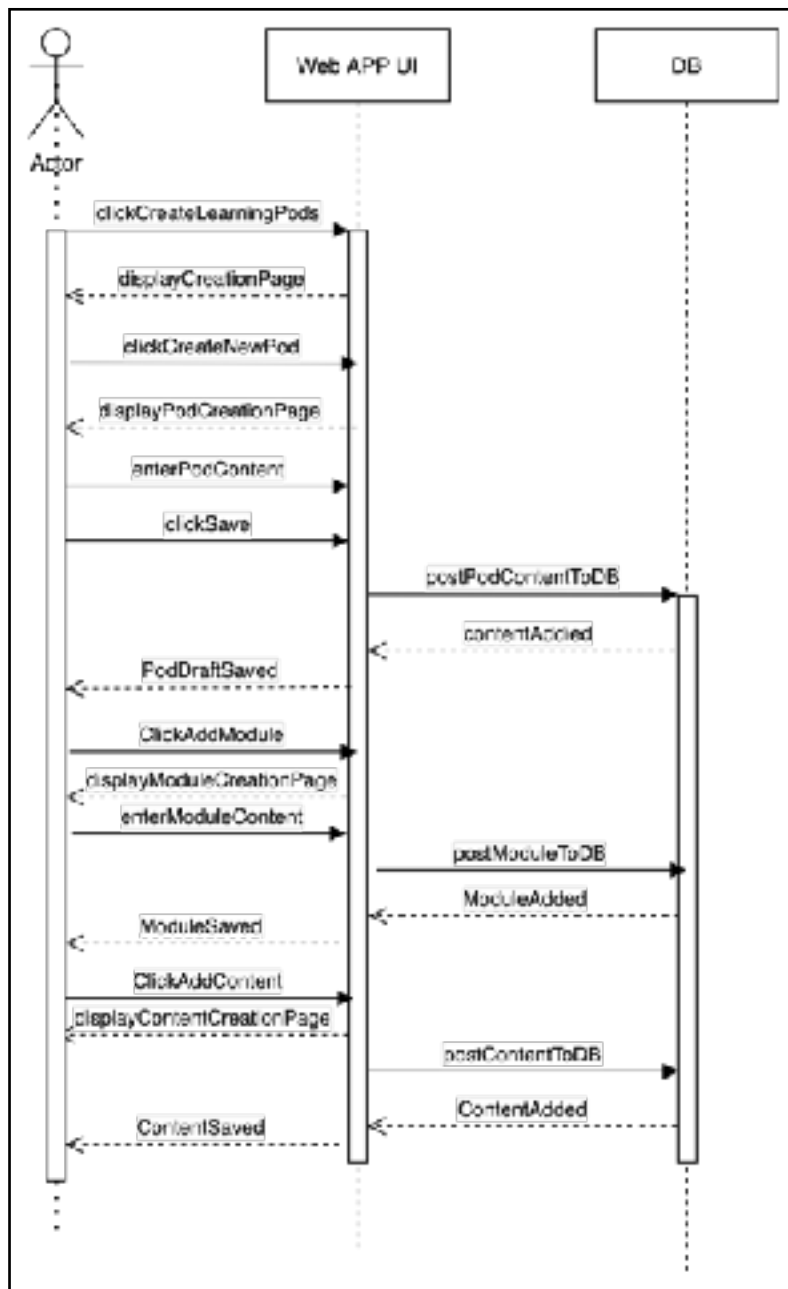
Sequence diagram of searching and displaying pods in web app



Sequence diagram of displaying subscribed pods and displaying pod content in web app



Sequence diagram of creating pods and adding content in web app



4. Status Of Deployment

4.1. Deployment Method

The app is deployed to DigitalOcean's app service. It is an app service that containerize any app and deploy it to web with an integration to GitHub. For deploying the app DigitalOcean's own manuals has been used.

Deployment URI: <https://orca-app-ah2ap.ondigitalocean.app/>

5. System Manual

In order to run this app in local environment, app itself needs to be cloned from the public repo.

Public Repo HTTP: <https://github.com/bharaddur/bounswe573-2022.git>

From terminal, below commands needs to be given:

```
$ git clone https://github.com/bharaddur/bounswe573-2022.git
```

After cloning is done

```
$ docker-compose build
```

It may take a while for it to compose the dockerized application but when it is done it will be ready to be used. There is no additional command needed as “python manage.py runserver” and “python manage.py migrate” is done in entrypoint script.

6. User Manual

6.1. Credentials and Site URL

Site URL: <https://orca-app-ah2ap.ondigitalocean.app/>

Username: uskudarli

Password: spice1234

Username: bharaddur

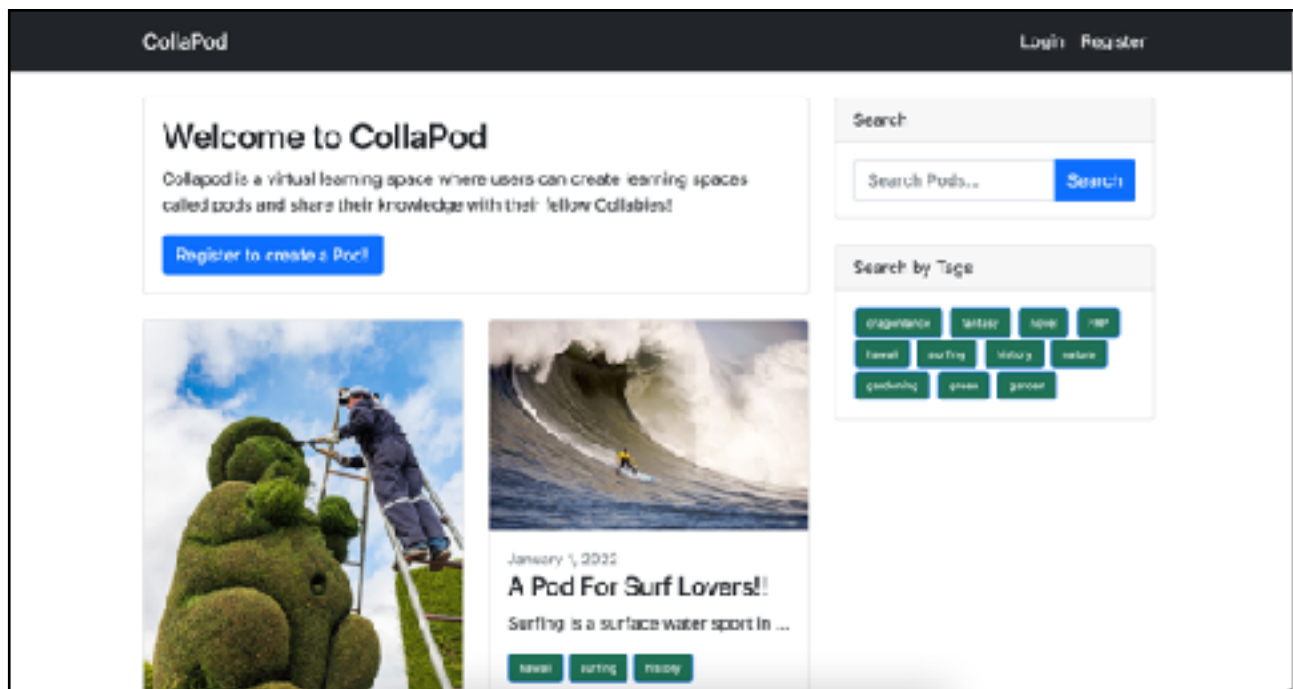
Password: spice1234

6.2. How To Use Web App

6.2.1 Registering to Collapod

In order to use this app first URL that is given above needs to be clicked. Once it is clicked users will be seeing main page of the CollaPod application.

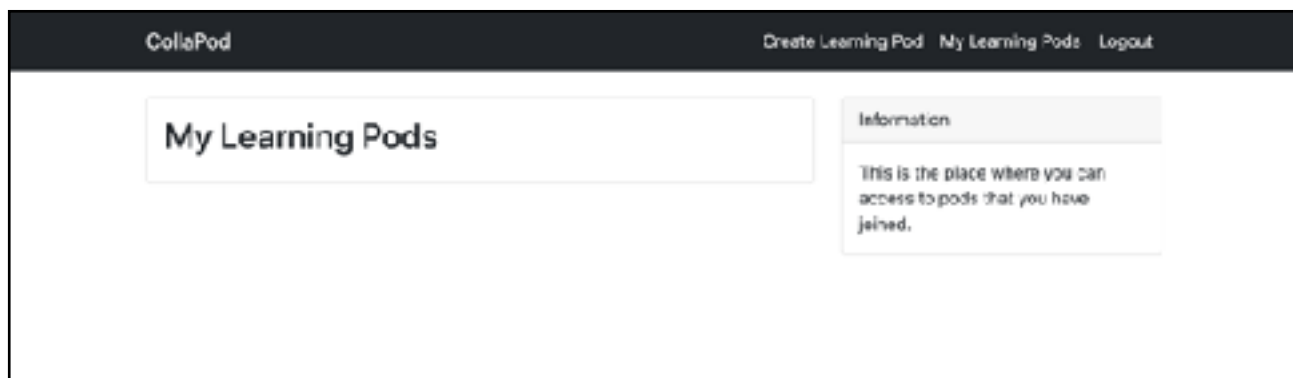
In the main page a user will first see the created Pods in the CollaPod site. User will be able to search any Pod by giving writing desired text to search textbox. There is also search by tags functionality in CollaPod and users will be able to query Pods by clicking any tag. In order to see any Pod overview user needs to be logged in or registered to the CollaPod.



Once “Register” button in navigation bar clicked user will be prompted to sign up page. By giving his/her basic credentials he/she will be able to sign up to the CollaPod

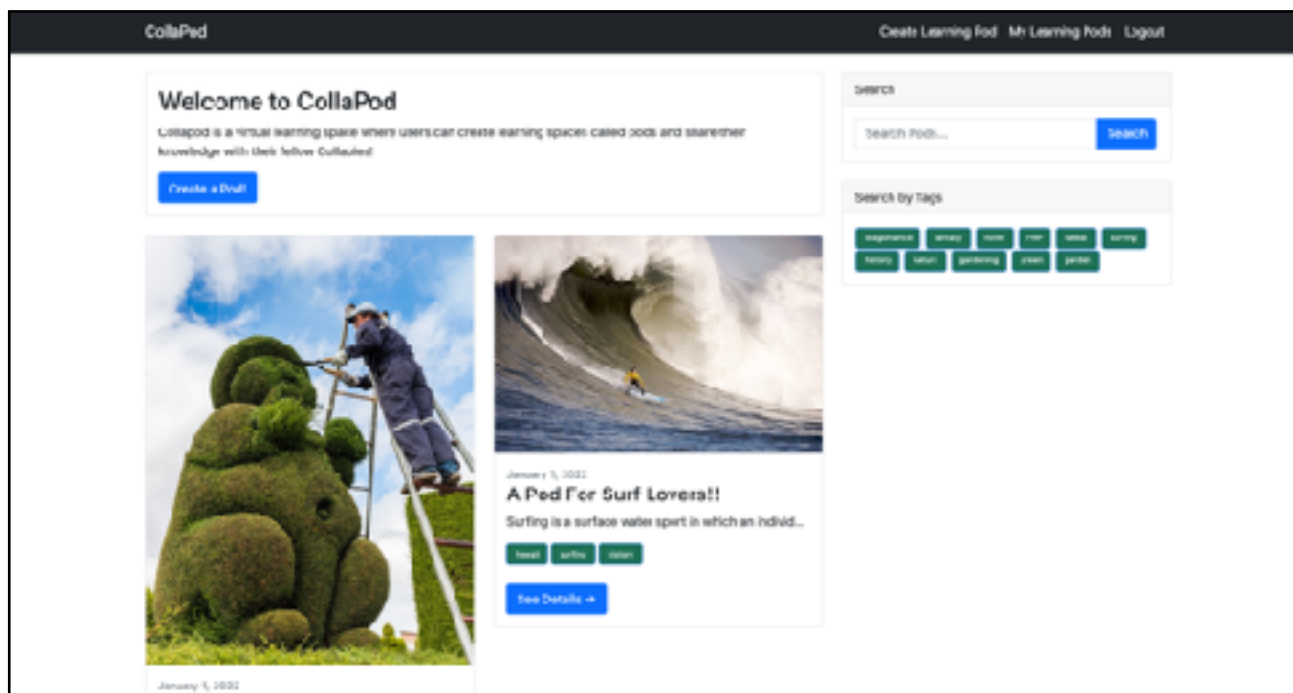
The screenshot shows the CollaPod sign-up page. At the top is a dark navigation bar with the 'CollaPod' logo on the left and 'Login' and 'Register' links on the right. The main content area is white. The page has a large 'Sign up' heading. Below the heading is the text 'Enter your details to create an account:'. There are two input fields: 'Username' and 'Password'. The 'Username' field has a blue border and a note: 'Required. 150 characters or fewer. Letters, digits and @/./+/-/_ only.' The 'Password' field has a note: 'Your password can't be too similar to your other personal information. Your password must contain at least 8 characters. Your password can't be a commonly used password. Your password can't be entirely numeric.' Below the password field is a 'Password confirmation' field with a note: 'Enter the same password as before, for verification.' At the bottom of the form is a button that says 'Create my account'.

Once the user is signed up system will prompt user to “My Learning Pods” page. As it appears there is no Pods yet.




6.2.2 Joining to a Learning Pod

In order to join any pod user can navigate to main page. Since the user is logged in, navigation bar is changed and button names are changed as well.



By clicking “See Details” user can access the overview page of a learning pod. If a user clicks on “See Content” system will automatically enroll this user to the relevant Learning Pod and this learning pod will be appearing in “My Learning Pods” as well.

Dragonlance World



Dragonlance World

3 modules. Creator: bharaddur

Dragonlance is a shared universe created by Laura and Tracy Hickman, and expanded by Tracy Hickman and Margaret Weis under the direction of TSR, Inc. into a series of fantasy novels. If you're a fan, dive in!

[Dragonlance](#) [Timeline](#) [Index](#) [FAQ](#)

[See Content](#)

Information

Here you can enroll to a learning Pod and start learning!

After clicking “See Content” users will be able to see Pod content in structured manner. In below Pod what user is seeing is the first module of “Dragonlance World” pod. Here user can like this course and choose module by clicking purple buttons to access module specific content. Also user can start a discussion by asking question.

CelliaPod

Create Learning Pod | My Learning Pods | Logout

Module: What is Dragonlance?


[Like](#) - 8 Likes

Introduction

Dragonlance is a shared universe created by Laura and Tracy Hickman, and expanded by Tracy Hickman and Margaret Weis under the direction of TSR, Inc. into a series of fantasy novels. The Hickmans conceived Dragonlance while driving in their car on the way to TSR for a job interview. Tracy Hickman met his future role-playing game partner Margaret Weis at TSR, and they gathered a group of associates to play the Dungeons & Dragons role-playing game. The adventures during that game inspired a series of gaming modules, a series of novels, licensed products such as board games, and lead miniature figures.

In 1984, TSR published the first Dragonlance game module, *Dragons of Despair*, and the first novel, *Dragons of Autumn Twilight*. The novel began the Chronicles trilogy, a core element of the Dragonlance world. While the authoring team of Tracy Hickman and Margaret Weis wrote the setting's central books, numerous other authors contributed novels, short stories and game supplements to the setting. Over 180 novels have used the Dragonlance setting; the Dragonlance campaign setting has also been used for multiple editions of *Dungeons & Dragons* and for the *SAOA* System. Following *Wizards of the Coast*'s acquisition of TSR in 1997, *Wizards* licensed Dragonlance to Margaret Weis's company *Sovereign Press* to produce game materials; this licensing agreement ran from 2001 to 2007. Dragonlance is scheduled to return in 2022 with a new adventure module and the start of a new novel trilogy.

The fictional Dragonlance world of Krynn contains numerous characters, an extensive timeline, and a detailed geography. The history of Krynn consists of five ages. The novels and related game products are primarily set in the fourth age, *The Age of Despair*. Since the publication of *Dragonlance: Fifth Age* in 1996, the fifth age, *the Age of Mortals*, has been used.^[1] The *Heroes of the Lance*, created by Weis and Hickman, are the popular protagonists of the *Chronicles* trilogy. Along with *D&D*'s world of the *Forgotten Realms*, Dragonlance is one of the most popular shared worlds in fiction.



Pod Modules

- What is Dragonlance?
- Publication History
- World

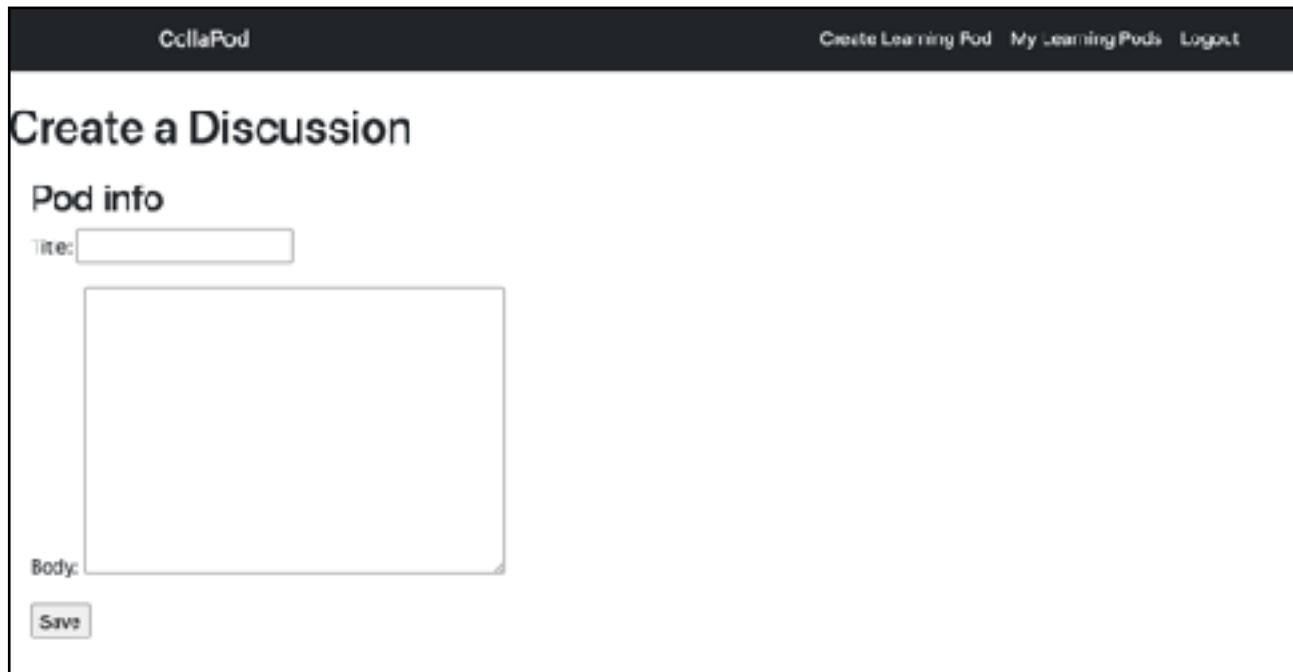
Discussions

[Ask a question](#)

[Why Ralstin did not save Caramon?](#) - bharaddur - May 26, 2022, 10:57 pm.

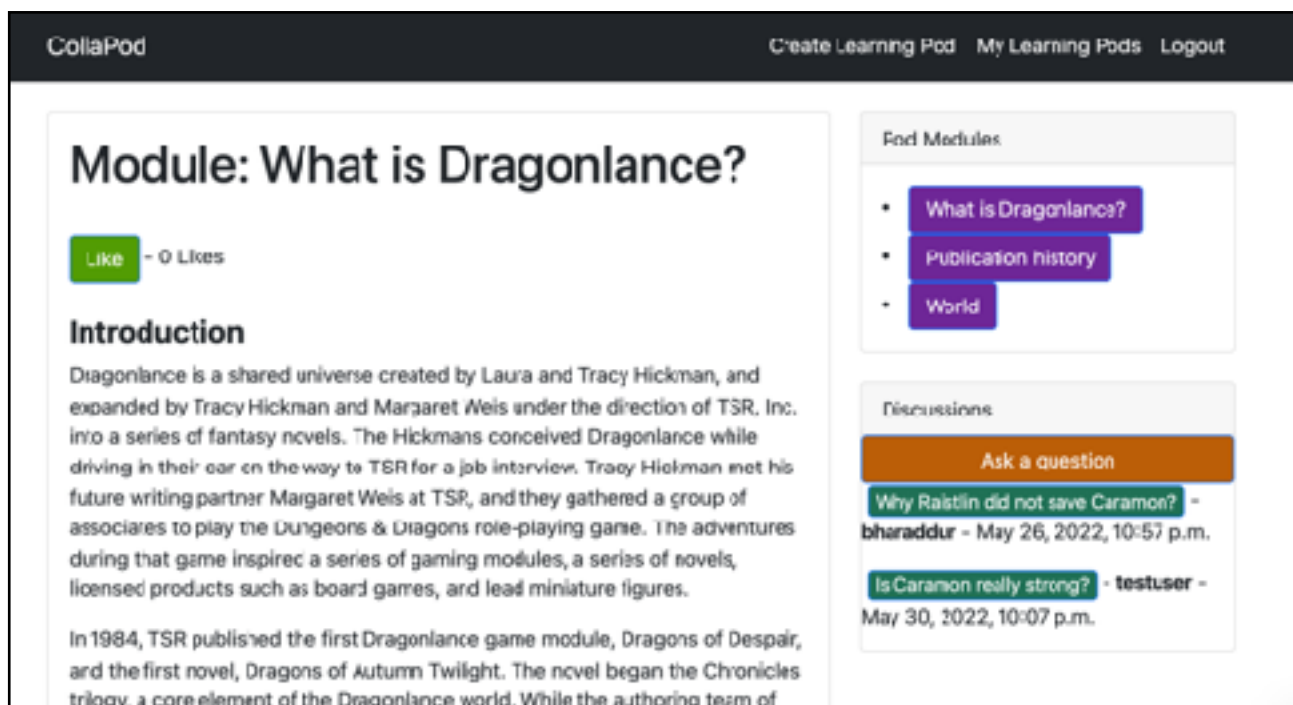
6.2.3 Creating a Discussion in Learning Pod

Once a user clicks on “Ask a question” button he/she will be prompted to discussion form. Here he/she can give a title to this thread and give details about it.



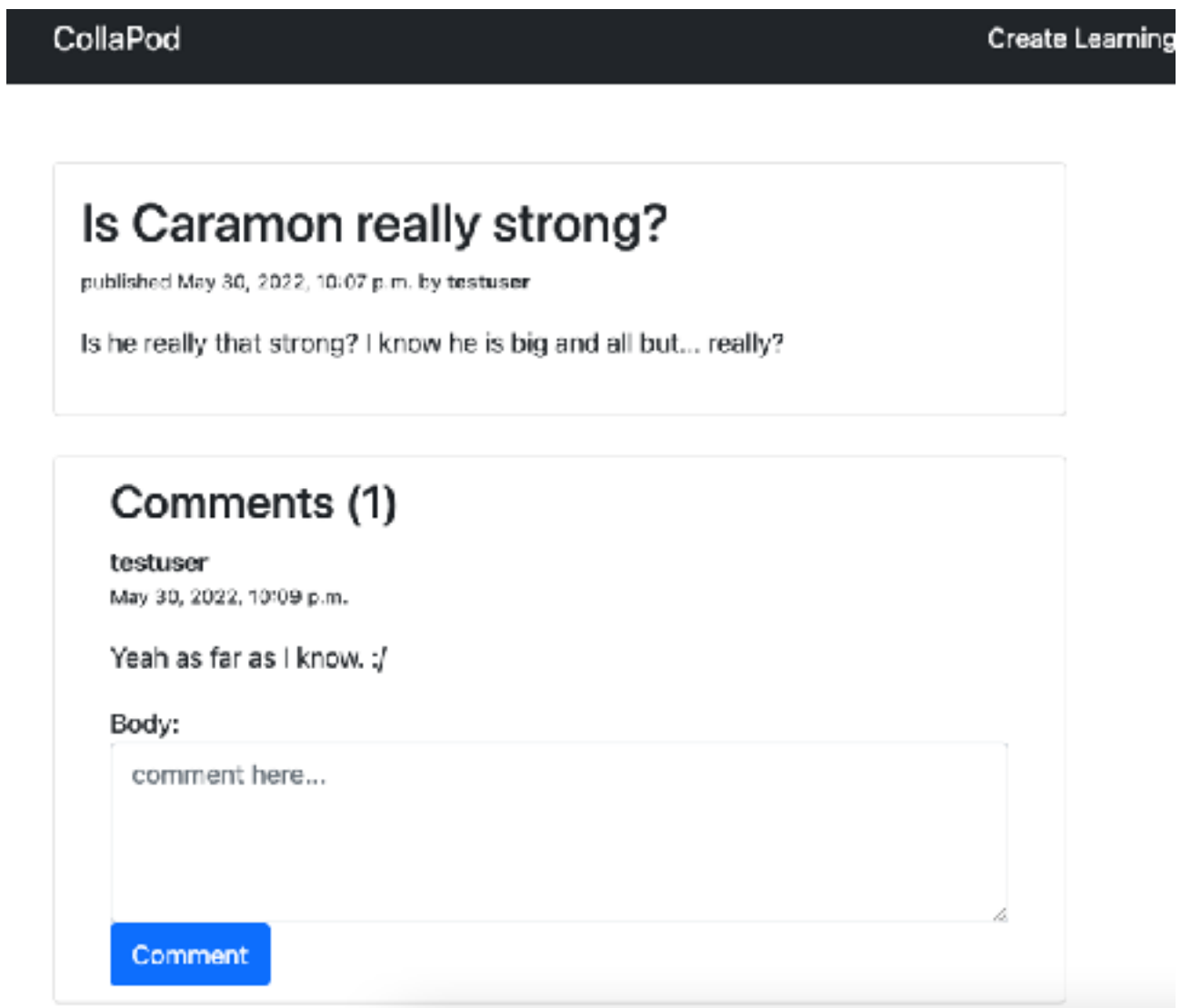
The screenshot shows the 'Create a Discussion' form in the CollaPod interface. The form has a title 'Create a Discussion' and a section 'Pod info'. Under 'Pod info', there is a 'Title:' label followed by a text input field, and a 'Body:' label followed by a large text area. A 'Save' button is located at the bottom left of the form.

User will be prompted to Pod content page once he/she clicked on Save button and will be able to see the discussion title in the content page.



The screenshot shows the 'Module: What is Dragonlance?' page in the CollaPod interface. The page has a header with the CollaPod logo and navigation links: 'Create Learning Pod', 'My Learning Pods', and 'Logout'. The main content area is titled 'Module: What is Dragonlance?' and includes a 'Like' button with '0 Likes'. Below the title is an 'Introduction' section with text about the Dragonlance universe. On the right side, there is a 'Pod Modules' section with a list of modules: 'What is Dragonlance?', 'Publication history', and 'World'. Below the modules is a 'Discussions' section with an 'Ask a question' button and two discussion threads: 'Why Raistlin did not save Caramon?' by bharaddur and 'Is Caramon really strong?' by testuser.

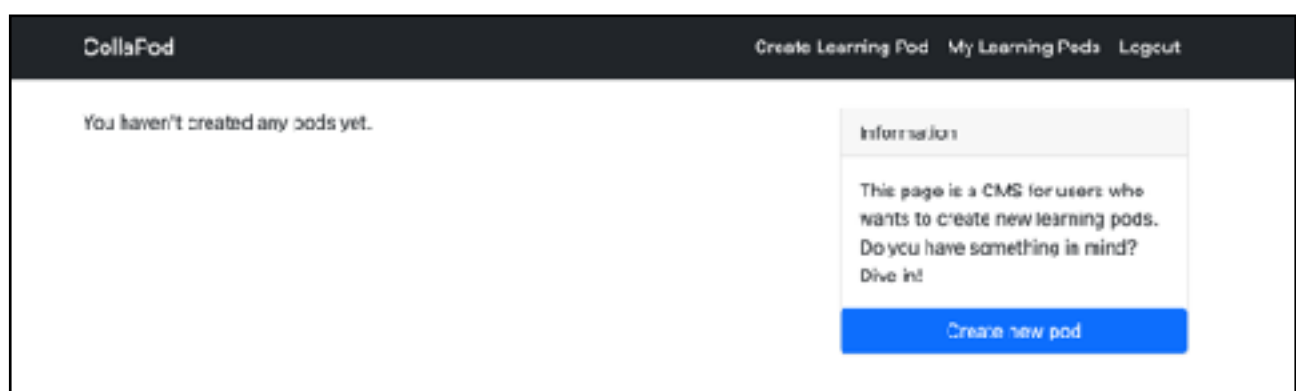
By clicking the discussion title he/she will be able to comment in discussion.



The screenshot shows a web interface for CollaPod. At the top is a dark navigation bar with the CollaPod logo on the left and a 'Create Learning' button on the right. Below the navigation bar is a discussion post. The post has a title 'Is Caramon really strong?' in a large, bold font. Below the title is a line of text indicating it was published on May 30, 2022, at 10:07 p.m. by a user named 'testuser'. The body of the post contains the text 'Is he really that strong? I know he is big and all but... really?'. Below the post is a section titled 'Comments (1)'. It shows a comment from 'testuser' dated May 30, 2022, at 10:09 p.m., with the text 'Yeah as far as I know. :/'. Below the comment is a form for adding a new comment, with a label 'Body:' and a text area containing the placeholder 'comment here...'. A blue 'Comment' button is positioned below the text area.

6.2.4 Creating a Learning Pod

Users can also create their own Pods. In order to do that “Create Learning Pod” button in navigation bar can be clicked. In this page users can create a pod by clicking on “Create new pod”



The screenshot shows a web interface for creating a learning pod. At the top is a dark navigation bar with the CollaPod logo on the left and three buttons: 'Create Learning Pod', 'My Learning Pods', and 'Logout'. Below the navigation bar, the main content area has a message on the left that says 'You haven't created any pods yet.' On the right side, there is a box with the heading 'Information'. Inside this box, the text reads: 'This page is a CMS for users who wants to create new learning pods. Do you have something in mind? Dive in!'. At the bottom of this box is a blue button labeled 'Create new pod'.

After clicking “Create new pod” user will be prompted to pod creation screen. User can enter comma separated tags, title, a header picture and a overview text.

The screenshot shows the 'Create a new pod' form in the CollaPod application. The form is titled 'Create a new pod' and is located on the left side of the page. It contains several input fields: 'Tags' with the value 'howto, play, guitar', 'Title' with the value 'How to Play Guitar', 'File' with a 'Choose file' button and the filename 'gitarumetudil...arknogan.jpg', and 'Slug' with the value 'gitar'. There is also a large text area for 'Overview' containing the text: 'You can use a guitar to play anything from death metal to classical and everything in between. Learning to play guitar is more approachable than learning to play many other instruments, once you master a few basics. You, too, can learn how to get started teaching yourself to play.' A 'Save pod' button is located at the bottom left of the form. On the right side of the page, there is a sidebar with the heading 'Information' and the text 'Here you can edit your Pod information.'

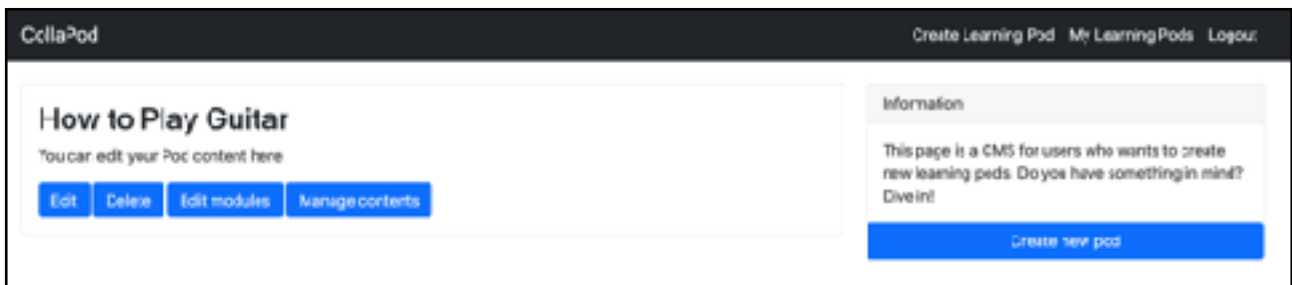
Once user click on “Save Pod” button, he/she will be prompted to “Create Learning Pod” page and will see the newly created pod without modules or content.

The screenshot shows the 'How to Play Guitar' pod page in the CollaPod application. The page has a dark header with the CollaPod logo and navigation links: 'Create Learning Pod', 'My Learning Pods', and 'Logout'. The main content area is titled 'How to Play Guitar' and contains the text 'You can edit your Pod content there'. Below this text are three buttons: 'Edit', 'Delete', and 'Edit modules'. On the right side of the page, there is a sidebar with the heading 'Information' and the text 'This page is a CMS for users who wants to create new learning pods. Do you have something to share? Dive in!'. At the bottom of the sidebar is a blue button labeled 'Create new pod'.

In order to continue with the creation of the pod user needs to click on “Edit modules” button. Once he/she click on system will prompt to module creation page. By default system gives 2 modules to edit. If a user wants to create more than 2 modules he/she can click save and 2 more modules will be added in the next round.

The screenshot shows the 'Edit "How to Play Guitar" Pod Modules' page in the CollaPod application. The page has a dark header with the CollaPod logo and navigation links: 'Create Learning Pod', 'My Learning Pods', and 'Logout'. The main content area is titled 'Edit "How to Play Guitar"' and contains a section titled 'Pod Modules'. This section has two input fields: 'Title' and 'Description'. Below these fields is a large text area for the module content. On the right side of the page, there is a sidebar with the heading 'Information' and the text 'Here you can edit your Pod information.'

Once user click o “save pod” button system will prompt user to “Create Learning Pod” page once again but this time “Manage Content” will be available



By clicking “Manage Contents” user will be finally able to add content. In content creation page modules will be available and users will be able to add content by clicking the content type.

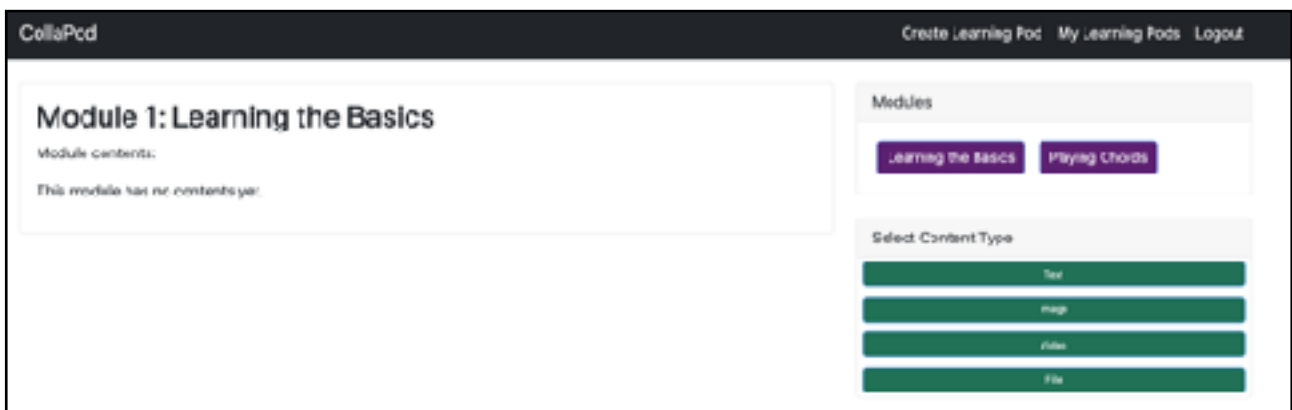
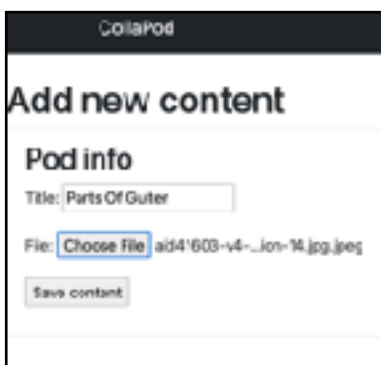


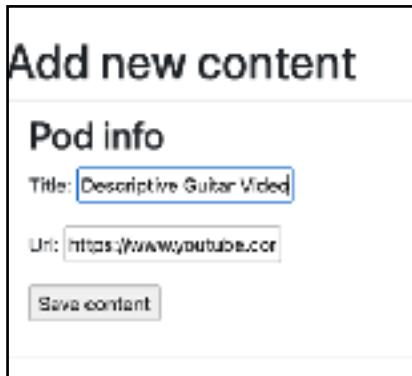
Image content creation (local image file needs to be selected by clicking “Choose File”)



Text Content Creation



Video Content Creation



Add new content

Pod info

Title:

Url:

File Content Creation (local file needs to be selected by clicking “Choose File”)



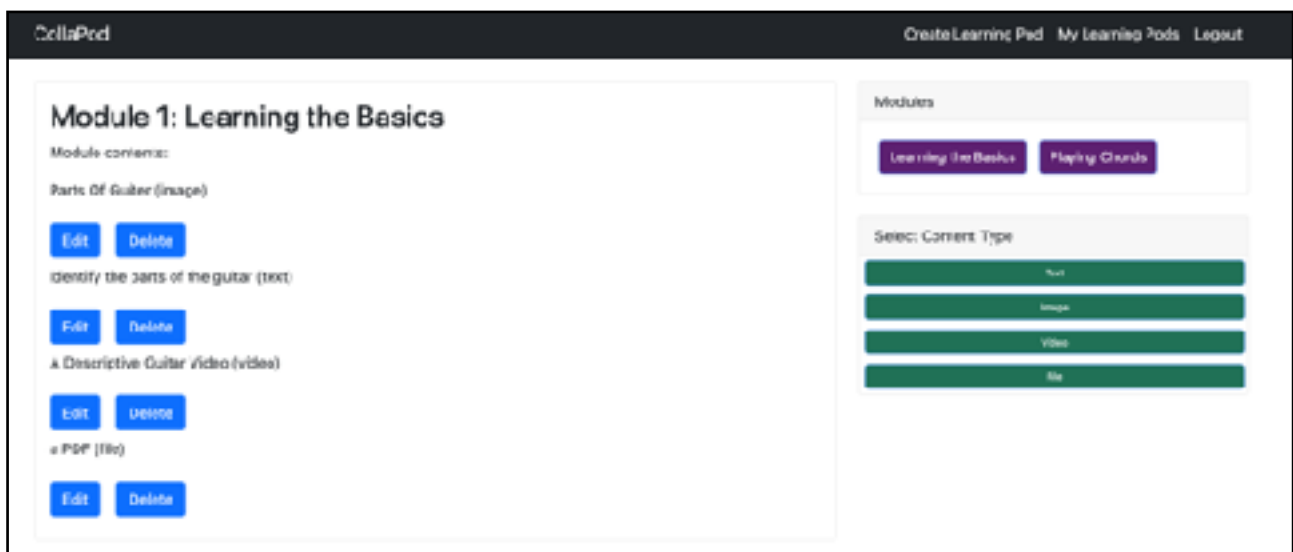
Add new content

Pod info

Title:

File: gibbon-electric_arn-roger.jpg

Contents are created and can be seen in listed manner.



CellaPod Create Learning Pod My Learning Pods Logout

Module 1: Learning the Basics

Module contains:

Parts Of Guitar (image)

Identify the parts of the guitar (text)

A Descriptive Guitar video (video)

a PDF (file)

Modules

Select Content Type


And the content will be as follows;

CollaPod

Create Learning PodMy Learning PodsLogout

Module: Learning the Basics

Like0 Likes



Parts Of Guitar

Identify the parts of the guitar

Whether you're playing an electric or an acoustic guitar, the instrument is essentially wood and metal. Copper-wound strings vibrate to create sound. The wooden body resonates that sound to create the warm tones we associate with a guitar.

The strings run between the headstock of the guitar, where they are affixed to tuning pegs that can be rotated to tighten and slacken them, and the bridge, where they're tied to the guitar's body. Unamplified guitar, the strings are fixed to the bridge with removable pegs, and on an electric guitar the strings are generally strung

Pod Modules

- Learning the Basics
- Playing Gtr

Discussions

Ask a question

No Discussion Yet...

After the creation of the Pod. It will appear in the main page.


CollaPod

Create Learning PodMy Learning PodsLogout

Welcome to CollaPod

Collapod is a virtual learning space where users can create learning spaces called pods and share their knowledge with their fellow Collapoders!

Create a Pod




January 1, 2022

How to Play Guitar

You can use a guitar to play anything from death metal.

guitar, how to, play

See Details



Search

Search Pods...

Search

Search by Tags

fragrance, fantasy, novel, tbp, travel, writing, history, nature, gardening, games, sports, guitar, home, jobs

7. Test Results

Only manual tests are done during development of this project.

8. References

During this project development there were several open source tutorials and sources has been used. The list of them as follows;

Codemy / Django Wednesdays Series in Youtube : [URL](#)

Programming With Mosh / Django Tutorial For Beginners: [URL](#)

[TestDriven.io](#) / Dockerizing your Django App: [URL](#)

VeryAcademy / How to Dockerize a Django application (Beginners Guide): [URL](#)

DigitalOcean / Deployment Tutorial: [URL](#)

Selmi Tech / Build A Blog With Django: [URL](#)

W3schools / Used free css templates and tutorials: [URL](#)

[freeCodeCamp.org](#) / Git and GitHub for Beginners - Crash Course: [URL](#)