**My E-Learning Management System (ME-LMS)**

**Objectives**

Creating Our Own E-Learning App. Which help to keep the track about learnt technologies.

**Problem Statement**

The sudden and rapid changes in the world due to the COVID-19 pandemic have led to a shift in the educational methods used in educational facilities. Challenges faced by both students and lecturers or trainer have led to a quality difference in the education provided. What are the online learning challenges faced by students are they are not able to focus online session. Since the success of e-learning system depends on students’ willingness and acceptance to use this system.

**Real-World Scenario:**

Your organization wants to deploy a new multi-tier application. The application will take live data from the learners or students those technologies he or she learnt through e-learning video session from LMS portal, live session from trainer as well as own things search in google or you tube. This application help us to keep the track about learn new things in same technologies.

High level Steps follow by trainer while delivering MEAN Stack training. This running application divided into four phases.

**Phase1:** Technologies going to learn Agile, Git, HTML, CSS, JavaScript using ES5 and ES6 and bootstrap

1. Agile : creating user stories
2. Creating Remote repository and adding project in remote repository
3. HTML : Creating HTML pages for all technologies like agile, html, css etc which hold static data.
4. CSS : Adding basic formatting styling for those pages.
5. JavaScript : Using JavaScript adding dynamic effects for those pages
6. Bootstrap : applying bootstrap features for those pages.

**Phase 2** : Technologies going to learn : Node JS Overview, Running json sever, Typescript, Angular framework, testing jasmine and karma.

1. Converting those static pages into angular component and making the relationship between those components
2. Creating forms adding technologies notes dynamically using angular forms using template driven or model driver form
3. Doing Validation for those forms.
4. Creating services for those technologies adding those information in json file with help of json-server.
5. Writing test case using jasmine and karma for component and services layer.

**Phase 3** : Technologies going to learn : Node JS, Node JS module like fs, http, express js, mongo db, connecting mongo db using mongoose module, testing node js app, testing express js using mocha with chai etc.

1. Creating REST API using Express JS
2. Converting all json file data into collection in Mongo DB.
3. Connecting mongo db database using Mongoose module using MVC style.
4. Creating test cases to test node js, express js application.

**Phase 4** : Technologies going to learn : Docker, docker compose, CI and CD tool, AWS etc.

1. Creating Docker images for frontend technologies
2. Creating Docker image for backend technologies
3. Running both image using Docker compose
4. Creating CI and CD tool
5. Pull the project from git and build the docker image
6. And Deploy this project in AWS using EC2 instance