

inSided assignment for a PHP Developer

Dear candidate,

Please complete the below assignment and return the results to the inSided recruiter. Our technical team will review them. Based on the results of the review we will decide, if we continue the hiring process. If so, you will be invited to the inSided HQ in Amsterdam for a live interview. We will revisit your submission during the live technical interview.

You have the time until after the coming weekend to complete the assignment, unless agreed otherwise.

In case you have any questions, please contact the inSided recruiter.

Mindset

Answer the following questions in writing, including concrete examples from your experience, if possible.

Time needed: **30 minutes**.

1. What is the most difficult software development challenge (on coding/architecture level) you have encountered? How did you handle that challenge?
2. What are the 3 most important design patterns for web development in your opinion and why?
3. Could you describe your way to keep a codebase clean?
4. Describe a situation in which there was a strong disagreement / a clash on personal level within a development team you were part of? How have you solved that?
5. What would you like to learn this year? How do you usually keep up-to-date? Please be as concrete as possible, e.g. mention the last books, blogs you read, meetups you visited, or people you follow.

Sample of work

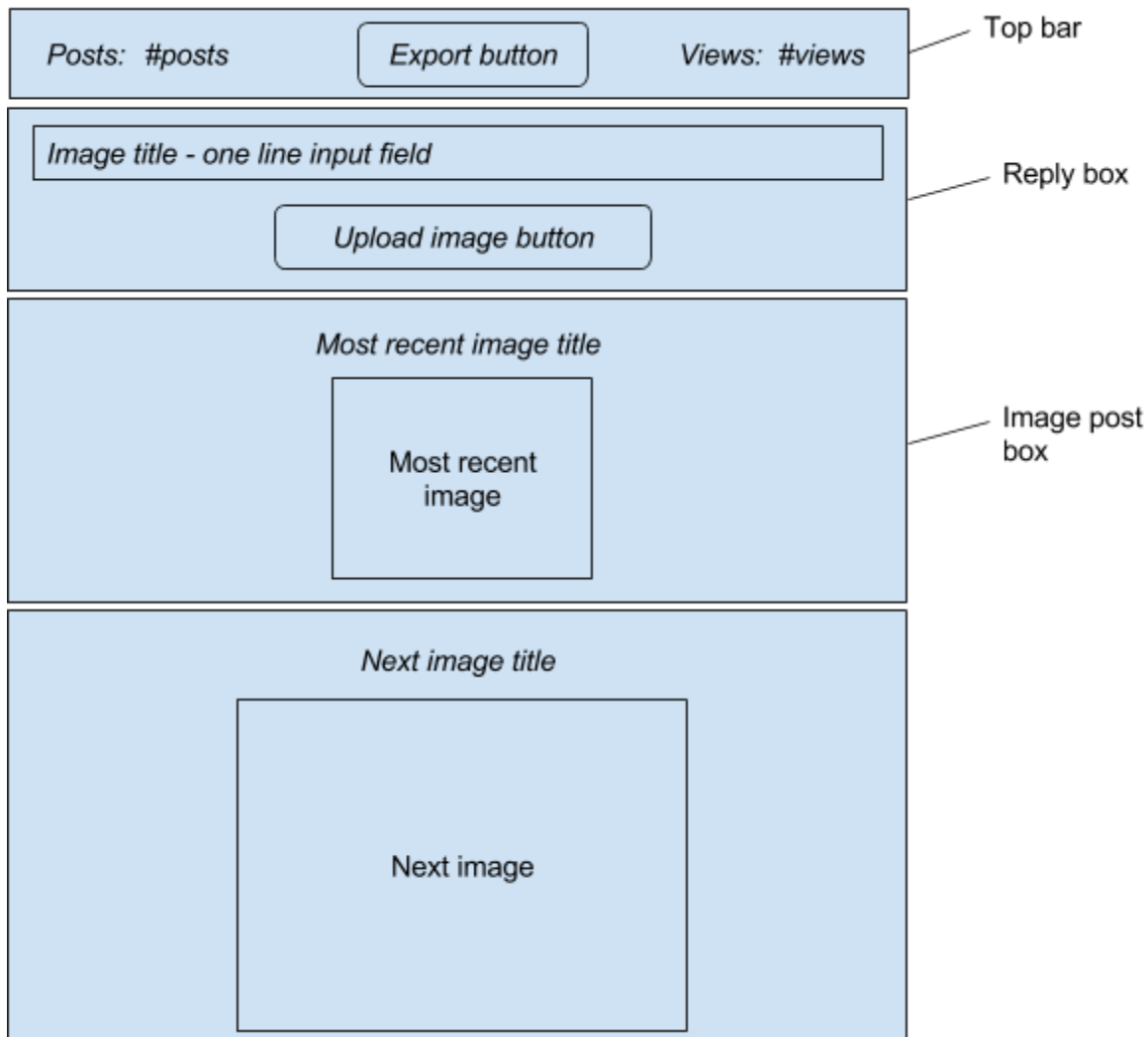
Share a sample of your code or a GitHub/Bitbucket account with your projects and open-source contributions.

Time needed: **5 minutes**.

ImageThread mini-project

In this exercise you will create a simplified forum web app, containing only one thread of discussion, where each post is an image with a title, a bit like Instagram.

Wireframe



Requirements

- Initially only the Top bar and the Reply box are visible.
- Successfully uploading an image creates a post.
- Empty title is allowed.
- The list of posts grows downward with the most recent post at the top.

- Support the JPEG image format only. Bonus points: Support PNG and (animated) GIF as well.
- Image size: upto 1920x1080, upto 2 MB. Bonus points: image size upto 20 MB.
- #posts increments with each new post. #views increments with each view.
- Performance: The post must be visible within 2 seconds, and all the images must be complete loading within 5 seconds on a 10 Mbps Internet connection.
- Clicking the Export button produces a CSV file with a header row and two columns: (image) Title and Filename. Bonus points: Make it possible to export the Excel format as well. Bonus points: clicking the Export button produces a ZIP file with all images and the CSV file mentioned above.
- Bonus points: The #posts and #views should update every 15 seconds without reloading the page.

Process

- Time needed: **4 hours** on average. Longer, if tasks for bonus points are completed.
- Complete the assignment in PHP as you would write production code.
- Explain the major design choices.
- Put the code in a Git repository online and give access to silvie.van.steensel@insided.com.
- Bonus points: deploy the app on a server and send us the URL. Bonus points: use a cloud provider.

Bonus points: Scaling the app

Our little app is becoming a success. During the busy times we have upto 10 posts and 500 views per minute. We expect 10x growth in the next 6 months. How would you (re)design the app to handle that? Sketch a diagram of the (cloud) infrastructure.

Bonus points: The API

We have just signed up a big enterprise customer. They want to integrate the ImageThread app with their site. Design an API to be able to: create posts, retrieve individual posts, perform a bulk export.