Information Management Group

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EndGem

"The best way to learn is by doing"

Introduction

Here at *IMG*, we believe in learning by doing, constantly trying to work and improve. Each day with the motive of being better than we were yesterday, we work, we code, we learn but most importantly we do. So, this is your chance to learn it in the way we do and feel the difference.

Overview of the app

Maintaining course content has always been a pain when you have a lot of courses and each of them having multiple documents such as books, tutorials, assignments and not to forget the life-saving friend's notes. So why not make an app that maintains it for you? This winter lets start our journey of web development by making a simple course-content management app **EndGem.**

Goals

The app will be a primary course-content management system, where users can keep their documents under different courses. The course-content will be grouped based on the course it belongs to. The app will contain a fully functioning leaderboard for each course, which will sort the course-content on the number of its downloads. This leaderboard **(Top Gems)** will help one to choose the diamond amongst the gems.
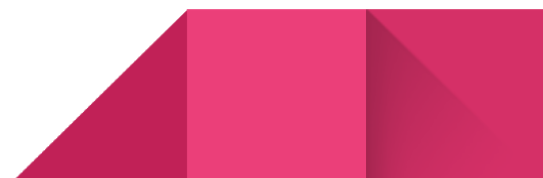
App Flow

While developing an app, the very first step is to decide how various pages will be related to each other, how and where various functionality will be accessed. Answering these hows, wheres, whats, etc is fancifully termed as the flow of the app.

Homepage: The homepage will have an option to select the course whose material user wants to view. The course-content will be in a list format with a download button. On each download, the number of downloads for that material will be incremented by 1. There will be a button on the homepage to check out the course **leaderboard.**

Leaderboard(Top Gems): This will simply contain the list of the content arranged in decreasing order of downloads.

Add: The Add button on the homepage will redirect to a form that will allow the user to select the course, file to upload and a name for it.

We have designed *wireframes*[1] which you can refer to for a better understanding.

Screenshots:http://bit.ly/endgem-wireframes

Prototype: http://bit.ly/endgem-desktop (You can click on various buttons/icons to see, where it goes)

This entire flow can be developed into 4 milestones, out of which one is optional.

[1]*wireframe:* A wireframe is commonly used to lay out content and functionality on a page that takes into account user needs and user journeys.

Milestones

Milestone 1 🏁

Making HTML page

Now introduced with a basic flow of the app, you are ready to move on the next step. You need to decide how the HTML pages will look like. You can add your own imagination and creativity here to design the web pages or simply follow the design given.

Search Keywords: HTML, CSS

Milestone 2 🏁

Adding Javascript to your page

Now that you have a static view of the pages the next step is to add javascript so that the leaderboard changes dynamically based on the number of downloads. So, whenever a user downloads a file (clicks on the download icon) following actions must happen:

- The count of downloads of the corresponding file must increment by 1.
- The leaderboard must update, arranging the content by new download figures.

Search Keywords: JS, JS DOM, JQuery

Remark: Read about Javascript and JQuery for help

Milestone 3 🏁

Make your web page responsive *(Brownie points)*

Responsiveness simply means making websites that can adapt to the size of the visitor's viewport. Our next step will be to make an app that looks good on any device. Design for the same is given in the drive link but you are free to innovate and use your own designs.

Prototype for the mobile view: http://bit.ly/endgem-mobile

Remarks:

1. You may exercise this part after accomplishing the next milestone.
2. Take a look at [common beginners mistake](#) before starting.

Milestone 4 🏁

Connect your app with a functioning backend

Till now, you have a dynamically updating leaderboard but when you refresh, whoosh! All of the figures vanish. We need to connect our static pages to a backend and a database. This will help you to retrieve all the course-related material from the database and keep a track of downloads for each file.

Some of the most common backend languages are PHP, Python(Django, Flask), NodeJS whereas some common databases are MySQL, PostgreSQL, MongoDB.

Search Keywords: PHP, MySQL

Remarks:

1. For reference, you can look into our workshop [source code](#).
2. https://stackoverflow.com/questions/26757659/how-to-store-images-in-mysql-database-using-php.

I have a question! What to do?

Ask! We at IMG are here for your help throughout your development from a learner to a web developer. Just ping us at any point if you are stuck, we surely like stick to the motto.

" Help will always be provided to those who ask for it."

Remark: Post your queries at https://gitter.im/IMGIITRoorkee/recruitment-2020

We would be really happy to see your progress. Even if you are not able to reach the end, what is more important, that you learned something new and that is all that matters to us. We look for talented developers/designers like yourselves who have a constant desire to learn and grow, so submit your code to us via GitHub link for a public repository and if your hard work reflects in your code, you may get a chance to directly appear for the interviews in the recruitment to be held in January.

We will release the submission form on our recruitment site and social pages soon. Keep following.

Happy Coding!

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