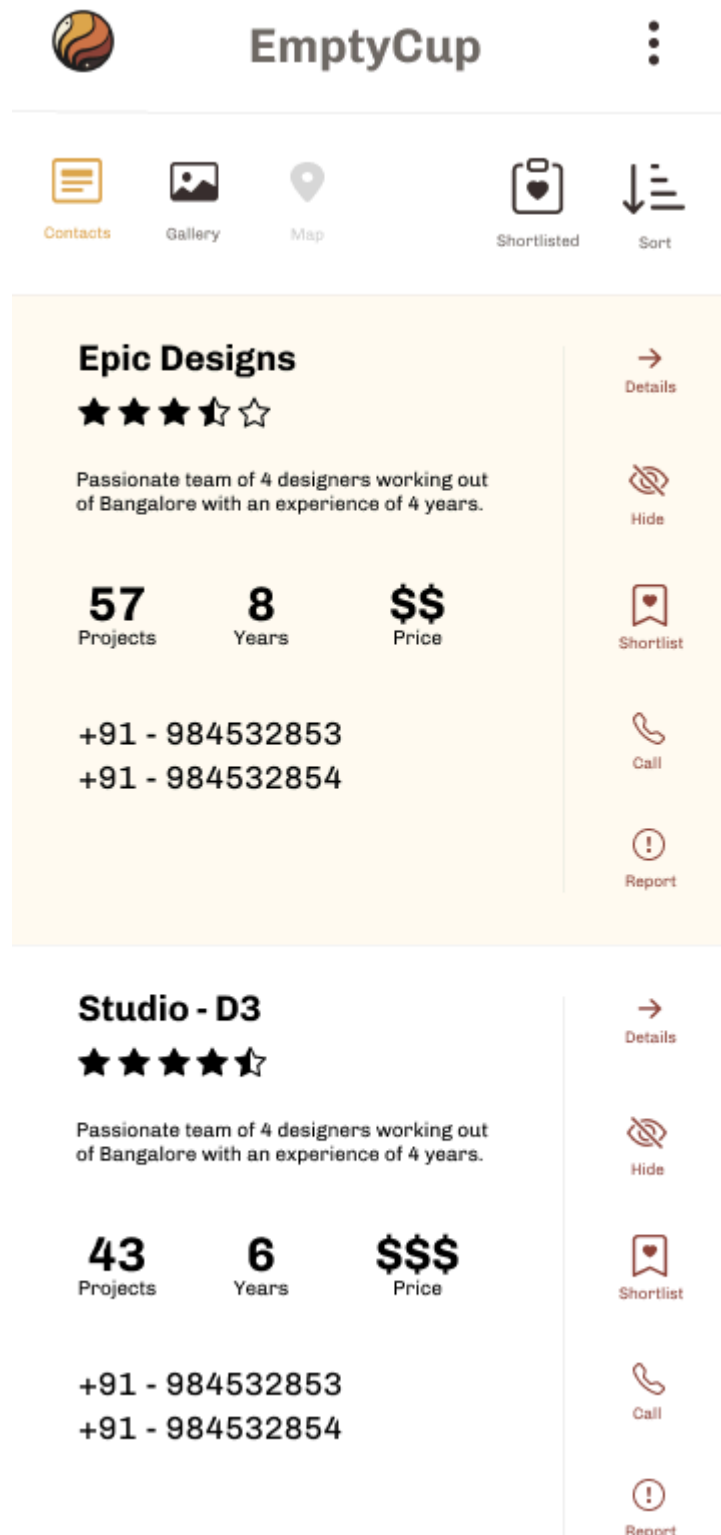


Full Stack Assignment

The assignment is a single mobile web page.



[Figma link for the design specification](#)

NOTE: DO NOT request edit access to the Figma file. You can duplicate the file and edit it if you wish to play around with the design

The page lists all the interior designers who are active on EmptyCup's platform. Any homeowners interested in finding an interior designer who they can collaborate with can come to this listings page where they can see all our users who are available for business.

1. Web page + Styling

Your objective is to create a single mobile web page that looks exactly like the given design.

Styling matters a lot. EmptyCup's users are designers and have a very sensitive taste. They will ditch the product and worse, lose respect for EmptyCup & its products, if the styling is off. So, the first requirement is that the page you create should look exactly like the figma design. You can use the same fonts and icons as in the Figma file by downloading the icons from Figma itself.

This demonstrates your ability to work with HTML & CSS code. When it comes to writing software for production environment, HTML CSS fluency is paramount. You probably used websites before where some buttons are not visible or the content layout is screwed up. That was because the person who wrote the HTML didn't get it right. So, this is the most basic test.

2. Shortlisting

Once you have the page ready, you should work on making the page dynamic through Javascript. For this, you should add the shortlisting functionality. For every listing, on the right there are 4 action items. Details, Hide, shortlist,

report. You have to implement the functionality for the 3rd shortlist button. The shortlist button is a toggle button. If selected, the icon inverts (line icon to fill icon and vice versa). Fill icon indicates that the listing has been shortlisted. All shortlisted listings can be viewed using the "Shortlisted" filter on the top bar. The "Shortlisted" filter is also a toggle icon. When it is toggled on, only shortlisted listings are shown below. If toggled off, all listings are shown.

If you can implement this, it shows you have a decent command over writing Javascript. EmptyCup is a web based interior design tool. So, our product is heavily dependent on Javascript. If you can implement this, you will be able to handle a lot of our codebase.

You can ignore the rest of the action buttons on each listing.

3. Backend integration

The next step is to get the data for all the listings. This data shouldn't be hardcoded in the HTML files. It needs to be queried from the backend. The best way to implement this is by deploying a simple python based REST API using Flask that returns all the listings data as a JSON object.

If you haven't worked on any REST API project before, the best way to start would be by saving the data in a static JSON file that will be served along with the HTML page. The javascript linked in the HTML page will load the JSON file as a static asset just like loading an image. Once you have that working, you can create a separate API server to serve this JSON from a DB.

If you can implement this, it shows that you have full stack capabilities. A full stack developer is way more efficient because there are no communication overheads between frontend and backend work. At EmptyCup, all your work will have both frontend and backend components.

If you don't have experience with backend development, you can start with using Flask on Python. There are good Flask Tutorials on YouTube to get you started. There are some good tutorials for API development by Miguel Grinberg for REST API development on Flask.

4. Deployment

There are 2 modules in deployment:

1. Local deployment for development
2. Public cloud deployment for demo

For local deployment, you should use Docker. If you are not aware of Docker, you can find a lot of simple tutorials to setup docker locally. You will have to create containers for all the services that you need to run your app properly including the DB. Ideally, a local dev deployment should work without an internet connection. Once you create the containers, you should be able to orchestrate those containers using `docker-compose`. Ideally, it should be possible for someone to just pull your repo and deploy locally without any instructions from you. Make use of the *README.md* file.

Once you have the build working locally on docker, you should figure out how to deploy publicly. Frontend code is static and can be deployed by a service like Netlify. Deploying on netlify will not be very complex. You can even have simple link between your Github repository and Netlify, so that whenever you push your code changes to Github, Netlify automatically deploys the latest code. Deploying backend code is a little more complex. Depending on the cloud and the backend technology you use there are multiple options. At this point, probably the easiest would be to get a cloud vm and run the API server there. Deploying to AWS Lambda or Azure Functions should also be possible. You can also deploy the docker containers directly.

If you can deploy publicly, it shows that you have a good understanding of devops as well. Most beginners neglect devops thinking code is the

important part. But devops is as important as programming and is the gateway to bring your programming skills into the real world.

Deployment needs a good understanding of basics of computer science like OS and networking. If you miss something crucial, it can become frustrating easily. If you get stuck, you can ask for help on the Slack community channel

Evaluation

There will not be any Q&A interviews. Based on your assignment submission, we will shortlist for a code review session. Depending on your understanding of the codebase, you'll be selected for the internship position.

You need NOT complete the whole assignment to be considered for evaluation. You can complete as much as you can and submit. But the more complete your assignment is, the better your chances are.

Submission

To submit the assignment, you need to submit 2 files:

1. A zip file containing all your code with the name "Your Name.zip". The zip file should yield a "Your Name" folder containing all the code when it is unzipped. Please make sure your codebase contains a *README.md* in the root folder which gives step by step instructions to run and preview your code. The zip file with your code has to be named in the format "Your Name.zip". DO NOT add further any extra words like Final or '-2' etc. There is an automated system that picks up your assignment and categorizes it for evaluation. So please follow the instructions precisely.
2. A screen recording demo of your work in action. The video should show the demo of the webpage including the shortlisting functionality (~1min). It should then show your database schema (~1min). After that it should show

the hierarchy of all files in your source code folder(~1min). It should show the backend code for your API routes(~1min). It should show the UI components (~1min). You should explain each module with a voice over. You can use [Loom for screen recording](#) or any other software you're comfortable with.

You can submit the 2 files by emailing them to **tryouts@emptycup.in** with the subject **EmptyCup Assignment 2025 - Your Name**. Based on your submission, you will be shortlisted for an online code review. This will be a online video call where we'll walk through your code line by line and discuss it with you as we would when merging your code into production.

Sometimes, college email addresses get blocked when sending large files outside the organisation. Hence, it is recommended that you submit with your gmail account. In the email, please mention your college name.

If there is a problem attaching the files to your email, you can use Google drive to upload and share the assignment code & demo video. The filename guidelines should still be followed.

The assignment can be submitted multiple times. Only the final submission will be considered for evaluation. So, DO NOT wait till the deadline to submit your assignment. If you are submitting the assignment for the second time. Please reply on your existing email thread. DO NOT create new email threads for each submission.

We request you to please keep your repository private on Github. You can grant private access to your mentor, if and when they ask. If we detect plagiarism, everyone involved may be disqualified.

CAUTION: We strongly advise that you don't waste your time and our time by copying or duplicating code from someone or somewhere else. There will be a detailed code review at the end where a mentor will walk through your entire codebase. Even if we don't, you won't be able to maintain that image for more

than a week when you start your internship as the work will be intense and you won't be able to copy or get outside help. We will take strong action if we find out you misrepresented your work.