

A Thesis/Project/Dissertation Report

on

Udemy Clone using Ruby on Rails

*Submitted in partial fulfillment of the
requirement for the award of the degree of*

**Bachelor's of Technology in Computer
Science Engineering**



(Established under Galgotias University Uttar Pradesh Act No. 14 of 2011)

**Under The Supervision of
Dr. Kuldeep Singh Kaswan
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Submitted By

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INDIA
MAY, 2022**



**SCHOOL OF COMPUTING SCIENCE AND
ENGINEERING
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CANDIDATE'S DECLARATION

I/We hereby certify that the work which is being presented in the thesis/project/dissertation, entitled “**Udemy Clone using Ruby on Rails**” in partial fulfillment of the requirements for the award of the Bachelors of Technology submitted in the School of Computing Science and Engineering of Galgotias University, Greater Noida, is an original work carried out during the period of May, 2021 to May, 2022, under the supervision of “**Dr. Kuldeep Kaswan Associate Professor**” Department of Computer Science and Engineering/Computer Application and Information and Science, of School of Computing Science and Engineering, Galgotias University, Greater Noida

The matter presented in the thesis/project/dissertation has not been submitted by me/us for the award of any other degree of this or any other places.

Shobhit Sharma(18SCSE1010260)

Parth Verma(18SCSE1010007)

This is to certify that the above statement made by the candidates is correct to the best of my knowledge.

Dr. Kuldeep Singh Kaswan

Associate Professor

CERTIFICATE

The Final Thesis/Project/ Dissertation Viva-Voce examination of Shobhit Sharma (18SCSe1010260) & Parth Verma(18SCSE1010007) has been held on _____ and his/~~her~~ work is recommended for the award of Bachelor's of Technology in Computer Science Engineering.

Signature of Examiner(s)

Signature of Supervisor(s)

Signature of Project Coordinator

Signature of Dean

Date: May , 2022

Place: Greater Noida

Abstract

Udemy is a well renowned educational website that helped a lot of students in today's world to help to learn new technologies and have a knowledge of the basic to advance concepts in different areas of technologies. Now a days students are more indulging in online learning and motivating themselves to learn new things in the area of technology and software. Udemy not only benefit students with domain of software and development but also provide various of domains in which students want to build their career. Udemy is an online learning platform that has variety of concepts and technologies from which student can learn and even teach to others and share the knowledge with others as well.

In today's technological society, a lot more development is going on and people are shifting to high technologies and becoming more and more smart. In order to boost the development of the society our application plays a very crucial role in personality development as well as development in their knowledge. Each and every person requires certain technological knowledge so that he/she can work with advancement in the society that requires good knowledge, money to live and adapt the standard of living. The today's developing generation is growing day by day and in this process of the betterment of the people's living quality, the demands of making people's life efficient and quality of life higher money is the major demand.

Therefore, in context to that particular scenario we as a web developer invested our technical and logical skills in making a wonderful web application named as **Udemy Clone** using **Ruby on Rails** framework that is one of the best and user-friendly frameworks which allows the developer to learn the language more easier and precisely along with using latest features.

In context to this concept, I have invested my knowledge in creating a Udemy Clone application that is created using a new technology named as **Ruby on Rails** in short **ROR**. ROR is a primary technology used in developing this website. ROR provide a programmer with a wide variety of features that can be used to create any particular website effectively.

ROR follows MVC also called as **Model View Controller Architecture** that contains 3 section model, view and controller.

We have tried to design the window application in such way that user may not have any difficulty in using this application without much effort. This software can be really used by end user who have Window running devices with them. The language

that we use to develop this system is Ruby (version 3.0.2), Rails (version 6) for the frontend and for the backend we are using is SQLite3 as a primary database.

This application is MVC architecture-based Application. If you want to learn variety of technologies and learn new courses then this website is best suited to you. The main feature of this applications is that you can learn variety of course by purchasing them and also can act as an instructor and can even instruct other students to learn new things. You can use it as per your choice of category and can select the variety of course based on your interest of domain.

The main objective behind the introduction of this particular application is to allow students/learners to learn more new technologies and can develop and grow their personality that can be used in future work. This provides vast features from learning as a beginner to teaching as a professional where everyone can learn and teach. Therefore, both type of users whether learner or teacher gets the most of the application.

This project is based on the objective to learn more, grow more and work smartly for the future requirements where the user with disadvantage of going outside can also learn through this application and save money and time as well. This innovation will surely lead to the equality and development of the society.

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CHAPTER-1

Introduction

1.1 Introduction

In today's firmament of Technology and frequent development there is a lot of up gradation in the mindset of the people living in society. Most of people want to learn new technological things and also want to learn and grow in different areas like Human Psychology, Technical Courses, Software Based Courses etc. The convictions and execution details are changing as the people are directing the mode of their development.

Udemy Clone is an innovative website or a learning platform that will help lot of students to learn more and more. In today's world all the education a technology is growing at a faster rate and everything in this world can be achieved by having a knowledge. If a person is having a lot of knowledge, he eventually will be very successful in life and hence I designed this website for the learning purpose so that students can learn and make their knowledge sharp in any domain. From decades ago, and today we have grown up a lot and now a days new technologies have come into play and people are developing and evolving new software and brand. Not only this many desktop and mobile applications has developed but also in other domain a lot more is happening around the world.

Explaining about the latest application built in this category, Course Era, Khan Academy, Code academy are also the learning platforms that are existing in the same domain but the advantage that Udemy Clone is having and others not is that the courses available on Udemy Clone are cheaper and are best sellers and are maintained by the knowledgeable instructors and hence they are having deep knowledge of concept and so helpful for the students to get efficient knowledge without any doubt. Moreover, there are different doubt clearing sessions happen on Udemy Clone so that students can get their doubts cleared. Also, every instructor of the course keeps an eye on their every student so that student can learn and have clear concepts. This application is mobile friendly as well as PC friendly and is emerging since 2012. This application is embedded with ROR to define and allow every person to learn different things in every particular domain.

In this world of total technology and the complex world of web development there are some amazing and awesome programs to build and patterns for most web developers. Moreover, the design must have the capability to turn the path towards remodeling of design instead of lending itself to the initial common practices. The other modes i.e., web apps are one of those places where web developers can change their creative side and hope that their solutions can be more effective and flexible. In this report we will describe the most exciting and fashionable journey down the road to the web program. The desire of this job is to set up Real time expense tracking application where one can save a sufficient amount of money and protect his or her future and also lead himself/herself to a growing path. The Real-Time expense tracking application is like indirect wallet on the Internet where consumers can update the details of his/her expense in order to maximize the profit and reduce the loss of money. Due to the introduction of voice command one who is not able to work properly or is handicap can also make the most of this particular web application. Hence this also oppose discrimination.

With the introduction to Udemy Clone, consumers aren't required to wander and waste their precious time while crawling on the Internet in search of their desired learning platform. Instead, they only have to have the internet on the computer and just go to our website, and can save their time in learning different areas and subjects and also grow their knowledge as per the desired course, based on their personal interest. This will help each customer to save more time and learn more.

1.2 Formulation of Problem

In today's world all the education a technology is growing at a faster rate and everything in this world can be achieved by having a knowledge. If a person is having a lot of knowledge, he eventually will be very successful in life and hence I designed this website for the learning purpose so that students can learn and make their knowledge sharp in any domain. From decades ago, and today we have grown up a lot and now a days new technologies have come into play and people are developing and evolving new software and brand. Not only this many desktop and mobile applications has developed but also in other domain a lot more is happening around the world.

Moreover, due to the invention of new virus named as COVID-19 world as completely changed its phase to a deadly phase where maximum of people is finding it difficult to survive and due to which most of the employees lost their jobs and hence are homeless and not able to get the mode of earning from anywhere. Considering the scenario this application provides lots of advantages to those people and also provide them a means of living and employment.

It is important to note that now a days technology is growing day by day therefore it's very important to work and learn the technology else it would be difficult to leave in this technological world. Udemy is a well renowned educational website that helped a lot of students in today's world to help to learn new technologies and have a knowledge of the basic to advance concepts in different areas of technologies. Now a days students are more indulging in online learning and motivating themselves to learn new things in the area of technology and software. Udemy not only benefit students with domain of software and development but also provide various of domains in which students want to build their career. Udemy is an online learning platform that has variety of concepts and technologies from which student can learn and even teach to others and share the knowledge with others as well.

1.2.1 Tool and Technology Used

Udemy Clone is an innovative website or a learning platform that will help lot of students to learn more and more. In today's world all the education a technology is growing at a faster rate and everything in this world can be achieved by having a knowledge. If a person is having a lot of knowledge, he eventually will be very successful in life and hence I designed this website for the learning purpose so that students can learn and make their knowledge sharp in any domain. From decades ago, and today we have grown up a lot and now a days new technologies have come into play and people are developing and evolving new software and brand. Not only this many desktop and mobile applications has developed but also in other domain a lot more is happening around the world.

Ruby is an advance level frontend designing language that comes under ROR framework and is used importantly and mainly in designing the frontend part for that application. It's easy to work with and is similar to python as well. The main difference between python and ruby is that it uses advance level

function and provide more functionality than python. Therefore, user like it more as compare to work with python.

Moreover, coming on to the backend part the different technology used is as follows:

RAILS: Rails one of the important Ruby gems that is concurrent, and specifically designed to have as few implementation dependencies as possible. The main purpose of using is gem is that it mainly deal with backend and also this gem is also used for starting the local server. As the back-end tools Rails is used to provide functionality to the attributes displaying in UI.

SQLITE3: - SQLITE3 mainly delivers visual tools for creating, executing, and optimizing SQLITE queries. The SQL Editor provides colour syntax highlighting, auto-complete, reuse of SQL snippets, and execution history of SQLITE3. The Database Connections Panel enables developers to easily manage standard database connections, including SQLITE3 Fabric. The Object Browser provides instant access to database schema and objects.

The Udemy Clone web application uses **Sublime Text** as a developing atmosphere, with **Ruby on Rails** framework and Ruby as the primary languages for back-end and front end. Moreover, the system consists of SQLite3 as an active database to store the various user record details as well as including all User details.

CHAPTER-2

Literature Survey/Project Design

Our web platform is one of the most widely used web application based platform these days and also enhancing its use for making betterment in different areas of life. Website as a platform is based on the Platform as a Service and is monitored by Google, Amazon and other technical companies and primarily designed for electronic devices and different browser like safari, chrome, Mozilla Firefox etc.

The advanced Smart Web applications, real-time and wireless sensor network are widening their service areas. Web application with e-learning facility was introduced initially in 1960s at the University of Illinois, USA, but has much wider potential.

In this paper we are studying, one of the smart and enhancing web application which are based on e-learning facility. These application helps students, teachers, parents, patients and users of home appliance as anytime and anywhere basis for their daily basis need and more over we would take this technology forward for android development using a beautiful technology called as “React Native and Flutter”. These application are very useful for mobile development is one of the most trending application now days

Many people in today’s lifestyle have a risk of moving outside but due to their dilemma for learning new thing Udemey Clone has come into consideration. Therefore with a rapid development of technology and cost on goods it’s very difficult to save money now-a-days, so therefore we invested our technical knowledge in creation of a perfectly working application for learning and earning at same time throughout. This is a plus point for the people those who want to save the money for future use as they can also purchase free courses.

We will test the app in three environments including hardware, software and network. Test hardware environment will be HP laptop; software environment is i3 intel core processor. The results of testing each feature on a mobile phone and a computer website revealed that the Udemey Clone works smoothly and there is no advertising. This provide an advantage for us to get the application work for the outside world perfectly and as per user’s interest.

The Practical Requirements is a description of services that the software must offer. It defines the software system or its component. The system must fulfil the following functional requirements as follows-

Record Customer Details-

The system must be able to record the details and information of the new customers that are being added as a new account in order to manage the data.

Catalogue of All Record –

The system must be able to record the details i.e., Catalogue of all the courses in which the user is interested to learn and make it easy for the user to save the records based on the particular category they want. This feature of creating catalogues of all courses that provides the advantage to each user to save the record based on interest in no time based on their desirable result.

Record Customer Review-

After developing any application, it is the major requirement to have the review of the other users in order to know whether the users are comfortable with the applications or the applications needs to be upgraded in order the fulfil all the requirements of the users that are lacking in it.

Therefore, the system is granted with customer review feature.

Record Daily Expense-

The Udemy Clone is a web application that allows the users to buy new courses or learn through free courses under the supervision of professional teachers.

Update Daily Money Record-

In the era of web development, the system fulfills the feature of upgrading the daily record and suggesting the user to choose course based on desired technology.

Temporary Storage-

The system also provides the user with temporary storage for adding the courses to cart they require at a limited duration of time i.e., for few hours. After the duration is completed, the user would be required to re-enrol the data.

Background Module Function-

- (1) Classification management: read the division, add the division of the second division, change the first division of the second division, remove the first division of the second division.
- (2) Record Management-Background directors have identical practicality as foreground users in looking for saving records, however directors may manage record data like adding record, and deleting data.

CHAPTER-3

Functionality/Working of Project

The complete audio Udemey Clone web application is divided into multiple components. The Udemey Application uses MVC i.e., Model, View, Controller architecture in which the model is responsible to get the data from backend the frontend. The View is responsible for rendering the data to the frontend. The Controller is responsible to perform actions on the data that is brought up by the model. All these components are termed as modules. The different modules included inside the project are as follows: -

1. Login Page-

This is the very first page that is encountered to the users when they enter the application. It is the first step of the stair from which the user enters the application and start their journey. The login page allows the preexisting user to work and interact with the application and all the data of a particular user is stored in the application that can be resumed on login.

```
1 <%= render "courses/nav"%>
2 <p class="fs-6 pt-3 pb-2 me-3 d-grid col-md-3 offset-md-4 fw-bold"
  style="text-align:center">Log In to Your Udemey Account!</p>
3
4 <hr class="d-grid col-md-3 offset-md-4 fw-bold">
5 <%= form_for(resource, as: resource_name, url: session_path(resource_name)) do |
  f| %>
6 <div class="field btn-lg d-grid col-md-3 offset-md-4" style="text-align:center">
7
8 <div class="border d-inline border-dark border-1 ml-2 mb-2">
9 <div class="field ">
10 <svg xmlns="http://www.w3.org/2000/svg" width="16" height="16"
  fill="currentColor" class="bi me-3 bi-envelope-fill" viewBox="0 0 16 16">
11 <path d="M.05 3.555A2 2 0 0 1 2 2h12a2 2 0 0 1 1.95 1.555L8 8.414.05 3.555ZM0 4.
  697v7.104L5.803-3.558L0 4.697ZM6.761 8.83L-6.57 4.027A2 2 0 0 2 14h12a2 2 0 0
  0 1.808-1.144L-6.57-4.027L8 9.586L-1.239-.757Zm3.436-.586L16 11.801V4.697L-5.
  803 3.546Z"/>
12 </svg>
13 <%= f.email_field :email,placeholder: "Email", autofocus: true, autocomplete:
  "email",class:"text-decoration-none shadow-none col-md-10 offset-md-0 fs-5",
  style:"outline-none"%>
14 </div>
15 </div>
16
17 <div class="border border-dark border-1 ">
18 <div class=" field">
19 <svg xmlns="http://www.w3.org/2000/svg" width="16" height="16"
  fill="currentColor" class="bi me-2 bi-lock-fill" viewBox="0 0 16 16">
20 <path d="M8 1a2 2 0 0 1 2 2v4H6V3a2 2 0 0 1 2-2zm3 6V3a3 3 0 0 0-6 0v4a2 2 0 0
  0-2 2v5a2 2 0 0 2 2h6a2 2 0 0 2-2V9a2 2 0 0 0-2-2z"/>
21
```

Fig 3.1 Login Page

2. Signup Page- This page is basically for the new users who just now entered the application and want to start fresh journey with the application. The user can create account on the website via sign up and then user would be able to study, enrol the courses and learn on the website.


```
1 <%= render "courses/nav" %>
2 <p class="fs-6 pt-3 pb-2 me-3 d-grid col-md-3 offset-md-4 fw-bold"
  style="text-align:center" >Sign Up and Start Learning!</p>
3
4 <hr class="d-grid col-md-3 offset-md-4 fw-bold">
5 <%= form_for(resource, as: resource_name, url: registration_path(resource_name))
  do |f| %>
6   <%= render "devise/shared/error_messages", resource: resource %>
7   <div class="field btn-lg d-grid col-md-3 offset-md-4" style="text-align:center">
8     <div class="border border-dark border-1 ml-2 mb-2">
9       <div class="field ">
10        <%= f.text_field :name,placeholder: "Name", autofocus: true, autocomplete: "Name",
          class:"text-decoration-none shadow-none col-md-9 offset-md-0 fs-5"%>
11      </div>
12    </div>
13    <div class="border border-dark border-1 ml-2 mb-2">
14      <div class="field "><svg xmlns="http://www.w3.org/2000/svg" width="16"
        height="16" fill="currentColor" class="bi me-3 bi-envelope-fill" viewBox="0 0 16
        16">
15        <path d="M.05 3.555A2 2 0 0 1 2 2h12a2 2 0 0 1 1.95 1.555L8 4.414 4.05 3.555ZM0 4.
          697v7.104l5.803-3.558L0 4.697ZM6.761 8.831l-6.57 4.027A2 2 0 0 0 2 14h12a2 2 0 0
          0 1.808-1.144l-6.57-4.027L8 9.586l-1.239-.757Zm3.436-.586L16 11.801V4.697l-5.
          803 3.546Z"/>
16      </svg>
17      <%= f.email_field :email,placeholder: "Email", autofocus: true, autocomplete:
          "email",class:"text-decoration-none shadow-none col-md-9 offset-md-0 fs-5"%>
18    </div>
19    </div>
20    <% if @minimum_password_length %>
21      <em style="color:red; font-size:15px; margin-bottom:5px">(<%=
```

Fig.3.2Signup Page

3. **Dashboard** – After the user authentication is done successfully the user would be directed to the dashboard where the user could find the courses based on his choices and can enrol the courses based on the category and personal interest. This page allow the user to provide different enrolment options such as add to cart, buy now etc.

```
EXPLORER
FINALDEMY3
app
  assets
  channels
  controllers
  helpers
  javascript
  jobs
  mailers
  models
  uploaders
  views
  carts
  courses
  _form.html.erb
  _nav.html.erb
  _show.html.erb
  devise
  enrollments
  layouts
  order_items
  users
  videos
  bin
  config
  db
  lib
  log
  node_modules
  public
  storage
  OUTLINE
  TIMELINE

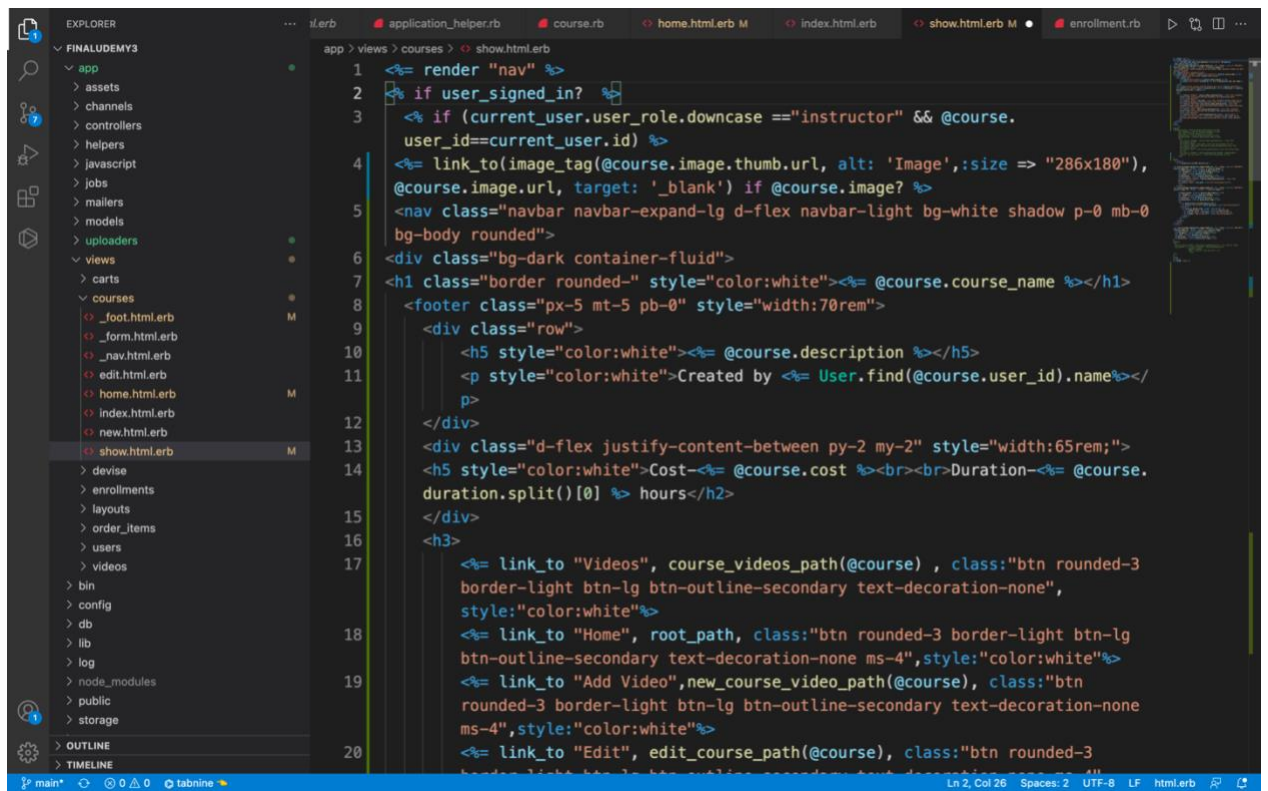
app > views > courses > home.html.erb
1 <%= render "nav"%>
2 <%= if user_signed_in? %>
3
4 <h1 style="text-align:center">All Courses</h1>
5 <ul style="display:flex; flex-wrap:wrap;">
6   <%= if @courses.size==0 %>
7     <h3 style="color:red">No Courses Created yet...</h3>
8   <%= end %>
9   <%= @courses.each do |course| %>
10     <div class="card me-4 mb-3" style="width:18rem;">
11 <%= link_to(image_tag(course.image.thumb.url, alt: 'Image',:size => "286x180"),
12 course.image.url ,target: '_blank') if course.image? %>
13
14 <div class="card-body">
15   <h5 class="card-title"><%= link_to course.course_name, course ,
16   style:"text-decoration:none;"%></h5>
17   <p class="card-text"><%= course.description %></p>
18 </div>
19 <%= link_to "Go to course", course ,style:"text-decoration:none;",
20 class:"btn btn-primary m-3"%>
21 </div>
22 <%= end %>
23 </ul>
24 <%= else %>
25 <%= if @courses.size == 0%>
26 <h1 style="text-align:center; padding:auto"><%= link_to "Login",
27 new_user_session_path, class:"text-decoration:none"%> to enroll</h1>
28 <%= else %>
29 <h1 style="text-align:center">Total Courses</h1>
30 <ul style="display:flex; flex-wrap:wrap;">
31 <%= @courses.each do |course| %>
32 <div class="card me-4 mb-3" style="width:18rem;">
33 <%= link_to(image_tag(course.image.thumb.url, alt: 'Image',:size => "286x180"),
34 course.image.url ,target: '_blank') if course.image? %>
35
36 <div class="card-body">
37   <h5 class="card-title"><%= link_to course.course_name, course ,
38   style:"text-decoration:none;"%></h5>
39   <p class="card-text"><%= course.description %></p>
40 </div>
41 <%= link_to "Go to course", course ,style:"text-decoration:none;",
42 class:"btn btn-primary m-3"%>
43 </div>
44 <%= end %>
45 </ul>
46 <%= else %>
47 <h1 style="text-align:center">Total Courses</h1>
48 </ul>
49 <%= end %>
50 </if %>
51 </pre>
```

```
EXPLORER
FINALDEMY3
app
  assets
  channels
  controllers
  helpers
  javascript
  jobs
  mailers
  models
  uploaders
  views
  carts
  courses
  _form.html.erb
  _nav.html.erb
  _show.html.erb
  devise
  enrollments
  layouts
  order_items
  users
  videos
  bin
  config
  db
  lib
  log
  node_modules
  public
  storage
  OUTLINE
  TIMELINE

app > views > courses > index.html.erb
1 <%= render "nav"%>
2 <%= if user_signed_in? %>
3   <%= if current_user.user_role.downcase == "instructor"%>
4     <h1 style="text-align:center; font-style:bolder">Created Courses</h1>
5     <%= if @usercourse.size==0 %>
6       <h3 style="color:red">No Courses Created yet...</h3><Create new course <%=
7       link_to "here", new_course_path, style:"text-decoration:none" %>
8     <%= else %>
9       <ul style="display:flex; flex-wrap:wrap;">
10 <%= @usercourse.each do |course| %>
11 <%= if course.user_id==current_user.id %>
12 <div class="card me-4 mb-3" style="width:18rem;">
13 <%= link_to(image_tag(course.image.thumb.url, alt: 'Image',:size => "286x180"),
14 course.image.url, target: '_blank') if course.image? %>
15 <div class="card-body">
16   <h5 class="card-title"><%= link_to course.course_name, course ,
17   style:"text-decoration:none;"%></h5>
18   <p class="card-text"><%= course.description %></p>
19 </div>
20 <%= link_to "Go to course", course ,style:"text-decoration:none;",
21 class:"btn btn-primary m-3"%>
22 </div>
23 <%= end %>
24 <%= else %>
25 <div class="card me-4 mb-3" style="width:18rem;">
26 <%= link_to(image_tag(course.image.thumb.url, alt: 'Image',:size => "286x180"),
27 course.image.url, target: '_blank') if course.image? %>
28 <div class="card-body">
29   <h5 class="card-title"><%= link_to course.course_name, course ,
30   style:"text-decoration:none;"%></h5>
31   <p class="card-text"><%= course.description %></p>
32 </div>
33 <%= link_to "Go to course", course ,style:"text-decoration:none;",
34 class:"btn btn-primary m-3"%>
35 </div>
36 <%= end %>
37 </ul>
38 <%= else %>
39 <h1 style="text-align:center">Total Courses</h1>
40 </ul>
41 <%= end %>
42 </if %>
43 <h1 style="text-align:center">Total Courses</h1>
44 </ul>
45 <%= end %>
46 </if %>
47 </pre>
```

Fig.3.3Dashboard

4. **Course Details Page-** When user scrolls the website to find the courses as per user's choice then user can decide the course by looking at the details about the course. User would be able to know what are the advantages that user will get after enrolling to the course and user can enroll as per the desired outcomes and motive. The details also provide the information about the technology that is user in the course and also the instructor information that helps user to decide whether user should enroll the course or not. This will help the user to save money and utilize it to the course that user actually wants as per the personal interest.



```
1 <%= render "nav" %>
2 <%= if user_signed_in? %>
3   <%= if (current_user.user_role.downcase == "instructor" && @course.
4     user_id == current_user.id) %>
5     <%= link_to(image_tag(@course.image.thumb.url, alt: 'Image',:size => "286x180"),
6       @course.image.url, target: '_blank') if @course.image? %>
7     <nav class="navbar navbar-expand-lg d-flex navbar-light bg-white shadow p-0 mb-0
8       bg-body rounded">
9       <div class="bg-dark container-fluid">
10        <h1 class="border rounded-" style="color:white"><%= @course.course_name %></h1>
11        <footer class="px-5 mt-5 pb-0" style="width:70rem">
12          <div class="row">
13            <h5 style="color:white"><%= @course.description %></h5>
14            <p style="color:white">Created by <%= User.find(@course.user_id).name%></
15            p>
16          </div>
17          <div class="d-flex justify-content-between py-2 my-2" style="width:65rem;">
18            <h5 style="color:white">Cost-<%= @course.cost %><br><br>Duration-<%= @course.
19              duration.split()[0] %> hours</h2>
20          </div>
21          <h3>
22            <%= link_to "Videos", course_videos_path(@course) , class:"btn rounded-3
23              border-light btn-lg btn-outline-secondary text-decoration-none",
24              style:"color:white"%>
25            <%= link_to "Home", root_path, class:"btn rounded-3 border-light btn-lg
26              btn-outline-secondary text-decoration-none ms-4",style:"color:white"%>
27            <%= link_to "Add Video",new_course_video_path(@course) , class:"btn
28              rounded-3 border-light btn-lg btn-outline-secondary text-decoration-none
29              ms-4",style:"color:white"%>
30            <%= link_to "Edit", edit_course_path(@course) , class:"btn rounded-3
31              border-light btn-lg btn-outline-secondary text-decoration-none ms-4" %>
32          </h3>
33        </div>
34      </div>
35    </div>
36  </div>
37 </div>
38 </div>
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100 </div>
```

```
24 </div>
25 </nav>
26 <%= else %>
27 <%= if @reqcourse.include? @course.id %>
28
29 <%= link_to(image_tag(@course.image.thumb.url, alt: 'Image',:size => "286x180"),
@course.image.url, target: '_blank') if @course.image? %>
30 <h2>Description: </h2><%= @course.description %></h2>
31 <h2> Category: </h2><%= @course.category %></h2>
32 <h2> Cost: </h2><%= @course.cost %></h2>
33 <h2>Duration: </h2><%= @course.duration %></h2>
34 <h2>Instructor: </h2><%= @instructor.name %></h2><br>
35 <h3><%= link_to "Videos", course_videos_path(@course) , class:"btn
btn-primary ms-2"%>
36 <%= link_to "Home", root_path, class:"btn btn-primary ms-2"%>
37 </h3>
38 <%= else %>
39 <%= link_to(image_tag(@course.image.thumb.url, alt: 'Image',:size => "286x180"),
@course.image.url, target: '_blank') if @course.image? %>
40
41 <h2>Description: </h2><%= @course.description %></h2>
42 <h2> Category: </h2><%= @course.category %></h2>
43 <h2> Cost: </h2><%= @course.cost %></h2>
44 <h2>Duration: </h2><%= @course.duration %></h2>
45 <h2>Instructor: </h2><%= @instructor.name %></h2>
46 <ul>
47 <%= if @ordercourse.include?(@course.id) %>
48 <%= link_to "Go to Cart",carts_show_path ,class:"btn btn-primary"%>
49 <%= else %>
50 <%= form_for @order_item, remote: true do |f| %>
51 <%= f.hidden_field :course_id, value: @course.id %>
```

Fig.3.4 Course Details Page

5. **Add to Cart-** When user gather information about the courses and finally user get convinced to buy the course then user can add the course and can proceed the checkout part by paying the money and the user would be able to see the course in his learning section and can see the videos and learn with the instructor.

```

1 <%= render 'courses/nav' %>
2 <h1 style="text-align:center">Shopping Cart</h1>
3 <% if @order_items.empty? %>
4   <h3 style="color:red">Please add item to cart</h3>
5 <% else %>
6   <ul style="display:flex; flex-wrap:wrap;">
7     <% @order_items.each do |cart| %>
8       <div class="card me-4 mb-3" style="width:18rem;">
9         <%= link_to(image_tag(cart.course.image.thumb.url, alt: 'Image',:size =>
10           "286x180"), cart.course.image.url, target: '_blank') if cart.course.image?
11         <div class="card-body">
12           <h5 class="card-title"><%= link_to cart.course.course_name,
13             style:"text-decoration:none;"></h5>
14           <p class="card-text"><%= cart.course.description %></p>
15           <%= form_for cart, remote: true do |f| %>
16             <%= link_to "Remove Items", order_item_path(cart), method: :delete,
17               remote: true, class: "btn btn-primary mb-0 ms-5",style:"float:bottom;">
18             <% end %>
19           </div>
20         </div>
21       <% end %>
22     </ul>
23   <h3 style="color:red">Total Cost:<%= current_order.subtotal></h3>
24   <% if @order_items.size!=0%>
25     <%= link_to "Checkout", checkout_path, class: "btn btn-primary btn-lg mt-4
26       ms-5">
27   <% end %>
28 <%= render 'courses/foot' %>

```

Fig.3.5 Cart

6. **My Learning** – After the course is designated to the user then user would be able to work with the course and can also learn from the course by watching the course videos. All these videos are uploaded by the instructors where the instructor is providing deep knowledge to the students regarding the topics and student can learn and can implement the knowledge practically as per the instructor’s instructions.

```
26 <h1 style="text-align:center">My Courses</h1>
27 <ul style="display:flex; flex-wrap:wrap;">
28   <% @reqcourse.each do |course| %>
29     <div class="card me-4 mb-3" style="width:18rem;">
30       <%= link_to(image_tag(course.image.thumb.url, alt: 'Image',:size => "286x180"),
31         course.image.url, target: '_blank') if course.image? %>
32       <div class="card-body">
33         <h5 class="card-title"><%= link_to course.course_name, course ,
34           style:"text-decoration:none"%></h5>
35         <p class="card-text"><%= course.description %></p>
36       </div>
37       <%= link_to "Go to course", course ,style:"text-decoration:none;",
38         class:"btn btn-primary m-3"%>
39     </div>
40   <% end %>
41 </ul>
42 <end %>
43 <else %>
44   <h1 style="text-align:center">Total Courses</h1>
45   <%= if @courses.size==0 %>
46     <h3 style="color:red">No Courses Published yet...</h3>
47   <end %>
48   <ul style="display:flex; flex-wrap:wrap;">
49     <% @courses.each do |course| %>
50       <div class="card" style="width: 18rem;">
51         
52         <div class="card-body">
53           <h5 class="card-title"><%= link_to course.course_name, course %></h5>
54           <p class="card-text">Some quick example text to build on the card
55             title and make up the bulk of the card's content.</p>
56         </div>
57       </div>
58     <% end %>
59   </ul>
60 <end %>
```

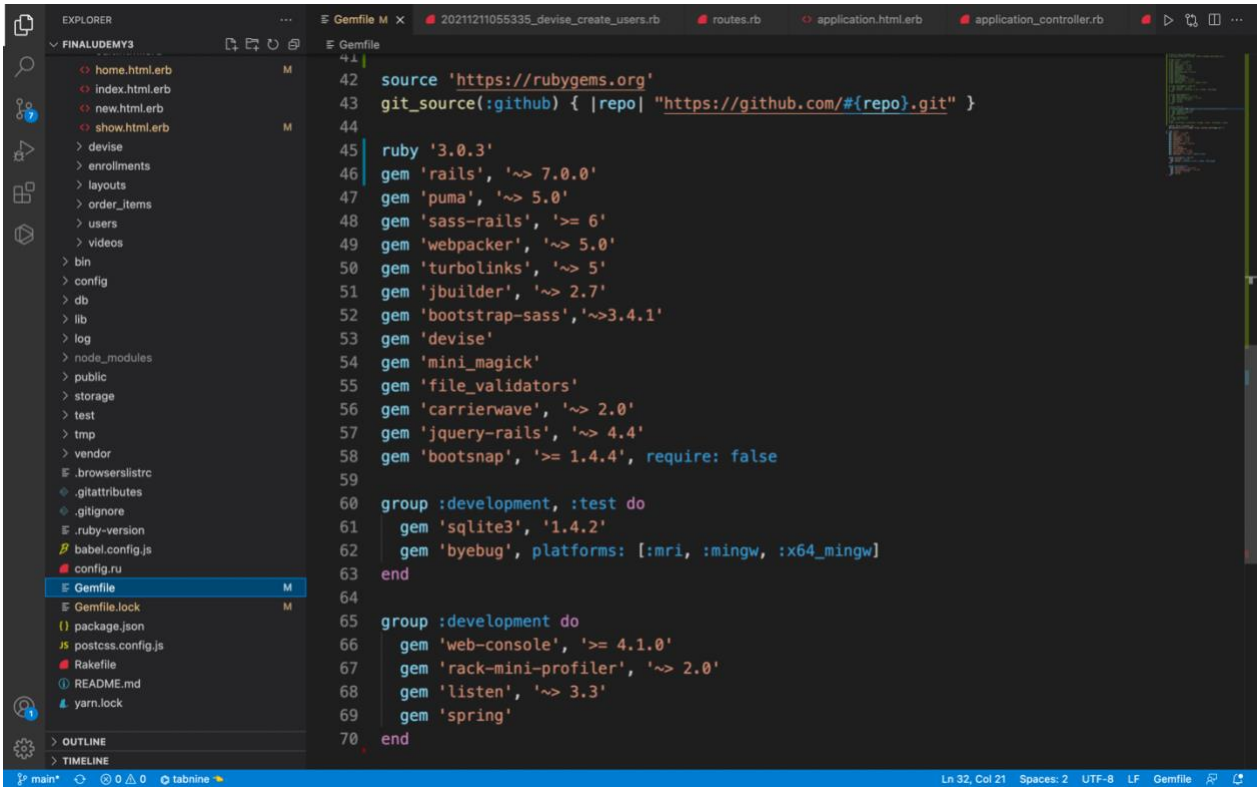
Fig.3.6My Learning

7. **My Course-** Considering the instructor point of view, the application also allows the user to login/signup as an instructor where the user could create course teach many students under one or many courses and also clear the doubts of the students.

```
16 <div class="card"><%= link_to course.course_name, course ,
17 style:"text-decoration:none"></h5>
18 <p class="card-text"><%= course.description %></p>
19 </div>
20 <%= link_to "Go to course", course ,style:"text-decoration:none;",
21 class:"btn btn-primary m-3">
22 </div>
23 <%= end %>
24 <%= end %>
25 <%= end %>
26 <h1 style="text-align:center">My Courses</h1>
27 <ul style="display:flex; flex-wrap:wrap;">
28 <%= @reqcourse.each do |course| %>
29 <div class="card me-4 mb-3" style="width:18rem;">
30 <%= link_to(image_tag(course.image.thumb.url, alt: 'Image',size => "286x180"),
31 course.image.url, target: '_blank') if course.image? %>
32 <div class="card-body">
33 <h5 class="card-title"><%= link_to course.course_name, course ,
34 style:"text-decoration:none"></h5>
35 <p class="card-text"><%= course.description %></p>
36 </div>
37 <%= link_to "Go to course", course ,style:"text-decoration:none;",
38 class:"btn btn-primary m-3">
39 </div>
40 <%= end %>
41 </ul>
42 <%= end %>
```

Fig.3.7My Courses

8. **Gem file-** This file is a primary file for containing all the information of the gems that we have used in this application with the name and version number we are using that allows the backend developer a knowledge of what technology he used in the application. Hence developer can update to new technology when required.



```
42 source 'https://rubygems.org'
43 git_source(:github) { |repo| "https://github.com/#{repo}.git" }
44
45 ruby '3.0.3'
46 gem 'rails', '~> 7.0.0'
47 gem 'puma', '~> 5.0'
48 gem 'sass-rails', '>= 6'
49 gem 'webpacker', '~> 5.0'
50 gem 'turbolinks', '~> 5'
51 gem 'jbuilder', '~> 2.7'
52 gem 'bootstrap-sass', '~>3.4.1'
53 gem 'devise'
54 gem 'mini_magick'
55 gem 'file_validators'
56 gem 'carrierwave', '~> 2.0'
57 gem 'jquery-rails', '~> 4.4'
58 gem 'bootsnap', '>= 1.4.4', require: false
59
60 group :development, :test do
61   gem 'sqlite3', '1.4.2'
62   gem 'byebug', platforms: [:mri, :mingw, :x64_mingw]
63 end
64
65 group :development do
66   gem 'web-console', '>= 4.1.0'
67   gem 'rack-mini-profiler', '~> 2.0'
68   gem 'listen', '~> 3.3'
69   gem 'spring'
70 end
```

Fig.3.8 Gemfile

Now coming on to the user interface on how the interface look like is defined below and the instruction that how a user can enroll in the course and select the category as per the choice and can interact with the application in an effective way.

Moreover, this application is a very user-friendly website and is very easy for the user to work with. Also, the website is self-learning website and user do not get any difficulty in working with this application.

The UI begins with the authentication page i.e., either Login/Signup page. As soon as user fill its credentials then user data will be authenticated and after that user will enter the dashboard and the dashboard consist of different courses that are shown in the list that user could figure out easily.

Below you will find the photo representing the login/signup page to enter the application very first time.

Log In to Your Udem Account!



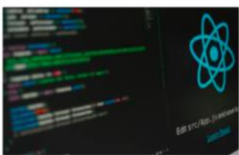

Email
Password
 Remember me
Log in

or [Forgot your password?](#)

Don't have an account? [Sign up](#)

The below photo represents the dashboard where user can find a lot more courses and the user can click on the below button and can see the details regarding the course i.e., name, instructor, duration, description, cost etc.

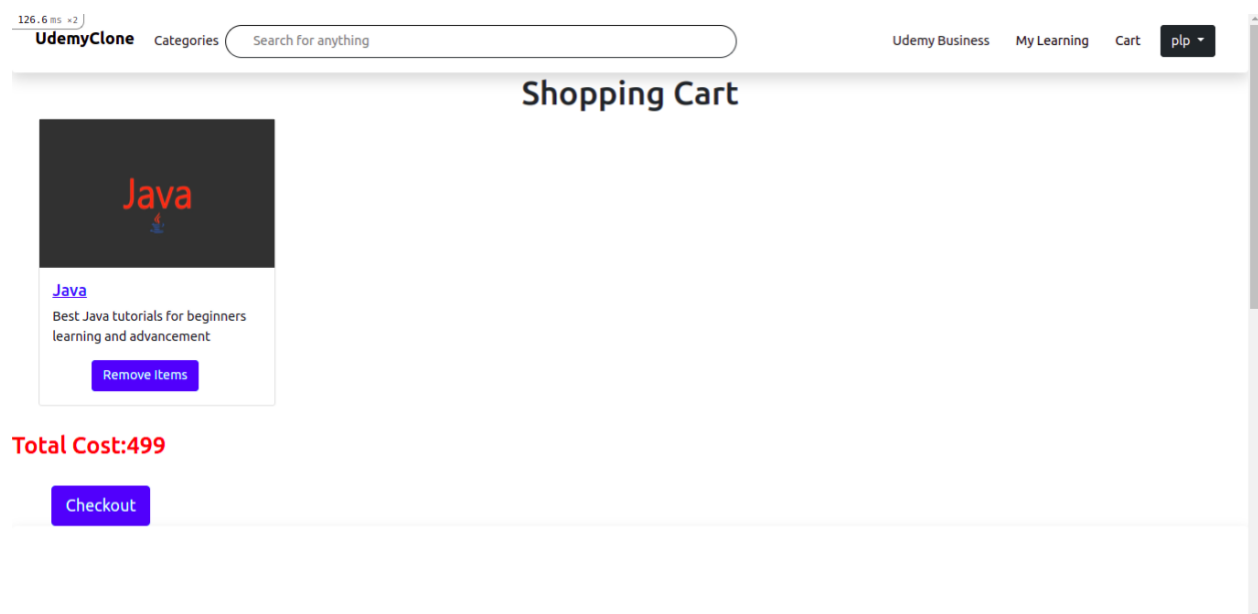
All Courses

 <p>Java Best Java tutorials for beginners learning and advancement</p> <p>Go to course</p>	 <p>Node Js Node js course for advance coders</p> <p>Go to course</p>	 <p>React Js The only advanced react javascript course for best learning.</p> <p>Go to course</p>	 <p>Python Python course for basic and deep knowledge</p> <p>Go to course</p>
---	---	---	--



After user click on the Go to Course button user would be able to see the details of the course and also if the user is the owner of the course user could get options like editing the course content, add videos to the course, delete the course permanently. All the courses that a particular instructor creates are reflected in the My Course section in navigation bar where user can check the courses and alter the content based on the requirement.

If a user otherwise a student, then the student can get the option like Add to Cart for adding the course to the cart and the user would be displayed with the total cost of the course then user can click on Checkout and finally the payment would be done and the course would be added to the user's learning.



CHAPTER-4

Results and Discussion

Based on the prior working and execution of the application on the website it was noted that it provides accurate result as per the convenience of the user. The application is perfect in working and the user interface is very favorable to the user operating the application.

User can easily enroll and learn from the course as per the choice they want. Moreover, the website is auto explanatory to the user and user do not find any difficulty to work with the application. First whenever the site loads the user is provided with the interface showing the authentication page where user can verify if it's a valid user or not. User is then directed to the dashboard where the user can select the course and can purchase the course and complete the enrollment process. After that if user is interested in any of the course, then user could go to the course details and can read about it from there only user can purchase the course by adding the course to the cart and then proceeding to the checkout button. After the user clicks on checkout button the payment will be done and the course would be added to the learning sheet of the user and then user is good to go to learn from the course.

The application is a self-explanatory application that allows user to learn by their selves and it provide an easy with which the user can interact with the application with no problem. Moreover, the cost of each course is so reasonable that user can afford the course easily and hence can study the courses and gain the knowledge. This web application not only benefits students in learning new technologies but also motivate the teachers to teach on the platform and hence teachers give their full support to the students in learning new technology. This also provide an advantage of employment as there are people who lost their jobs due to pandemic and now are jobless and finding it difficult to work.

CHAPTER-5

Conclusion and Future Scope

5.1 Conclusion

In this project, we have invested our deep knowledge of Ruby on Rails, Databases, coding as well as problem solving in creating a website application that is an e-learning platform known as “**Udemy Clone using Ruby on Rails**” that is created using a new technology named as “**Ruby on Rails**” in short ROR. ROR is a primary technology used in developing this website. ROR provide a programmer with a wide variety of features that can be used to create any particular website effectively.

ROR follows MVC also called as Model View Controller Architecture that contains 3 section model, view and controller. The basic overview of MVC structure is that in MVC structure there are 3 major components on which the complete application flow works i.e., Model which is responsible when the user request from frontend to get the data from backend then the Model component plays a major role in the case. Another component is Controller which is responsible for performing operations on the data gathered by the model from the backend database. The final component is View that defines the interface of the application.

We have tried to design the window application in such way that user may not have any difficulty in using this application without much effort. This software can be really used by end user who have Window running devices with them. The language that we use to develop this system is Ruby (version 3.0.2), Rails (version 6) for the frontend and for the backend we are using is SQLite3 as a primary database.

The Udemy Clone is the educational website that is created for the purpose of education and is one of the leading learning platforms for the purpose of the students who want to learn new technologies and learn new course and grow themselves into area of their interest. The final result we are getting is that this website is tested by the other developers and according to the final results and statistics it has been observed that the Udemy Clone is a successful website and hence is perfectly designed for the betterment of the future generation. Also, the main purpose of designing this website is to allow students to learn new course and develop their personalities into technology and other area they want. As this website allow students to learn online hence in this covid hard time student find

it difficult to go outside and learn therefore its best suited for those who want learn things at home and grow their personalities.

If you want to learn variety of technologies and learn new courses then this website is best suited to you. The main feature of this applications is that you can learn variety of course by purchasing them and also can act as an instructor and can even instruct other students to learn new things. You can use it as per your choice of category and can select the variety of course based on your interest of domain.

5.2Future Scope

The main objective of the project is to create a **Udemy Clone using Ruby on Rails** that allows users with the functionality of learning new technologies throughout. This allows the person to get a guidance that in which technology student wants to work in future and want to do masters in that. Udemy application also provide doubt solving sessions that are very useful for students for doubt clearance so that they can understand the concepts deeply and can implement in their practical life. Also due to pandemic most of the parents have fear of sending their children outside and hence our application is a best solution for that scenario as well. Not only this but also people who lost their jobs can also teach on this platform in whatever language, category or area they want to teach and can also earn money. This also supports people to provide a mode to live happily by earning online by teaching. Moreover, the courses available at website also consist of free courses that is useful for those students who are not able to learn due to wealth issues in family. The features have a positive point for the ease of handicap people or people who cannot go out due to pandemic that can also operate the application and work efficiently. The use of user authentication helps the user to store their last learning tutorial as it is and from next time, they can forward their learning from there only and hence they need not to start it again. Also, the authentication is done through a gem named as **Devise** that allows the data of each user to stay protected from outside world. Further the use of **SQLite3** as a database is also a plus point for the application. SQLite3 is one of the faster database that protects the data in efficient manner and also provide fast read write speed.

Many users in their daily life try to learn new things but in order to save money and mostly due to pandemic issues students and parents not willing to go out due to high risk. Therefore, in order to simplify their work and help them to learn new things at home we have decided to introduce this web application that allows

them to learn at home itself. This application is the best practice to work with. Keeping in mind the recession scenario we also provide user a new mode where user can teach students and students can purchase course through which user would be earning. The doubt solving session facility is a positive point for students to get attracted towards our web application.

Money wastage irritates every person and at this time of pandemic its very precious to save money. So, in our learning platform there will be no case of wastage of money. We will also try that our users are benefited with the application advantages.

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