



## SDE Skills System Design Session Handout

Live comments refer to real-time, interactive messages posted by viewers during a live video stream, allowing for immediate feedback, engagement, and conversation. These comments appear instantly for both the streamer and other viewers, creating a dynamic and engaging viewing experience

### Functional Requirements

- Real-time text comments
  - Users should be able to post comments in real-time during the live video stream.
  - Comments should appear instantly on the streamer's screen and on the viewers' screens.
- Emojis and reactions
  - Users should be able to include emojis in their comments.
  - Reactions such as likes or thumbs-up should be allowed for individual comments.
- Infinite scrolling
  - Comments should be paginated or support infinite scrolling to avoid overload of data.
- (Optional) User mentions and replies
- (Optional) Moderation and replies
- (Optional) Only allow subscribers to comment

### Non-Function Requirements

- Scalability: should be able to handle millions of live videos with thousands of comments per second.
- Latency: low latency comment broadcast (~300ms)
- High availability for comment creation
- Ensure that comments appear in the right order