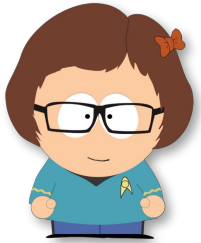


Functional requirements

Let's design a YouTube-like system. Specifically, video upload and video view functions.



interviewer

Let's design a YouTube-like system.



interviewer

Okay. I should try to define specific functions. But how?



software
engineer

Functional requirements

We need to identify
who is going to use the system and how


reasonably easy
for systems we know and use


- YouTube
- Facebook
- Twitter
- Gmail

quite hard
for systems we know little about

- Rate limiting system
- Fraud prevention system
- Content delivery network (CDN)

Functional requirements

 content creators
upload videos
create posts
view analytics
...

 viewers
search for videos
watch videos
leave comments
...

YouTube users


content creators

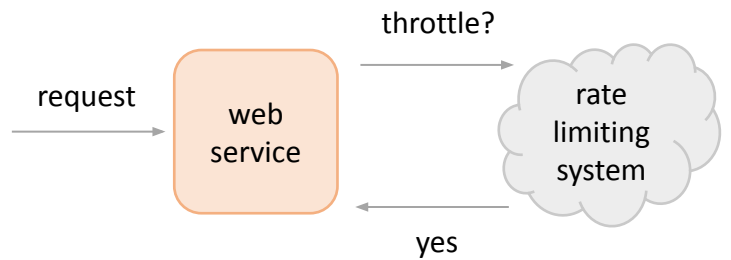

viewers

HOW
they use the
system

WHO
the customers are

start with a customer and
work backwards


customer
user
client



Rate limiting system
clients

web
service
A

web
service
B

Functional requirements

Let's design a YouTube-like system. Here are the use cases. Let's convert them to API first.



interviewer

Upload a video to the channel.



POST /channels/{channel_id}/videos

Return a list of videos for the channel, ordered by popularity.



GET /channels/{channel_id}/videos?sort_by=views_desc

Search for videos and channels.



GET /search?q={keywords}

Watch the specific video.



GET /videos?id={video_id}

Delete the specific video.



DELETE /videos?id={video_id}