

Learning Management System

Internship Report **Internship for MCA-IV**

Submitted in partial fulfillment of the requirements

For the degree of

Master of Computer Application

By

DEEPAK RAGHVENDRA RATHORE
20MCA014

Guided By

DR. SAURIN PARIKH
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Ahmedabad 382481

CERTIFICATE

This is to certify that the major project entitled “Learning Management System” submitted by DEEPAK RAGHVENDRA RATHORE (20MCA014), towards the partial fulfillment of the requirements for the degree of Master of Computer Application of Nirma University is the record of work carried out by him/her under my supervision and guidance. In my opinion, the submitted work has reached a level required for being accepted for examination.

Dr. Saurin Parikh
Assistant Professor
Computer Science and Engineering Dept.,
Institute of Technology,
Nirma University,
Ahmedabad

Dr. Madhuri Bhavsar,
Professor and HOD,
Computer Science and Engineering Dept.,
Institute of Technology,
Nirma University,
Ahmedabad

Director
Institute of Technology,
Nirma University,
Ahmedabad

Statement of Originality

I, Deepak Raghvendra Rathore, Roll no: 20MCA014, give undertaking that the Major Project entitled “**Learning Management System**” submitted by me, towards the partial fulfilment of the requirements for the degree of Master of Computer Application of Institute of Technology, Nirma University, Ahmedabad, contains no material that has been awarded for any degree or diploma in any university or school in any territory to the best of my knowledge. It is the original work carried out by me and I give assurance that no attempt of plagiarism has been made. It contains no material that is previously published or written, except where reference has been made. I understand that in the event of any similarity found subsequently with any published work or any dissertation work elsewhere; it will result in severe disciplinary action.

Signature of Student

Date: 10-05-2022

Place: Vadodara, Gujarat

Endorsed by

Dr. Saurin Parikh

(Signature of Guide)

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Thanks and Regards,

Deepak Rathore (20MCA014)

ABSTRACT

The Learning Management System, abbreviated as LMS, is a platform that helps provide online content for learning purposes. A technical definition for this would be, a Learning Management System (LMS) is a web-based software used to facilitate the delivery of online or face to face courses.

Learning Management System is a platform where every training related work will be managed. The Proposed system will provide course to authorize and registered users in Course section where they can view the courses, and download the materials. The system will help to schedule training and keeping a record of attendees in the training which will help in verifying the criteria for certification.

This way the system is designed is such that it will help Rishabh software Pvt. Ltd in facilitating trainings

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1. INTRODUCTION

1.1 ABOUT THE COMPANY

1.1.1 Introduction of the company

Rishabh Software PVT. LTD. established in Year 2000.

- From the start, the vision was clear – to empower businesses with world-class software Solutions.
- They did this by tapping into local talent in their home state of Gujarat by building a Platform for budding software developers to grow and nurture their careers.
- They did this by tapping into local talent in their home
- They set their CMMI level-3 with 1000+ successful projects.

1.1.2 Services for Tech Needs

Data Analytics

- Cloud Applications
- Enterprise Software
- Digital Experience
- Enterprise Mobile Application
- Software Testing and QA
- DevOps Services
- Digital Process Automation

1.1.3 Quality Policy

Rishabh is committed to provide timely and reliable services in Software Solutions through customer centric approach and using state-of-art technology

- IT Training by helping in enhancement of skills and expertise
- Achieve customer satisfaction
- Through continual improvement in their performance by effective deployment of international standards for quality management
- Encouraging teamwork and providing an environment conducive to individual and group growth and development

1.2 THE SYSTEM

1.2.1 Definition of system

Learning Management System is a platform where three different types of users perform various activities related to trainings. The system provides a platform where the trainees can learn courses by themselves by viewing or downloading the course content and can also by attending the face-to-face session whose details will be shown in the system when they are created by the admin. The system is also used to store attendance and assessments that are created by the trainer and also displays the marks of the trainee for better understanding the trainee progress, basically the system helps in facilitating trainings and course content with keeping a track record of it.

1.2.2 Purpose and objectives

To develop and deliver a robust, configurable, user-friendly LMS application, which will help the organization internal stakeholders to:

- Track the training progress, plan trainings, facilitate trainings and assess the effectiveness of the trainings conducted.
- To reduce manual activities and time consumed in facilitating trainings and conducting pre/post assessments. To avoid collapsing of two schedule training with respect to time, venue and availability of the trainer.
- To store course data at one place so every trainee can access it whenever needed
-

1.2.3 About present system

The current system includes all manual work and all the trainings that are carried out are schedule manually by checking the availability of the trainer, venue and timings. The attendance and assessments are taken manually and are stored in a file manually.

1.2.4 Proposed system

The Proposed system will eliminate the manual work and will help to facilitate trainings more efficiently and time saving. The proposed system will also collect the data and store it at one place which can be accessed through anywhere.

1.3 PROJECT PROFILE

1.3.1 Project title

Learning Management System

1.3.2 Scope of project

The purpose of the Learning Management System is to improve the learning process for Trainees and manage the training activity smoothly.

The three basic user of the system are

1. L&D manager (Admin)
2. Learner (Trainee)
3. Trainer

The benefits of having LMS is that Trainees can learn the course as per their convenience.

The system will manage the flow of training as it will assign the trainer as per their availability and every registered trainee will get to see the details in the system regarding it, so there will be no miss communication.

The system will be designed in such a way that it will hold all the details of all the physical trainings conducted like numbers of attendees, venue, date, time etc.

The system will be able to store assessments' and generate marks. The attendance will also be marked in the system of the trainees

1.3.4 Hardware/Software environment in company

Processor: Intel(R) Core(TM) i5-7200U CPU @ 2.50HGz 2.71 GHz

Memory: 8GB

Software Environment

Frontend: HTML, CSS, JavaScript, JQuery, Bootstrap

Framework: Laravel

Backend: PHP, SQL

Database: MySQL

2. SYSTEM ANALYSIS

2.1 FEASIBILITY STUDY

2.1.1 Operational feasibility

The system is designed in such a way that the organization needs can be met as it covers all the aspect that are currently needed to facilitate the trainings. As providing training to the Fresher's is a new initiative by the organization the system will help in all the task to be carried out, hence the operational feasibility study shows that the system will meet the and satisfy the current requirement of the organization

2.1.2 Technical feasibility

All the technical resources required to for the system are present in the organization, the project is 100% technically feasible for the organization.

2.1.3 Financial and Economical feasibility

The study was carried out and the expected outcome was beneficial as the system aims to provide training assistant and carry out various activities like taking attendance and assessments and the system also store the data of the trainee at one place which will reduce the storage cost of external entities.

2.1.4 Handling Infeasible projects

We have validated the scalability of the project and also estimated time, cost, scope and quality of the project. We have overcome challenges regarding the same and thereby eliminating the chances of the project being infeasible. Thus the current project is highly feasible.

2.2 CONTEXT DIAGRAM

DFD-LEVEL-0

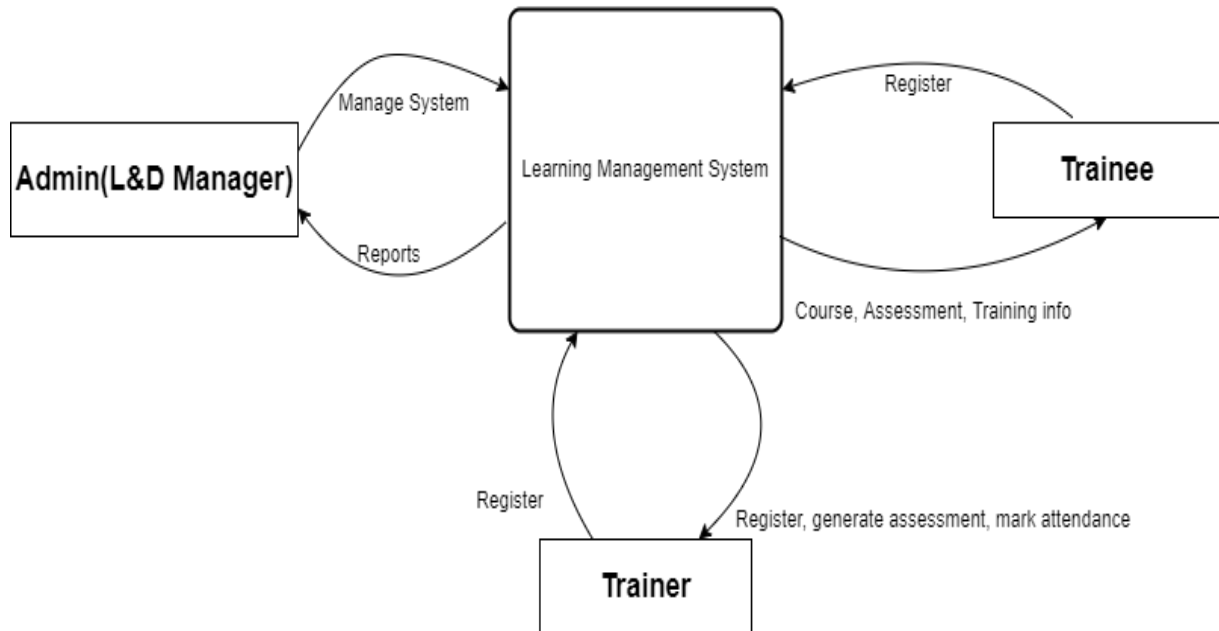


Figure: 2.2 Context Diagram

Description: The Flow of the System has three entities, the Admin, The Trainee and The trainer. The admin will manage the system such as managing user, batch, course, trainings and generating reports whereas the Trainee will view his assigned trainings, mark attendance and create assessments. The Trainee will view courses, give assessment, view assessment marks and training such as training scheduled and attendance

2.3 DATA FLOW DIAGRAMS

2.3.1 First level DFD

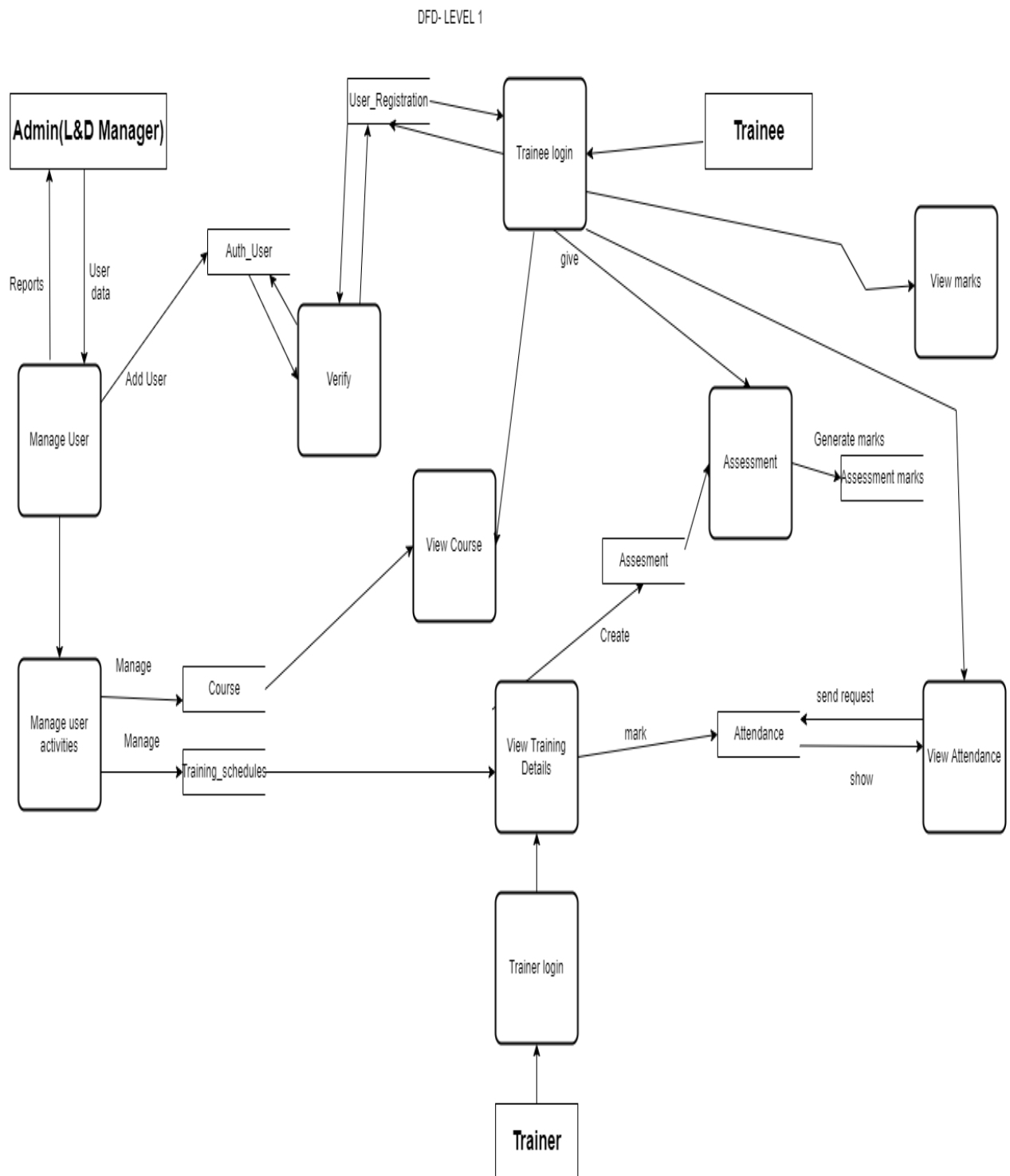


Figure: 2.3.1 First level DFD

2.3.2 Second level DFD

2.3.2.1 Second level DFD-1

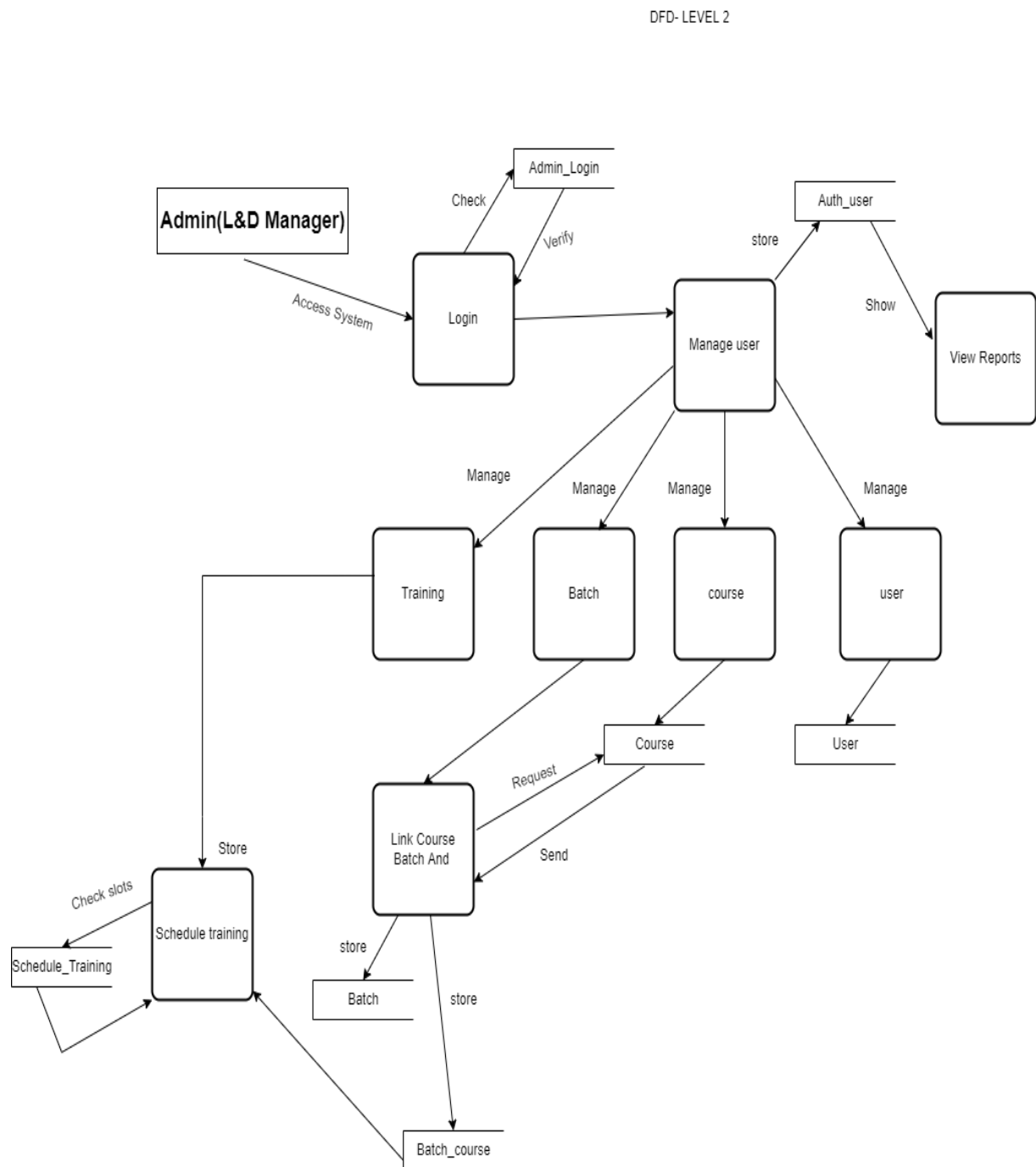


Figure: 2.3.2.1 Second level DFD-1

2.3.2.2 Second level DFD-2

DFD-LEVEL-2

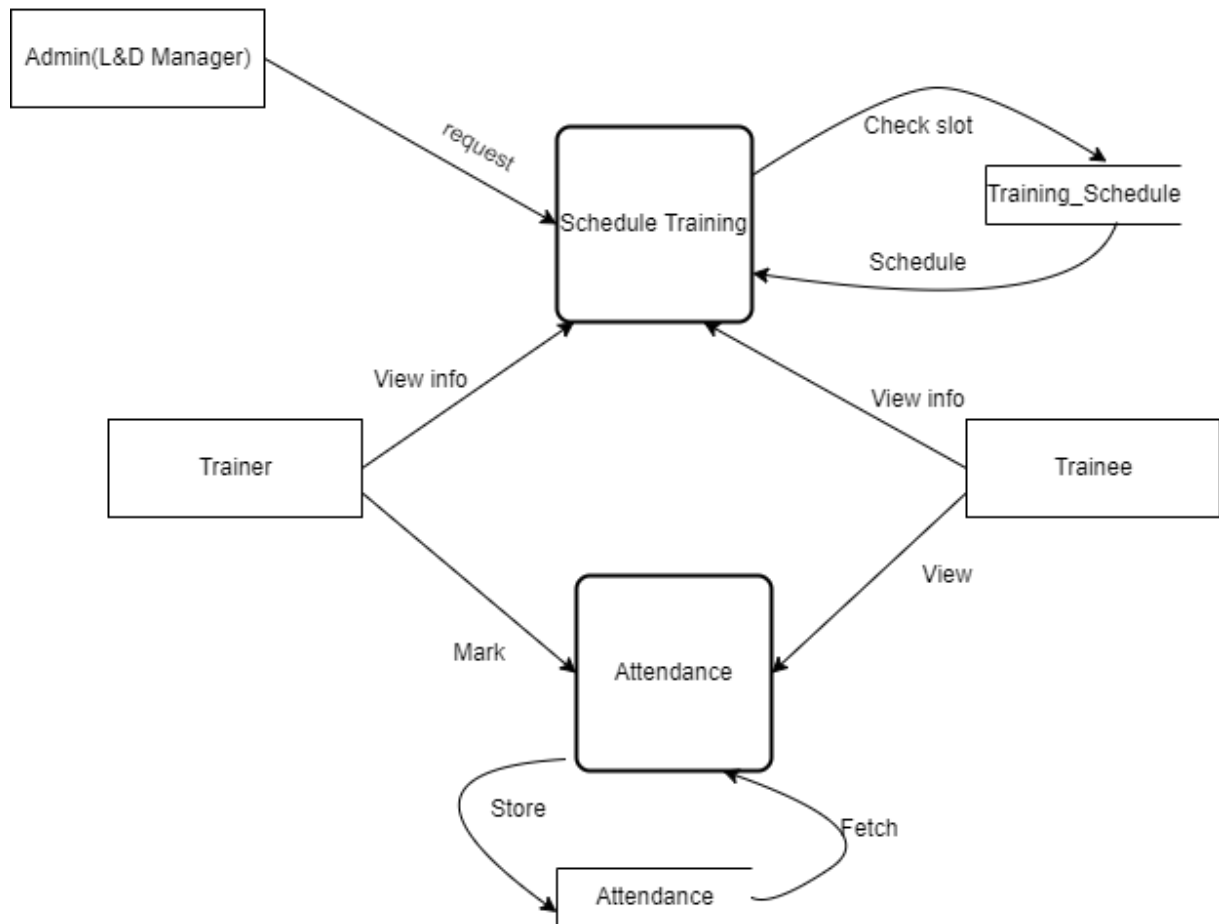


Figure 2.3.2.2 Second level DFD-2

3. SYSTEM DESIGN

3.1 Activity Diagrams

3.1.1 Admin Login Activity

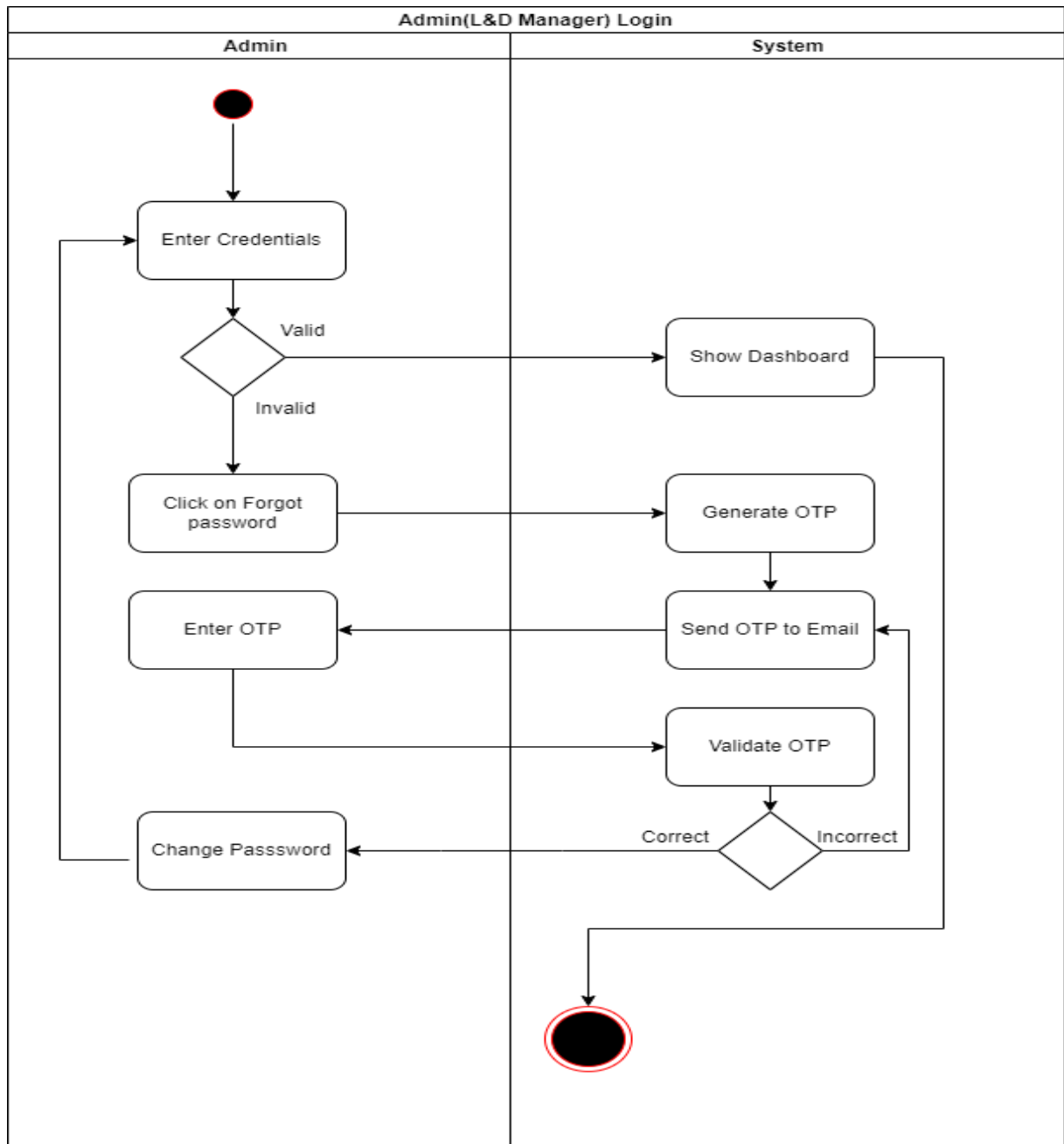


Figure 3.1.1 Admin Login Activity

Description: This is admin activity. The flow of activity will be as shown above when admin logs in to the system. The admin will enter credentials and if the credentials are valid, he will be redirect to dashboard page of admin. If he forgets his password he can reset it by clicking on forgot password. An OTP will be sent to registered mail and will be validate. The admin will then be allowed to change the password and login into the system by entering credentials.

3.1.2 User Login Activity

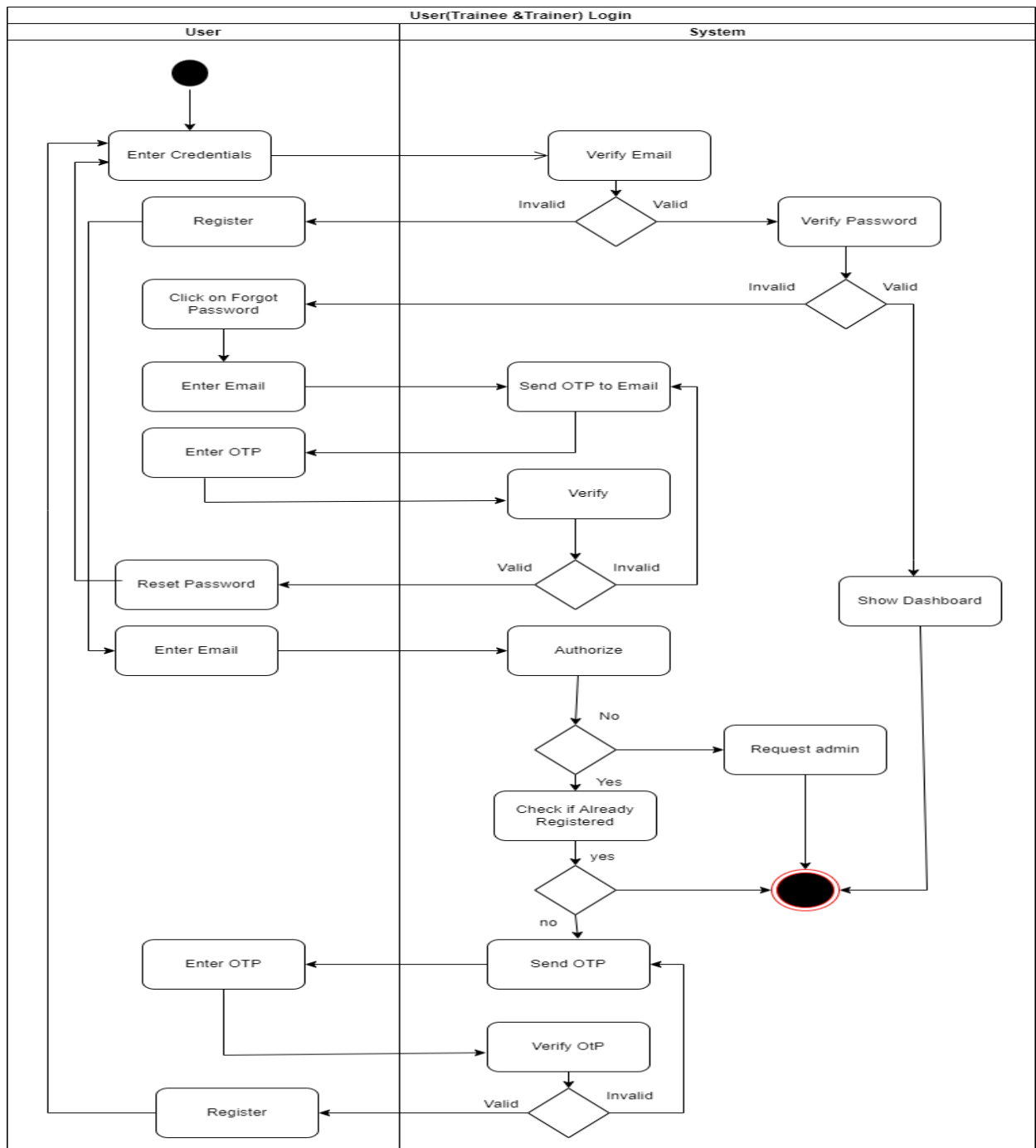


Figure 3.1.2 User Login Activity

Description: This is User login Activity which will be same for the trainer and trainee. The user will first enter credentials, email will be first verified at the backend. If it's valid then it will verify password. If both are correct than the user will be logged in. If the email is invalid, then it will ask to register, the user will enter the email id and an OTP will be sent to it if the email is authorized by the admin to register. If the password is invalid then the user can click on forgot password link and an OTP will be sent to the user to reset the password.

3.1.3 Admin - Add course Activity

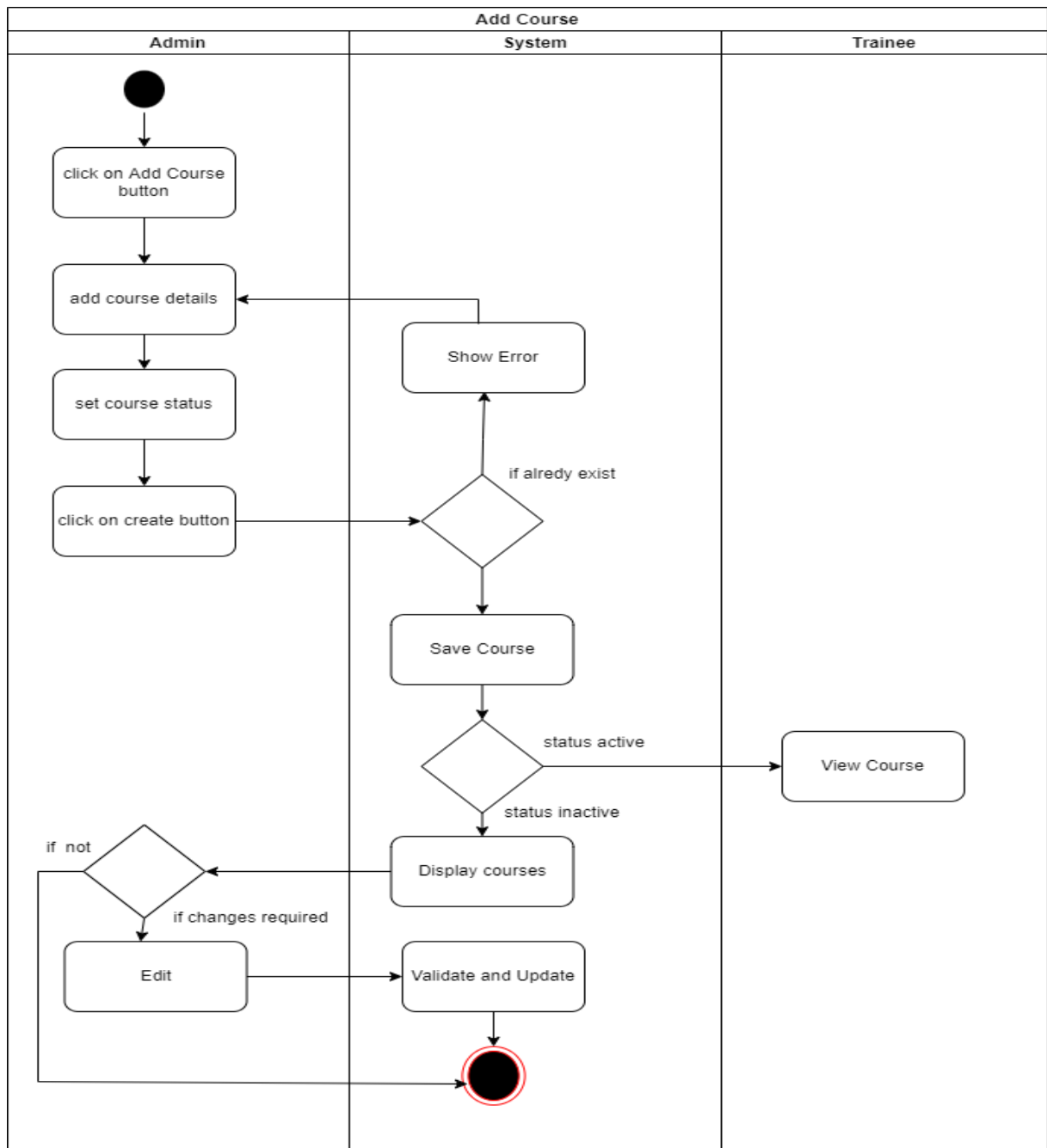


Figure 3.1.3 Admin - Add course Activity

Description: This is adding course activity for admin. The admin will add the course details by clicking on create course button and the system will check if the course already exists or not. If it does not exist the course will be store in the system and the allotted trainee will be able to see the course material

3.1.4 Admin – Training Scheduling

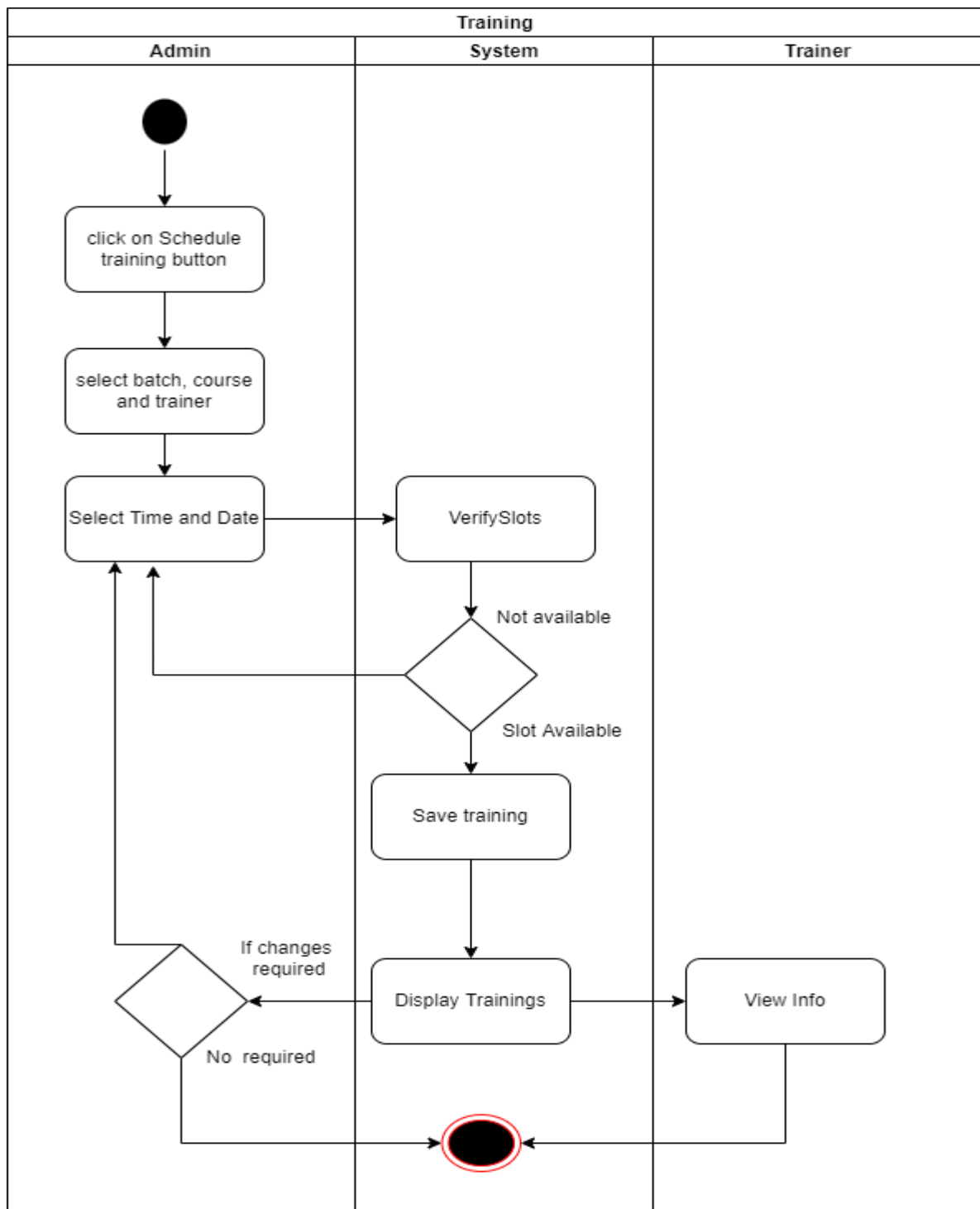


Figure: 3.1.4 Admin – Training Scheduling

Description: This is activity fir admin to schedule trainings. The admin will click on schedule training button and a form will open where he will select for which batch and course will be the trainings need to be schedule. The admin will select date and time if the date and time conflicts with other trainings. It will prompt a message and the admin has to again select date and time and click on save button. The trainings will be show to trainee and trainers

3.1.5 Trainer-Creating Assessment Activity



Figure: 3.1.5 Trainer-Creating Assessment Activity

Description: This is Activity of Trainer for Creating an Assessment in the system. The trainer will click on add assessment button and add the questions and answer as per the need by clicking on add more question button, it will load on client side through java script than he will save the assessment and the assessment will be displayed to the assigned trainee

3.2 Use case diagram

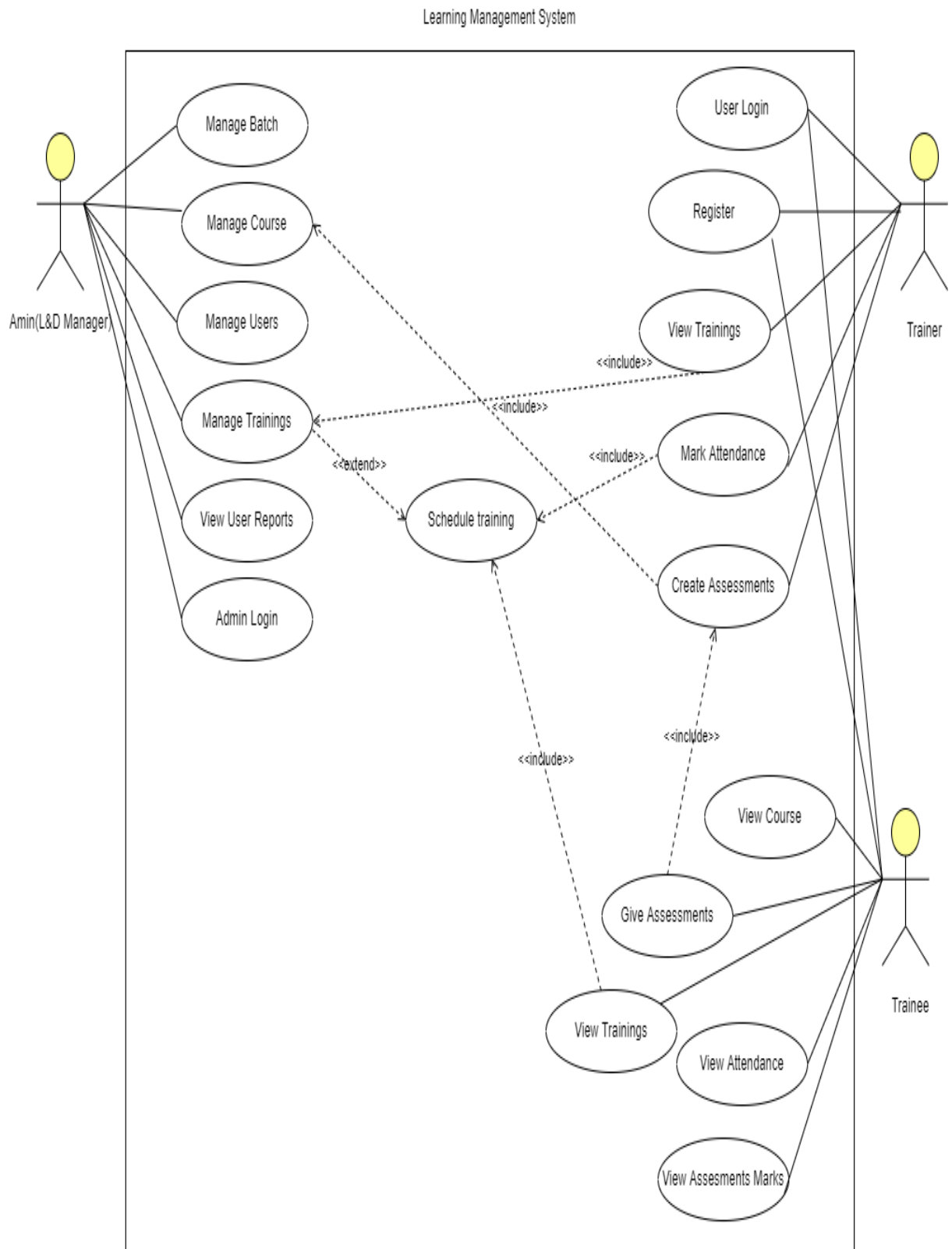


Figure: 3.2 Use Case Diagram

Description of Use Cases

Actor: Admin (L&D Manager)

Use case	Description
Manage Batch	Adding, Updating or deleting a batch and linking course to batches
Manage Course	Adding, Updating or deleting a Course and adding course pdf materials
Manage Users	Authorizing a user to use the system
Manage Trainings	Schedule the trainings according to the availability of date time and venue
View User Reports	View reports of all the users of the system
Admin Login	Login in to the system by default id and password, password can be change by sending OTP.

Table 3.2.1 Admin (L&D Manager) use case description

Actor: Trainer

Use case	Description
User login	Login in to the system by entering credentials
Register	Registering if first time using the system and if authorized by the admin
View Trainings	View all the trainings that are schedule in 3 section i.e. today's trainings, upcoming trainings and previous training
Mark Attendance	Marking attendance of previous training and present day's training
Create Assessments	Creating assessments for trainees

Table 3.2.2 Trainer use case description

Actor: Trainee

Use case	Description
User login	Login in to the system by entering credentials
Register	Registering if first time using the system and if authorized by the admin
View Course	View and download the allotted course
View Trainings	View the allotted trainings
Give Assessments	Give the allotted assessments
View Attendance	View attendance of respective trainings
View Assessments Marks	View marks of submitted assessments

Table 3.2.3 Trainee use case description

3.3 Entity-Relationship diagram

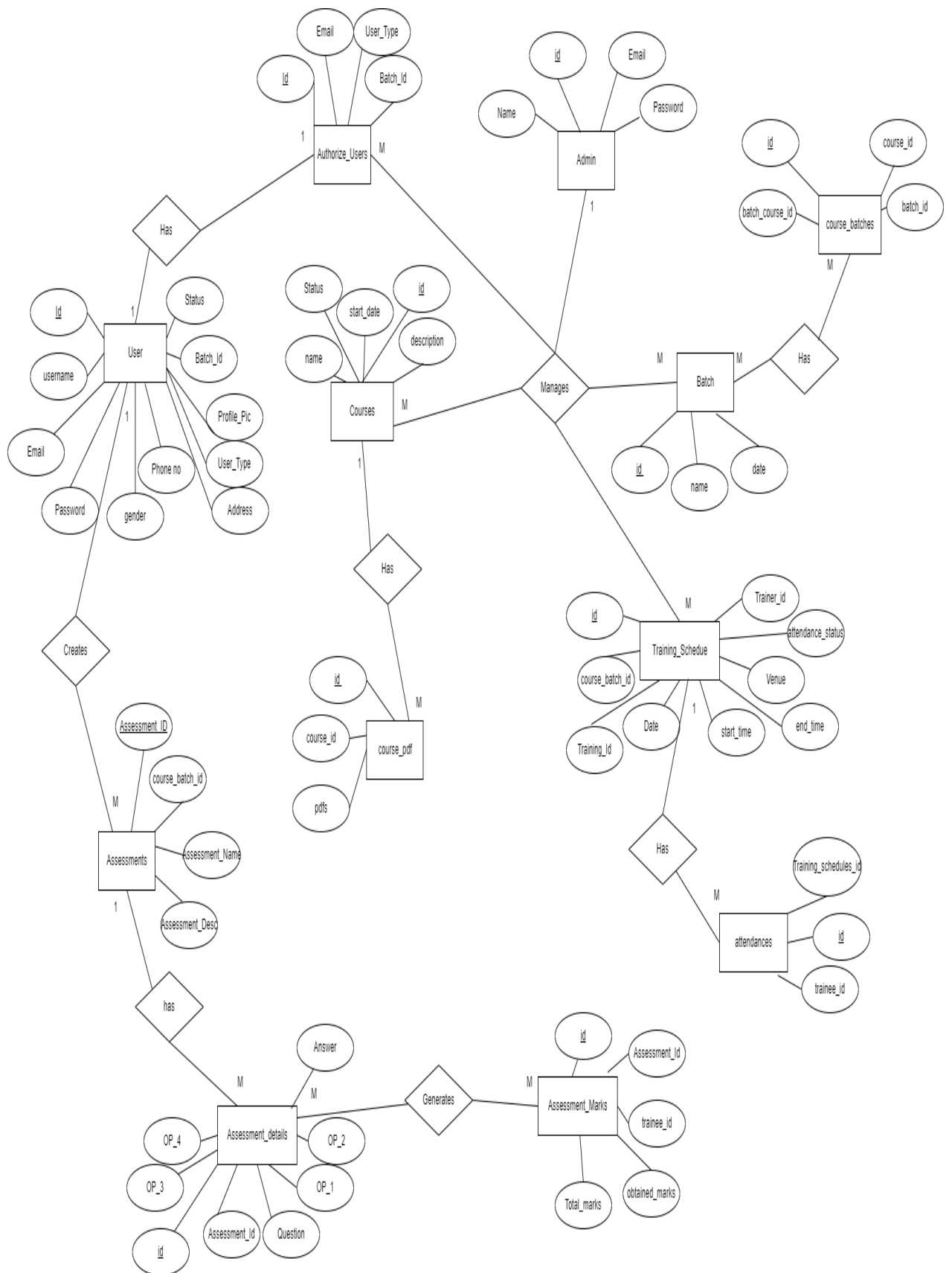


Figure 3.3 ER Diagram

3.3 Data dictionary

Admins

Field Name	Data type	Constraint	Description	Example
id (Primary)	bigint(20)	Primary Key	Id of admin	001
email	varchar(191)	NOT NULL	Email of admin	admin@admin.com
password	text	NOT NULL	Password of admin	admin

Users

Field Name	Data type	Constraint	Description	Example
id (Primary)	bigint(20)	Primary Key	User unique id	2
username	varchar(191)	Not Null	User first name and last name combined	Meet Agrawal
email	varchar(191)	Not Null	Email of user verified by OTP	meetagrawal39@gmail.com
password	text	Not Null	Password of user	PeLeSMYdXz+lyShQfIVRp50S1O6IrhNHFSwjI4Iti9o=
gender	varchar(191)	Not Null	Gender of user	male
phone_no	varchar(191)	Not Null	Phone no of user	9898562741
address	text	Not Null	Address of user	anandvan society
user_type	varchar(191)	Not Null	Trainee or trainer	Trainee
status	enum('1', '0')	Not Null	0 if active 1 if inactive	0
profile_pic	varchar(191)	Not Null	Profile pic url	Media/Profile_pics/1650183670_1.jpg
batch_id	varchar(191)	Foreign key	Batch id if the user is a trainee	2022

Authorize users

Field Name	Data type	Constraint	Description	Example
id (Primary)	bigint(20)	Primary Key	Id of authorized user	02
email	varchar(191)	Not Null	email of authorized user	meet@gmial.com
user_type	varchar(191)	Not Null	Trainee or trainer	Trainee
batch_id	varchar(191)	Foreign Key		2022

Courses

Field Name	Data type	Constraint	Description	Example
id	varchar(191)	Primary Key	Course id	101
name	varchar(191)	Not Null	Course name	HTML
status	varchar(191)	Not Null	Course status active or inactive	inactive
description	varchar(191)	Not Null	About course	Hypertext markup language and basics
start_date	timestamp	Not Null	Course starting date	2022-01-10

Batches

Field Name	Data type	Constraint	Description	Example
id	varchar(191)	Primary Key	Batch id	2020
name	varchar(191)	Not Null	Batch name	2020-freshers
date	timestamp	Not Null	Batch start date	2020-01-10

Course batches

Field Name	Data type	Constraint	Description	Example
id (Primary)	bigint(20)	Primary Key	Course batch link id	10
batch_course_id	varchar(191)	Not Null Unique	Course batch link name	2020_101
course_id	varchar(191)	Foreign key	Course id to link with batch	101
batch_id	varchar(191)	Foreign key	Batch id	2020

Course pdfs

Field Name	Data type	Constraint	Description	Example
id (Primary)	bigint(20)	Primary Key	Id of course and pdf auto incremented	35
course_id	varchar(191)	Foreign Key	Course id	101
pdf	varchar(191)	Not Null	Pdf to link with course	Media/PDFs/1650359 251_1.pdf

Training schedules

Field Name	Data type	Constraint	Description	Example
id (Primary)	bigint(20)	Primary Key	Id of training scheduled	17
course_batch_id	varchar(191)	Foreign key	For which batch and which course	2022_104
date	timestamp	Not Null	Date of training	2022-05-10
start_time	time	Not Null	Starting time	14:00
end_time	time	Not Null	Ending time	15:00
venue	varchar(191)	Not Null	Venue of training	Nalanda
trainer_id	varchar(191)	Foreign key	Id of trainer taking the training	26
attendance_status	varchar(191)	Not Null	Status of attendace(pending or done)	pending

Attendances

Field Name	Data type	Constraint	Description	Example
id (Primary)	bigint(20)	Primary Key	Id of attendance	4
training_schedules_id	varchar(191)	Foreign key	Id of trainings whose attendance is taken	10
trainee_id	varchar(191)	Foreign key	Trainer id who took attendance	2

Assessments

Field Name	Data type	Constraint	Description	Example
id (Primary)	bigint(20)	Primary Key	Id auto increment	1
course_batch_id	varchar(191)	Foreign key	Assement created for which course and batch	2022_105
assessment_id	varchar(191)	Not Null	Assessment id	2022_105_das
assessment_desc	varchar(191)	Not Null	Description of assessment	Assessment on functions
created_by	varchar(191)	Not Null	Trainer id	26

Assessment details

Field Name	Data type	Constraint	Description	Example
id (Primary)	bigint(20)	Primary Key	Id auto increment	6
assessment_id	varchar(191)	Foreign key	Assessment id	2022_105_das
question	varchar(191)	Not Null	Questions	SQL database follows which of the following principles?
op1	varchar(191)	Not Null	Option of the question	ACID
op2	varchar(191)	Not Null	Option of the question	AGILE
op3	varchar(191)	Not Null	Option of the question	SQL
op4	varchar(191)	Not Null	Option of the question	DBMS
answer	varchar(191)	Not Null	Answer of the question	ACID

Assessment marks

Field Name	Data type	Constraint	Description	Example
id (Primary)	bigint(20)	Primary Key	Id	1
assessment_id	varchar(191)	Foreign key	Assessment id	2022_105_das
trainee_id	varchar(191)	Foreign Key	Trainee id	2
total_marks	varchar(191)	Not Null	Total marks of quiz	10
obtained_marks	varchar(191)	Not Null	Marks obtained	8

4. USER MANUALS

4.1 Admin

4.1.1 Admin Login page

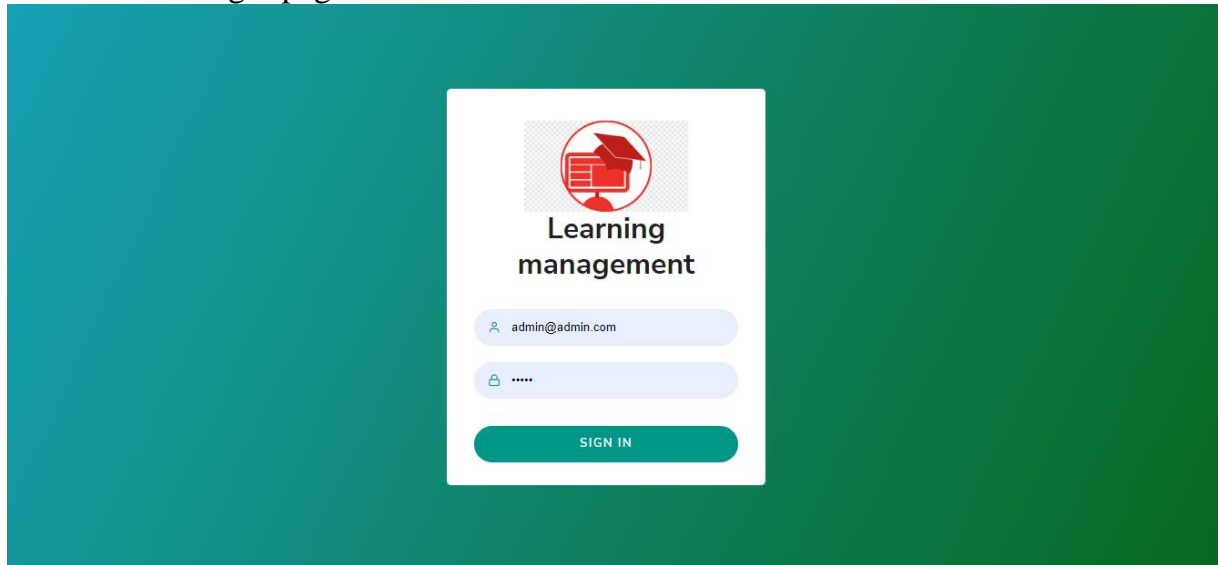


Figure: 4.1.1 Admin Login page

Description: The first page for admin. The admin will enter the credentials and will be redirected to the admin dashboard after successful login

4.1.2 Admin Dashboard page

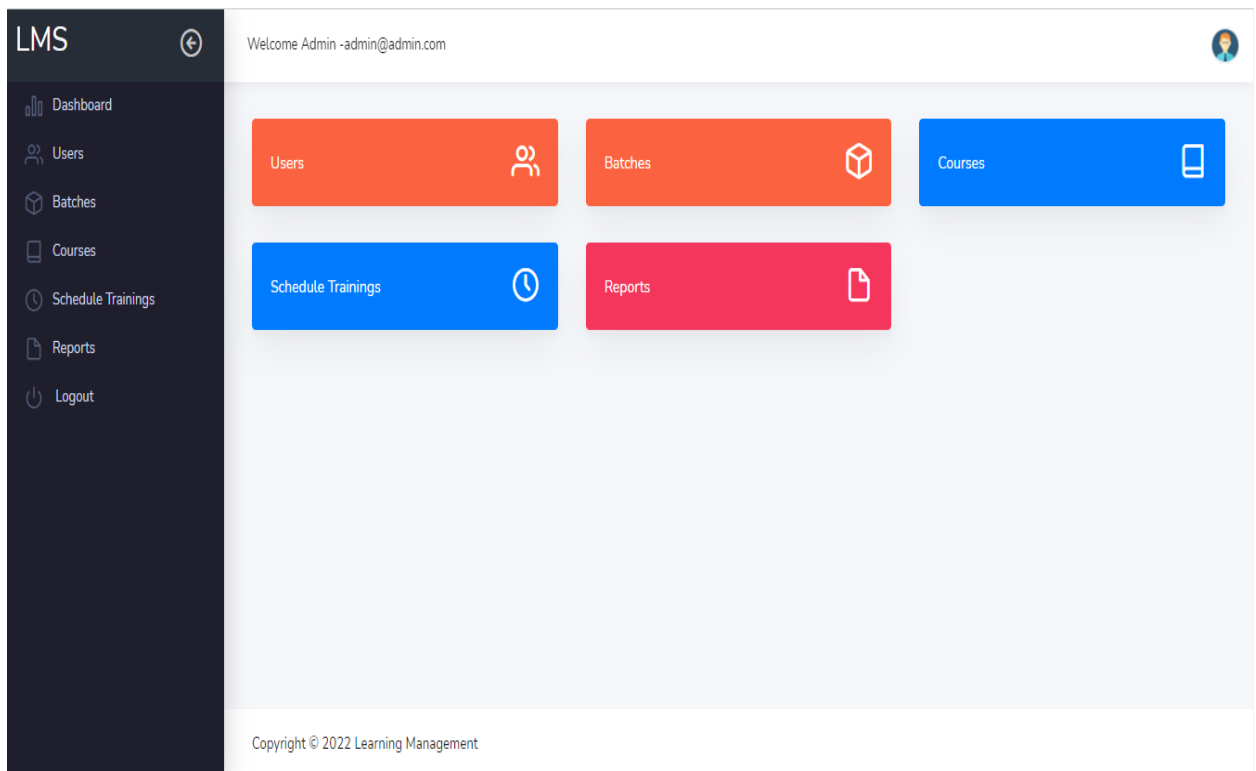


Figure: 4.1.2 Admin Dashboard page

Description: The admin dashboard has all the functionalities of the admin. Both the sidebar and the dashboard items will navigate to the same page of respective functionalities after clicking on it. The admin can logout from side bar as well from the top right corner by clicking in the profile pic a dropdown item will show logout option.

4.1.3 Admin Authorize user landing page

The screenshot shows the 'Users' management page in an LMS. On the left is a dark sidebar with the 'LMS' logo and navigation links: Dashboard, Users, Batches, Courses, Schedule Trainings, Reports, and Logout. The main content area has a header 'Welcome Admin -admin@admin.com' and a user profile icon. Below the header, the 'Users' section is titled with a blue icon and a breadcrumb 'Dashboard / Users'. A '+ Add User' button is in the top right. Below this is a search bar and a 'Show 10 entries' dropdown. The main part is a table with 7 rows of user data. Each row has columns for Sr., Email Id, User_type, Batch_id, and Action. The Action column contains icons for view, edit, and delete. At the bottom, it says 'Showing 1 to 7 of 7 entries' and has 'Previous', '1', and 'Next' pagination controls.

Sr.	Email Id	User_type	Batch_id	Action
1	kakone5587@royins.com	Trainer		
2	meetagrawal39@gmail.com	Trainee	2022	
3	chiraggajpara22@gmail.com	Trainee	2022	
4	dhruvkapadia786@gmail.com	Trainee	2022	
5	deepak.rj.dr@gmail.com	Trainer		
6	bjiruwala@gmail.com	Trainee	2022	
7	maharshi3n333@gmail.com	Trainee	2022	

Figure: 4.1.3 Admin-Authorize user landing page

Description: by clicking on user from dashboard or side bar this page will open. Here the admin can view all the authorize users of the system and can view edit or delete them from the system. The add user button will let the admin to authorize a new user. The user can also be searched by typing the field name in search bar for which the result needs to be displayed.

4.1.4 Admin-Authorize user add page

Figure 4.1.4 shows the 'Add User' page in the LMS. The page includes a sidebar with navigation options and a main form for adding a new user. The form fields are 'Email id', 'User Type', and 'Batch Id'. A 'Create' button is present to submit the form. The page also displays a welcome message and a copyright notice.

Figure: 4.1.4 Admin -Authorize user add page

Description: the admin will enter the email id of the user what needs to be authorized, the user type i.e. trainer or trainee and if the user is a trainee that he will specify the batch of the user. by clicking on the create button the user will be added to the system and then he/she can register in the system.

4.1.5 Admin -Batch landing page

Figure 4.1.5 shows the 'Batches' page in the LMS. The page includes a sidebar with navigation options and a main table listing batches. The table columns are 'Sr.', 'Batch Id', 'Batch Name', 'Start Date', and 'Action'. The table lists 5 batches from 2018 to 2022. The page also includes a search bar, a '+ Add Batch' button, and pagination controls.

Sr.	Batch Id	Batch Name	Start Date	Action
1	2018	2018-freshers	2018-01-10	View Edit Delete
2	2019	2019-freshers	2019-01-10	View Edit Delete
3	2020	2020-freshers	2020-01-10	View Edit Delete
4	2021	2021-freshers	2021-01-10	View Edit Delete
5	2022	2022-freshers	2022-01-10	View Edit Delete

Figure: 4.1.5 Admin -Batch landing page

Description: by clicking on batch from dashboard or side bar this page will open. Here the admin can view all the batches created in the system and can view edit or delete them from the system. The add batch button will let the admin to create a new batch. The batch can also be searched by typing the field name in search bar for which the result needs to be displayed

4.1.6 Admin -Add Batch Page

The screenshot displays the 'Add Batch' page in an LMS. On the left is a dark sidebar with navigation icons and labels: Dashboard, Users, Batches, Courses, Schedule Trainings, Reports, and Logout. The top header area includes 'LMS', a refresh icon, 'Welcome Admin -admin@admin.com', and a user profile icon. The main content area has a title 'Add Batch' and a breadcrumb 'Dashboard / Add Batch'. Below this is a form with four input fields: 'Batch id' (containing '2022'), 'batch Name' (containing 'Freshers'), 'Date' (containing '05/16/2022'), and 'Courses' (containing 'JAVASCRIPT' and 'SQL'). A blue 'Create' button is positioned below the form. At the bottom of the page, a copyright notice reads 'Copyright © 2022 Learning Management'.

Figure: 4.1.6 Admin -Add Batch Page

Description: the admin will enter the Batch id, batch name and date of which the batch will start. The admin will then allocate course to the batch that are created in the system and will click on create button to add batch in the system.

4.1.7 Admin- Course landing page

The screenshot shows the 'Courses' page in the LMS. The sidebar is identical to the previous page. The main content area has a title 'Courses' and a breadcrumb 'Dashboard / Courses'. Below the title is a '+ Add Course' button. A search bar is located below the button. Below the search bar is a table with the following data:

Sr.	Course Id	Course Name	Status	Action
1	102	CSS	active	View Edit Delete
2	104	JAVASCRIPT	active	View Edit Delete
3	105	SQL	active	View Edit Delete
4	106	PHP	active	View Edit Delete
5	107	REACT JS	active	View Edit Delete
6	101	Freshers	inactive	View Edit Delete

Below the table, it says 'Showing 1 to 6 of 6 entries'. At the bottom right, there are pagination controls: 'Previous', '1', and 'Next'.

Figure: 4.1.7 Admin -Course landing page

Description: by clicking on courses from dashboard or side bar this page will open. Here the admin can view all the courses created in the system and can view edit or delete them from the system. The add course button will let the admin to create a new course. The course can also be searched by typing the field name in search bar for which the result needs to be displayed

4.1.8 Admin -Add course page

Figure: 4.1.8 Admin -Add course page

Description: the admin will enter the course id, course name, status, course description and start date. The admin will then add course material in the form of pdf from the local drive and will click on create button to add course in the system.

4.1.9 Admin -Schedule training landing page

Sr.	Batch Name	Course Name	Training Date	Action
1	2022-freshers	CSS	2022-05-16	

Sr.	Batch Name	Course Name	Training Date	Action
-----	------------	-------------	---------------	--------

Figure: 4.1.9 Admin -Schedule training landing page

Description: The admin will be able to see the Trainings that are created for current date, previous date and upcoming dates. By clicking on schedule training he can schedule a new training. The trainings can also be searched by typing the field name in search bar for which the result needs to be displayed

4.1.10 Admin -Schedule training page

The screenshot displays the 'Add Course' page in an LMS admin interface. On the left is a dark sidebar with the 'LMS' logo and navigation links: Dashboard, Users, Batches, Courses, Schedule Trainings, Reports, and Logout. The main area has a light blue header with 'Welcome Admin - admin@admin.com' and a user profile icon. Below the header, the page title 'Add Course' is shown next to a clock icon. The form contains the following fields: 'Batch Name' (dropdown with '2018-freshers'), 'Course Name' (dropdown with 'Select'), 'Venue' (text input), 'Date' (calendar icon, showing '05/16/2022'), 'Start Time' (time picker, showing '---:--'), and 'End Time' (time picker, showing '---:--'). The 'Trainer' field is a dropdown with 'chirag gajipara'. A blue 'Schedule' button is at the bottom left of the form. The footer of the page reads 'Copyright © 2022 Learning Management'.

Figure: 4.1.10 Admin -Schedule training page

Description: here the admin will enter details for scheduling the training, the system will check the date, time, venue and trainer availability to avoid conflicts and then if there are no conflict then the training will be scheduled successfully.

4.2 Trainer

4.2.1 Trainer Login Page

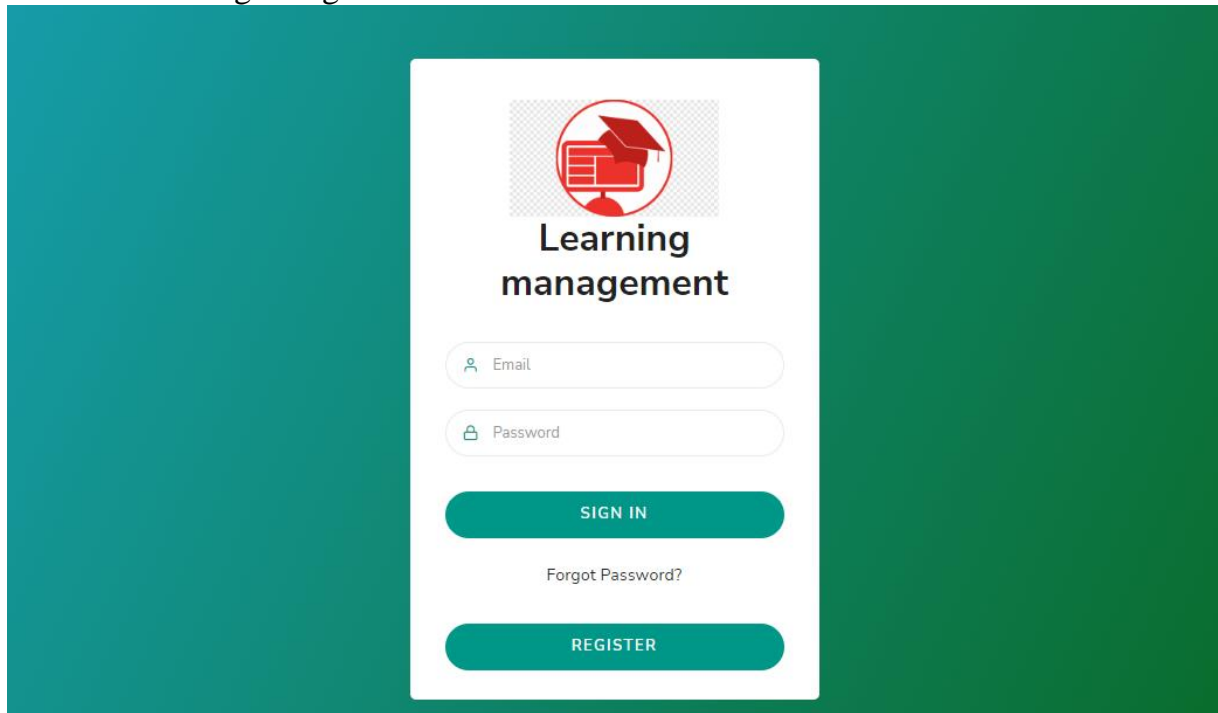
The image shows a login page for a 'Learning management' system. It features a teal background with a white central card. At the top of the card is a red circular icon containing a graduation cap and a laptop. Below the icon, the text 'Learning management' is displayed in bold. The login form includes an 'Email' field with a person icon, a 'Password' field with a lock icon, a teal 'SIGN IN' button, a 'Forgot Password?' link, and a teal 'REGISTER' button at the bottom.

Figure 4.2.1 Trainer Login page

Description: Login for users (Trainee and Trainer) by clicking on sign, if the user is trainer he would be redirected to trainer dashboard and if it's a trainee he will be redirected to trainee dashboard.

4.2.2 Trainer Register Page

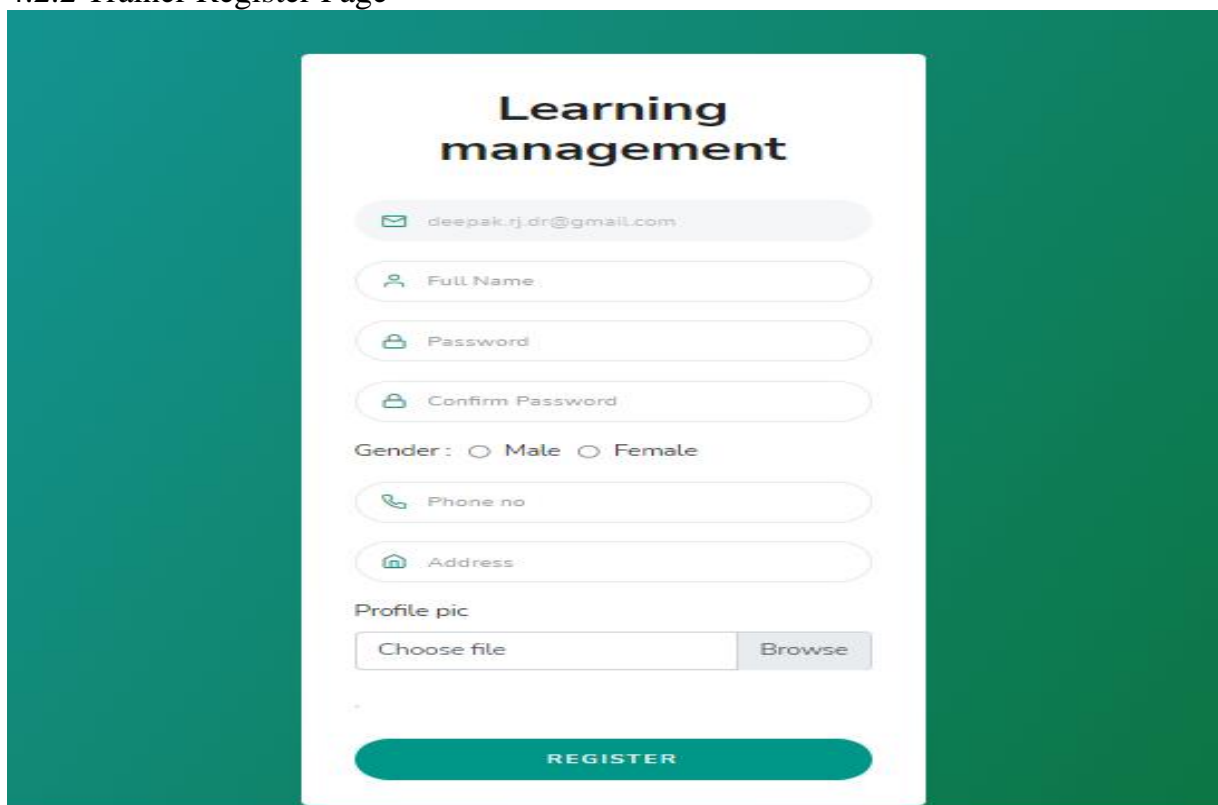
The image shows a registration page for a 'Learning management' system. It features a teal background with a white central card. At the top of the card, the text 'Learning management' is displayed in bold. The registration form includes an 'Email' field with an envelope icon (containing 'deepak.rj.dr@gmail.com'), 'Full Name', 'Password', and 'Confirm Password' fields, each with a person or lock icon. Below these is a 'Gender' section with radio buttons for 'Male' and 'Female'. There are also fields for 'Phone no' (with a phone icon) and 'Address' (with a house icon). A 'Profile pic' section contains a 'Choose file' button and a 'Browse' button. At the bottom of the card is a large teal 'REGISTER' button.

Figure: 4.2.2 Trainer Register page

Description: The user will register if he/she is authorized in the system and will be redirected to login page after registering.

4.2.3 Trainer Dashboard Page

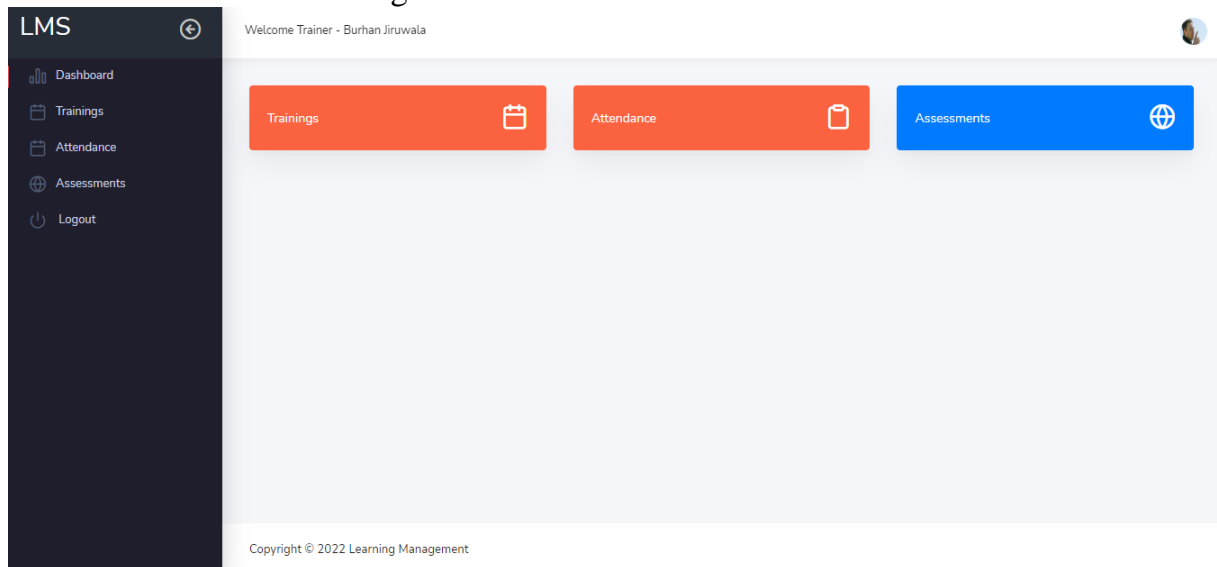


Figure: 4.2.3 Trainer Dashboard page

Description: The Trainer Dashboard has Trainings, Attendance and Assessments which can be accessed by side bar and main menus as well

4.2.4 Trainer-Trainings Page

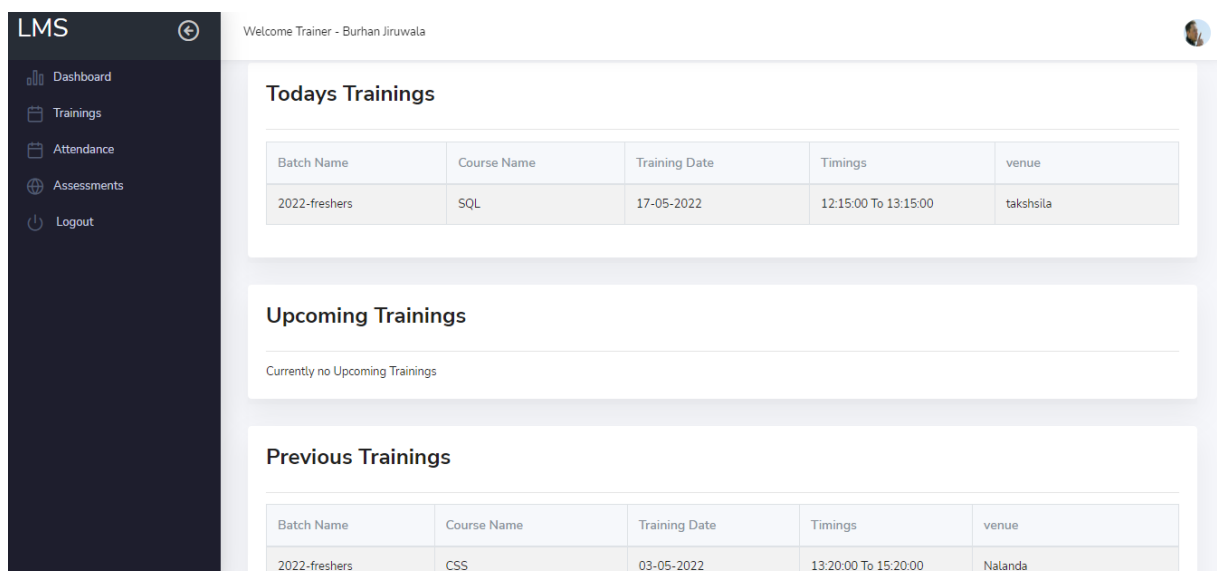


Figure: 4.2.4 Trainer-Trainings page

Description: The trainings will be shown that are created by the admin according to its time. If it's on current date it will be shown in today's trainings and so on.

4.2.5 Trainer-attendance Page

LMS Welcome Trainer - Burhan Jiruwala

Mark Attendance Dashboard / Attendance

Today's Trainings

Batch Name	Course Name	Training Date	Timings	Mark Attendance
2022-freshers	SQL	17-05-2022	12:15:00 To 13:15:00	

Previous Trainings

Show 10 entries Search:

Batch Name	Course Name	Training Date	Timings	Mark Attendance
2022-freshers	CSS	03-05-2022	13:20:00 To 15:20:00	Attendance marked
2022-freshers	JAVASCRIPT	03-05-2022	14:20:00 To 16:20:00	Attendance marked

Figure: 4.2.5 Trainer-attendance page

Description: the trainer can mark the trainee attendance for the current date or the previous dates that are left by mistake

4.2.6 Trainer –Mark Attendance Page

LMS Welcome Trainer - Burhan Jiruwala

Show 10 entries Search:

Id	Trainee Image	Trainee Name	Email Id	Attendance
2		Meet Agrawal	meetagrawal39@gmail.com	<input checked="" type="checkbox"/>
27		Maharshi Updhayay	maharshi3n333@gmail.com	<input type="checkbox"/>
28		DEEPAK RATHORE	deepak.rj.dr@gmail.com	<input checked="" type="checkbox"/>

Showing 1 to 3 of 3 entries Previous 1 Next

submit

Figure: 4.2.6 Trainer –Mark Attendance page

Description: clicking on mark attendance, the system will load all the attendees of the trainings. The attendance will be marked of those trainees whose attendance is tick marked

4.2.7 Trainer – Assessments Page

The screenshot shows the LMS interface for a trainer. On the left is a dark sidebar with navigation links: Dashboard, Trainings, Attendance, Assessments, and Logout. The main content area is titled 'Assessments' and includes a '+ Create assessment' button. Below this is a table with columns: Sr., Batch Name, Course Name, Assessment Id, and Action. The table contains one entry for '2022-freshers' in the 'SQL' course, with assessment ID '2022_105_das'. The action column has icons for view, edit, and delete. A search bar and a 'Show 10 entries' dropdown are also present. The footer indicates 'Copyright © 2022 Learning Management'.

Sr.	Batch Name	Course Name	Assessment Id	Action
1	2022-freshers	SQL	2022_105_das	

Figure: 4.2.7 Trainer – Assessments page

Description: The trainer can view all the assessments that are created till date. Also he can modify it or delete it from the system.

4.2.8 Trainer- Create Assessment Page

The screenshot shows the 'Create Assessment' form in the LMS. It includes fields for Batch Name (2022-freshers), Course Name (SQL), and Description (SQL Quiz). The Assessment Name field contains 'Sql'. The Question field contains 'Which SQL function is used to count the number of rows in a SQL query?'. There are four option fields: Option 1 (COUNT()), Option 2 (NUMBER()), Option 3 (SUM()), and Option 4 (COUNT(*)). The Answer field contains 'COUNT(*)'. A 'Question' label is at the bottom left.

Batch Name: 2022-freshers Course Name: SQL Description: SQL Quiz

Assessment Name: Sql

Question: Which SQL function is used to count the number of rows in a SQL query?

Option 1: COUNT() Option 2: NUMBER()

Option 3: SUM() Option 4: COUNT(*)

Answer: COUNT(*)

Figure: 4.2.8 Trainer- Create Assessment page

Description: by clicking on create assessments the trainer will be directed to from where he/she can add the details of the assessments

4.2.9 Trainer- view Assessment Page

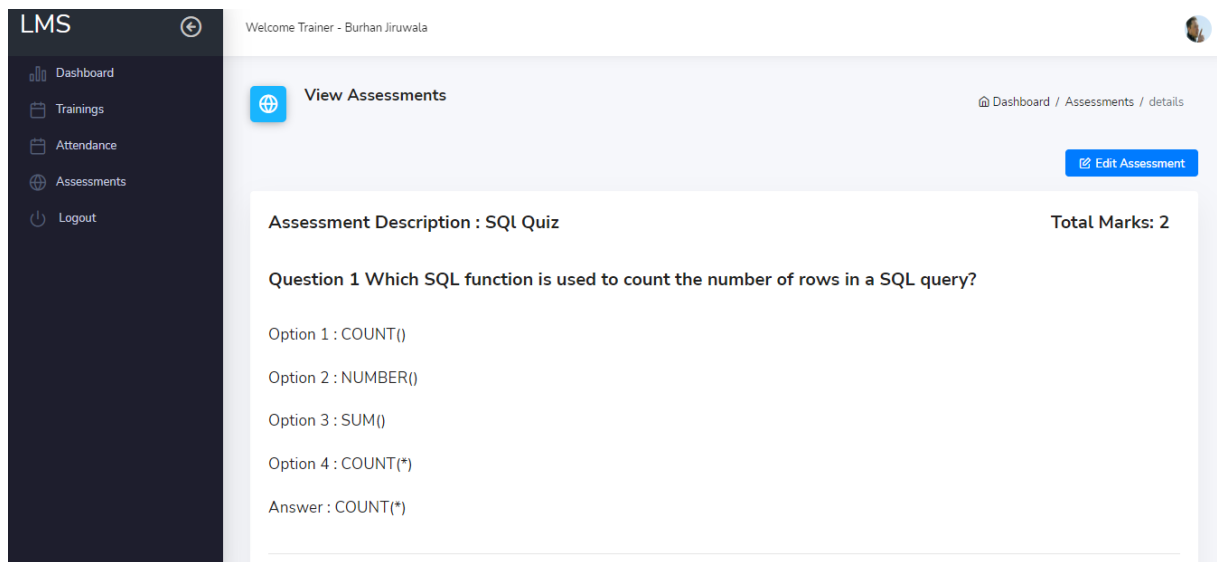


Figure: 4.2.9 Trainer- view Assessment page

Description: The trainer can also view the assessments after it is created

4.3 Trainee

4.3.1 Trainee –dashboard Page

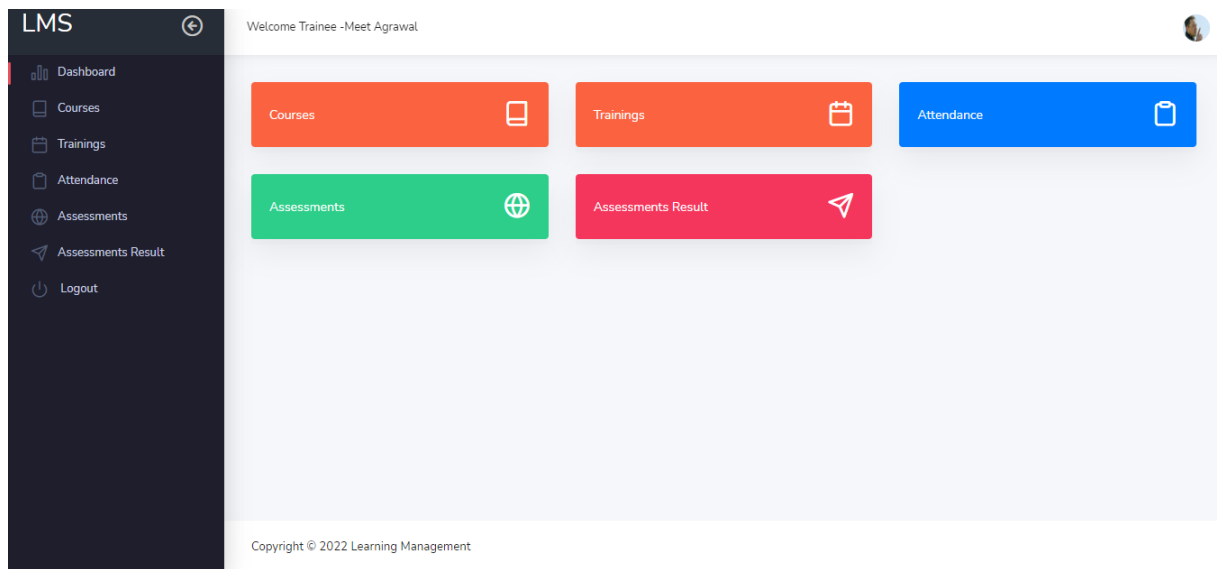


Figure: 4.3.1 Trainee –dashboard page

Description: the trainee dashboard will have courses, trainings, attendance, assessments and results.

4.3.2 Trainee – Courses Page

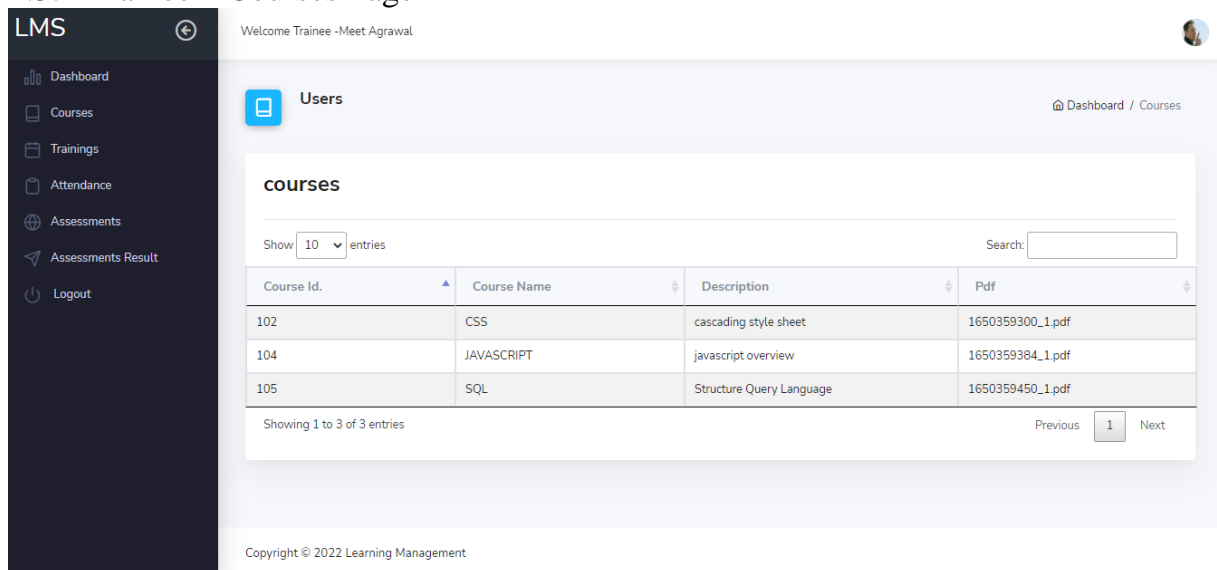


Figure: 4.3.2 Trainee – Courses page

Description: the trainee can view the courses allotted to his batch and can also search them from search bar

4.3.3 Trainee- Trainings Page

The screenshot shows the LMS interface for a trainee named Meet Agrawal. The left sidebar contains navigation links: Dashboard, Courses, Trainings, Attendance, Assessments, Assessments Result, and Logout. The main content area is titled 'Trainings' and includes a 'Todays Trainings' section with a table showing a training for SQL on 17-05-2022 at takshila from 12:15:00 to 13:15:00. Below this is a 'Trainings' section with a search bar and a table listing training entries. The table has columns for Course Id., Course Name, Description, and View Trainings. One entry is visible for Course Id. 102, Course Name CSS, and Description cascading style sheet.

Course Name.	Training Date	venue	Timings
SQL	17-05-2022	takshila	12:15:00 To 13:15:00

Course Id.	Course Name	Description	View Trainings
102	CSS	cascading style sheet	

Figure: 4.3.3 Trainee- Trainings page

Description: the trainee can view the trainings from here which are been scheduled.

4.3.4 Trainee -Attendance Page

The screenshot shows the LMS interface for a trainee named Meet Agrawal. The left sidebar contains navigation links: Dashboard, Courses, Trainings, Attendance, Assessments, Assessments Result, and Logout. The main content area is titled 'Users' and includes an 'Attendance' section with a search bar and a table listing attendance entries. The table has columns for Course Name, Total Sessions, Attended Sessions, and Total Percentage. Three entries are visible: CSS (2 Total Sessions, 2 Attended Sessions, 100.00 %), JAVASCRIPT (4 Total Sessions, 3 Attended Sessions, 75.00 %), and SQL (2 Total Sessions, 2 Attended Sessions, 100.00 %). The table also shows 'Showing 1 to 3 of 3 entries' and navigation buttons for Previous, 1, and Next.

Course Name	Total Sessions	Attended Sessions	Total Percentage
CSS	2	2	100.00 %
JAVASCRIPT	4	3	75.00 %
SQL	2	2	100.00 %

Showing 1 to 3 of 3 entries

Previous 1 Next

Figure: 4.3.4 Trainee -Attendance page

Description: the attendance of the trainings which are scheduled and the trainer has taken attendance of will be show here as total session and total attended sessions

4.3.5 Trainee- Assessments Page

The screenshot shows the LMS interface for a trainee. The left sidebar contains navigation links: Dashboard, Courses, Trainings, Attendance, Assessments, Assessments Result, and Logout. The main content area is titled 'Assessments' and displays a table of available assessments. The table has columns for Sr., Course Name, Assessment Name, Assessment Details, and Action. Two assessments are listed: '2022_105_das' (Submitted) and '2022_105_Sql' (SQL Quiz). A search bar and a 'Show 10 entries' dropdown are at the top of the table. The footer indicates 'Copyright © 2022 Learning Management'.

Sr.	Course Name	Assessment Name	Assessment Details	Action
1	SQL	2022_105_das	cza	Submitted
2	SQL	2022_105_Sql	SQL Quiz	

Figure: 4.3.5 Trainee- Assessments page

Description: The trainee can view the created assessment and can give them, once the assessment is given the Action will show it as submitted and he/she cannot give it again.

4.3.6 Trainee-Give Assessments Page

The screenshot shows the LMS interface for a trainee to take an assessment. The left sidebar is the same as in the previous figure. The main content area is titled '2022_105_Sql' and displays the assessment details. The assessment name is '2022_105_Sql' and the total marks are 2. The assessment description is 'Question 1 : Which SQL function is used to count the number of rows in a SQL query? :'. The assessment questions are listed below the description. The first question has four options: COUNT(), NUMBER(), SUM(), and COUNT(*). The second question has four options: MOST, TOP, MAX, and UPPER. The 'MAX' option is selected for the second question.

Description **Assessment Name** **Total Marks : 2**

2022_105_Sql

Question 1 : Which SQL function is used to count the number of rows in a SQL query? :

☐ 1: COUNT()
☐ 2: NUMBER()
☐ 3: SUM()
☒ 4: COUNT(*)

Question 2 : Which SQL keyword is used to retrieve a maximum value? :

☐ 1: MOST
☐ 2: TOP
☒ 3: MAX
☐ 4: UPPER

Figure: 4.3.6 Trainee-Give Assessments page

Description: the trainee will give assessments by clicking on one of the option of each question and after completing it he/she will click on submit button

4.3.7 Trainee-Assessments Result Page

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Sr.	Course Name	Assessment Name	Total Marks	Obtained Marks
1	SQL	2022_105_das	3	3
2	SQL	2022_105_Sql	2	2

Figure: 4.3.7 Trainee-Assessments Result page

Description: The result or score of the assessment will be shown here.

5. TESTING

Project Name:		Learning Management System				
Module Name		Registration				
date of creation		1/5/2022				
TEST SUIT ID		TS001				
TEST CASE ID	TEST CASE SUMMARY	PREQUISITES	TEST SCRIPT/PROCEDURE	TEST DATA	EXPECTED RESULT	STATUS
TC_REG_001	Blank Submit	none	1. Go to the system URL 2. Go to register now link 3. Keep all the fields blank and press submit	null	it should show error message and do not get registered	Passed
TC_REG_002	email id type check	none	1. Enter only a name in email id 2. Fill the form 3. press submit	Deepak	It should show error "please include an @ in email address" and do not get registered	passed
TC_REG_003	email id exist check	have an registered email id	1. Enter existing email-id 2. Fill the form 3. press submit	deepak.rj.dr@gmail.com	It should show error "email already exist and do not get registered	passed
TC_REG_004	password and different confirm password check	none	1. Fill the form 2. Enter password 3. Enter confirm password 4. press submit	password: 1234 confirm password: 123	it should show error "password and confirm password does not match and do not get registered	passed
TC_REG_005	Registration submit check	none	1 fill the form with proper details 2. press submit	all data for registration	it should show registered successfully and should redirect to login page	passed
TC_REG_006	Registration details inserted in database check	none	1. go to login page 2. enter registered email id and password 3 click on login	email id:deepak.rj.dr@gmail.com password: 1234	it should let the user login and redirect to home page	passed

Table 5.1 Registration module

Project Name		Learning Management System				
Module Name		Login				
date of creation		1/5/2022				
TEST SUIT ID		TS002				
TEST CASE ID	TEST CASE SUMMARY	PREQUISITES	TEST SCRIPT/PROCEDURE	TEST DATA	EXPECTED RESULT	STATUS
TC_LOG_001	Blank Submit	none	1. Go to the login URL 2. Keep all the fields blank and press submit	null	it should show error message and not allow to login	Passed
TC_LOG_002	login check with wrong password	registered email id	1. Enter email id 2. enter wrong password	email id:deepa k.rj.dr@gmail.com password :1234566	should show error message wrong Password	Passed
TC_LOG_003	login with wrong email	any registered password	1. Enter email id 2. enter wrong password	email id:deepa k@gmail.com password :1234	should show error user does not exist	Passed
TC_LOG_004	login check with correct credentials	correct id and password	1. Enter email id 2. enter password	email id:deepa k.rj.dr@gmail.com password :1234	should login and redirect to home page	Passed

Table 5.2 login module

6. FUTURE ENHANCEMENT

There are many features that can be added in the system in the future. We can say that the system which is developed is at a very basic level of its capability. The system will be added with more functionalities in the future such as

The time record of the trainee of how much time he/she has spent on course while accessing the documents.

The functionality to review the assessment given by the trainee and can raise a dispute if something ambiguous is found in the question.

The functionality to send an Email to the authorize users of training that are scheduled and the assessments that are created.

The scheduled trainings can be linked with the default calendar in the system for showing the reminder.

7. APPENDIX

While working on the Learning Management System various tools and technologies were used to make the development process easier are listed below.

1. Laravel Framework

The main reason to choose this framework is because of the file structure and its model-view-controller design pattern which makes the flow of the system very easy due to which the project was completed in expected period of time.

2. PHP

PHP is a server-side text language embedded in HTML. Used for managing dynamic content, information and session tracking.

3. SQL

SQL is used to create, delete, modify database and web resources in a database management system and to store, retrieve, update data on a website. SQL is a common language for creating, accessing, and deciphering a website management system

4. HTML

It is Hyper Text Markup Language used to design web pages.it is basically a combination of Hypertext and Markup languages.it defines a link between web pages. Marking language is used to describe a text document within a tag that describes the structure of web pages

5. Bootstrap

It is a free and open source framework for creating websites and web applications.it is used to make the system more responsive and attractive. It provides easy to use structure which has helped in building the system more systematically.

6. JavaScript

It is a cross-platform scripting language used to make webpage more interactive

7. JQuery

It is basically a JavaScript library which simplifies the JavaScript programming.in this project it is used at some places where there was requirement of using it

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