

System Design: Photo Sharing Application

LucidProgramming

Goals

- ▶ Design a photo sharing web application. Similar to Instagram, Flickr, etc.
- ▶ Step through the high-level requirements for such an application.
- ▶ Cover techniques for building and scaling this service.

Attributions

- ▶ Content based on: Designing Instagram by Educative

Basic Functionality Requirements

- ▶ Upload and download photos from service.
- ▶ Search for photos based on titles.
- ▶ Allow users to follow other users.
- ▶ Be able to display the feed of user as homepage.

Basic Service Requirements

- ▶ Low latency for news feed generation.
- ▶ Reliably store photos.
- ▶ Allow users to upload as many photos as they wish.

Not Required

- ▶ Other requirements could be asked by the interviewer, but for our application we will side-step these particular attributes.
 1. Commenting on photos.
 2. Tagging photos.
 3. Face recognition and user tagging.
 4. Suggesting who to follow.

Capacity Estimation

- ▶ Capacity figures obtained from: Educative.

- 1.

- 2.

- 3.

- 4.

Test

Further Resources