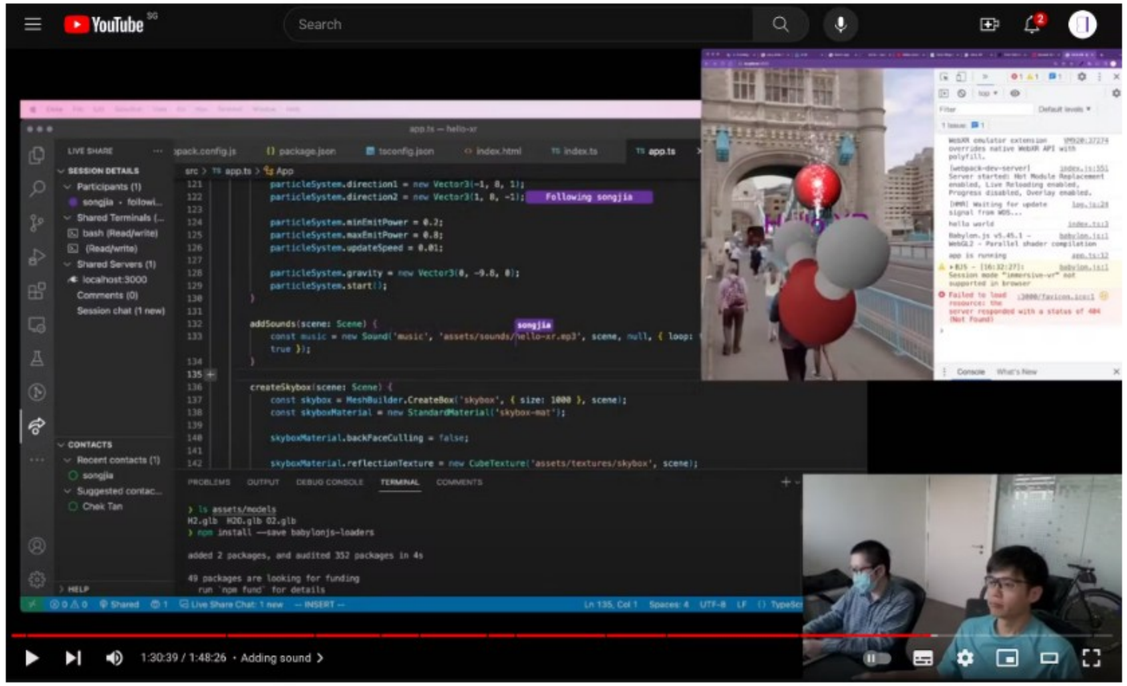
Mentimeter

Creating Virtual Environments

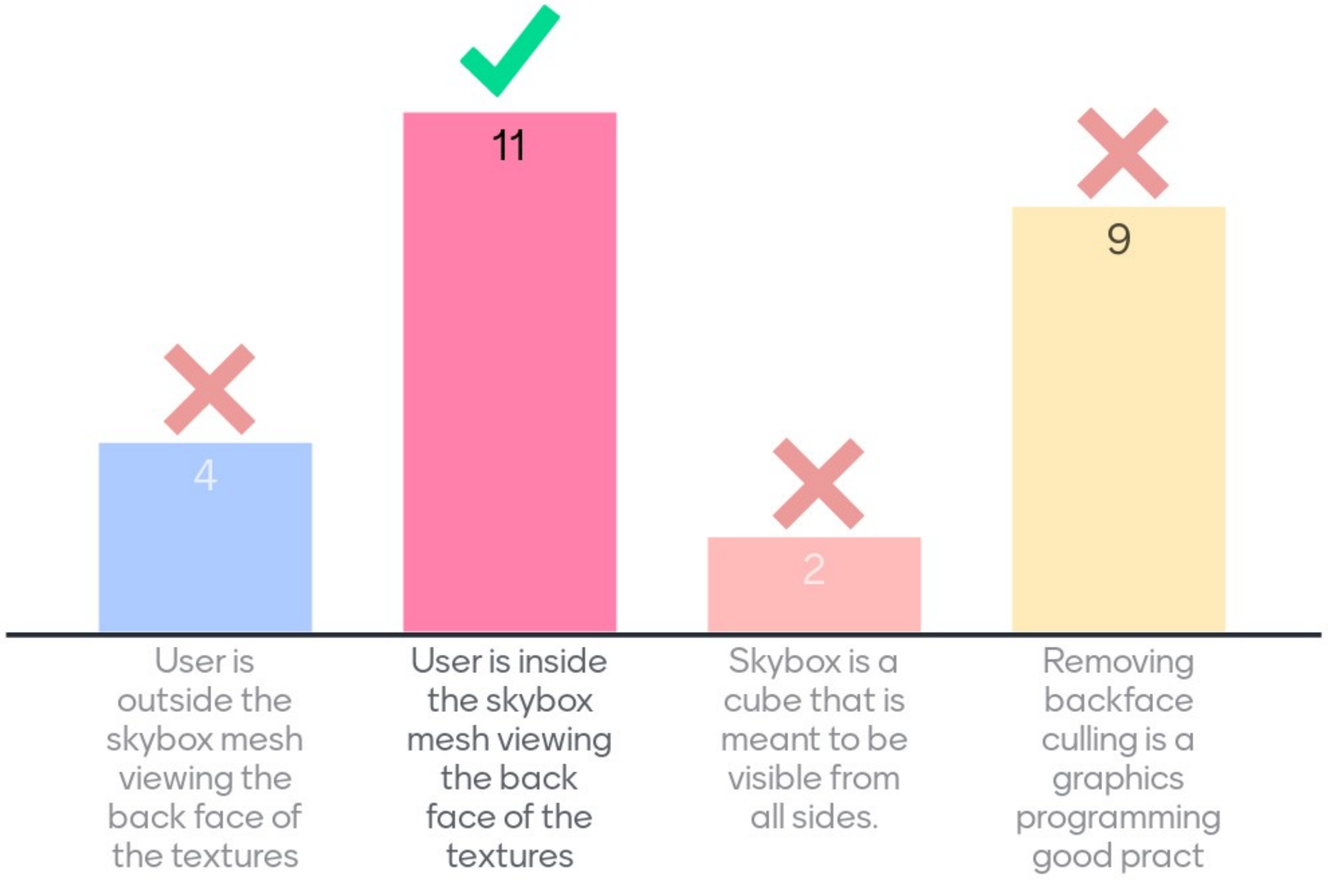
1



- skyboxes & skydomes
- primitives
- loading models
- textures & materials
- lighting
- audio
- other effects

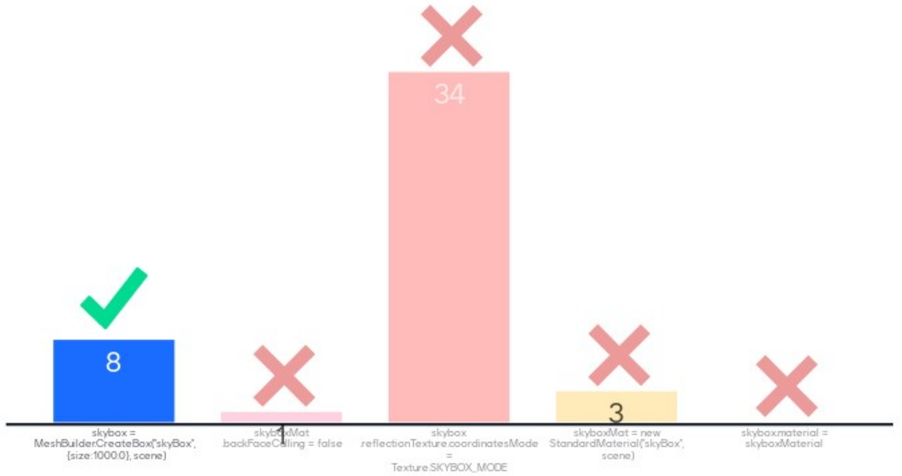
Mentimeter

Why do we need the following code?



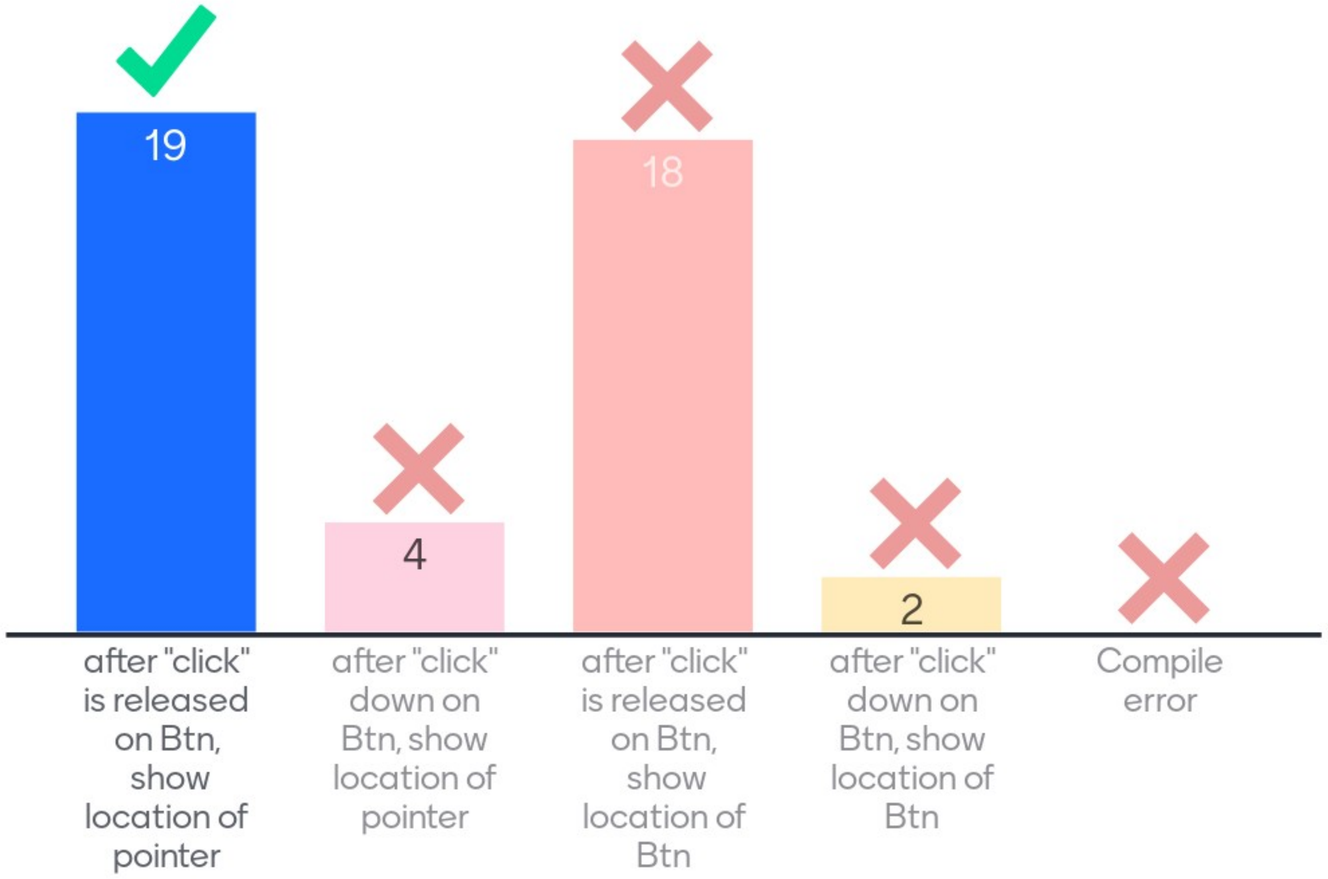
Mentimeter

Which line of code makes the skybox feel like it is part of the background surrounding the user?



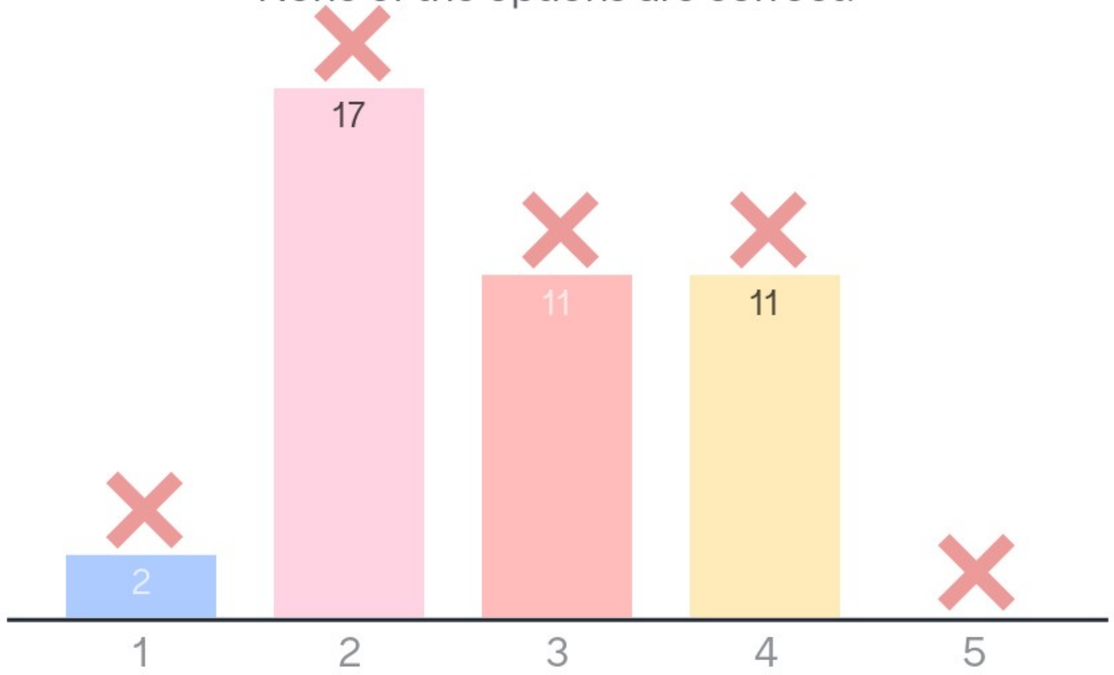
Mentimeter

What will the following code do?



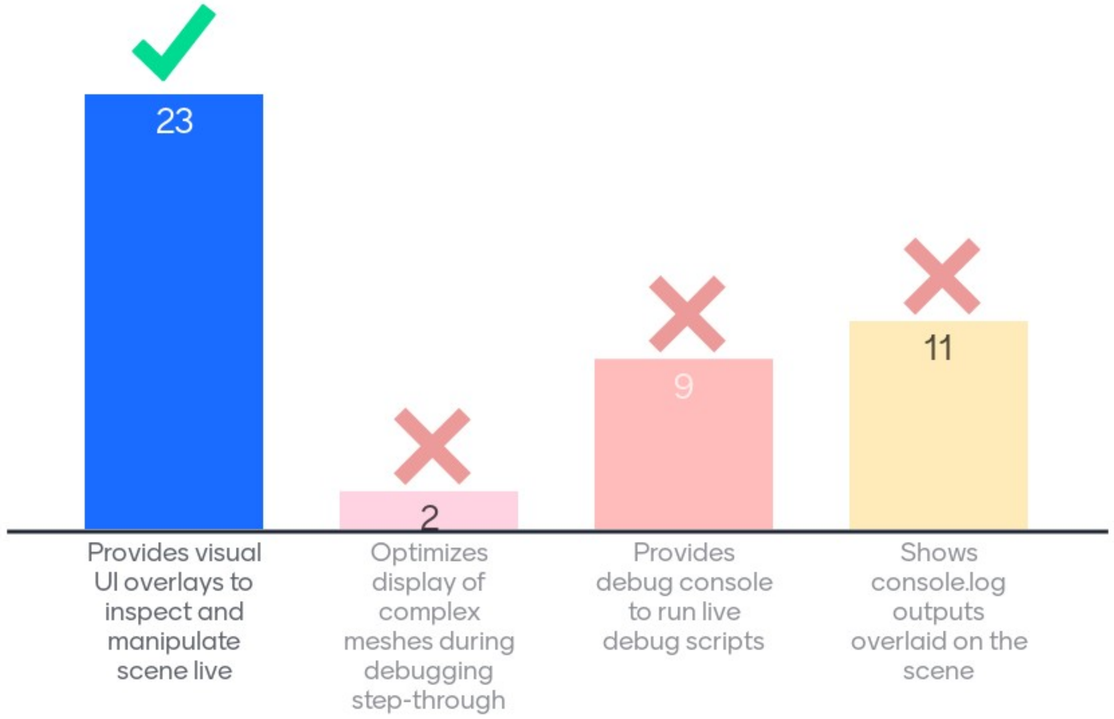
This code has a runtime error. Which line is the offending line that causes this?

None of the options are correct!



Mentimeter

What is the function of the debugLayer in the Scene class of Babylon.js?



6

Mentimeter

Creating Virtual Environments

- create a 3D virtual environment with a skybox and geometric primitives in WebXR
- implementing a simple GUI in an XR application
- implement anchors to overlay 3D virtual objects in camera video in WebXR
- implement basic audio in WebXR applications
- **differentiate model-based vs image-based methods to create virtual environments**

3

Mentimeter

Model-based approach

- → hand-made 3D models using 3D modelling tools
- → requires deep technical art expertise
- → enables full interactive implementations

Mentimeter

Model-based approach

1

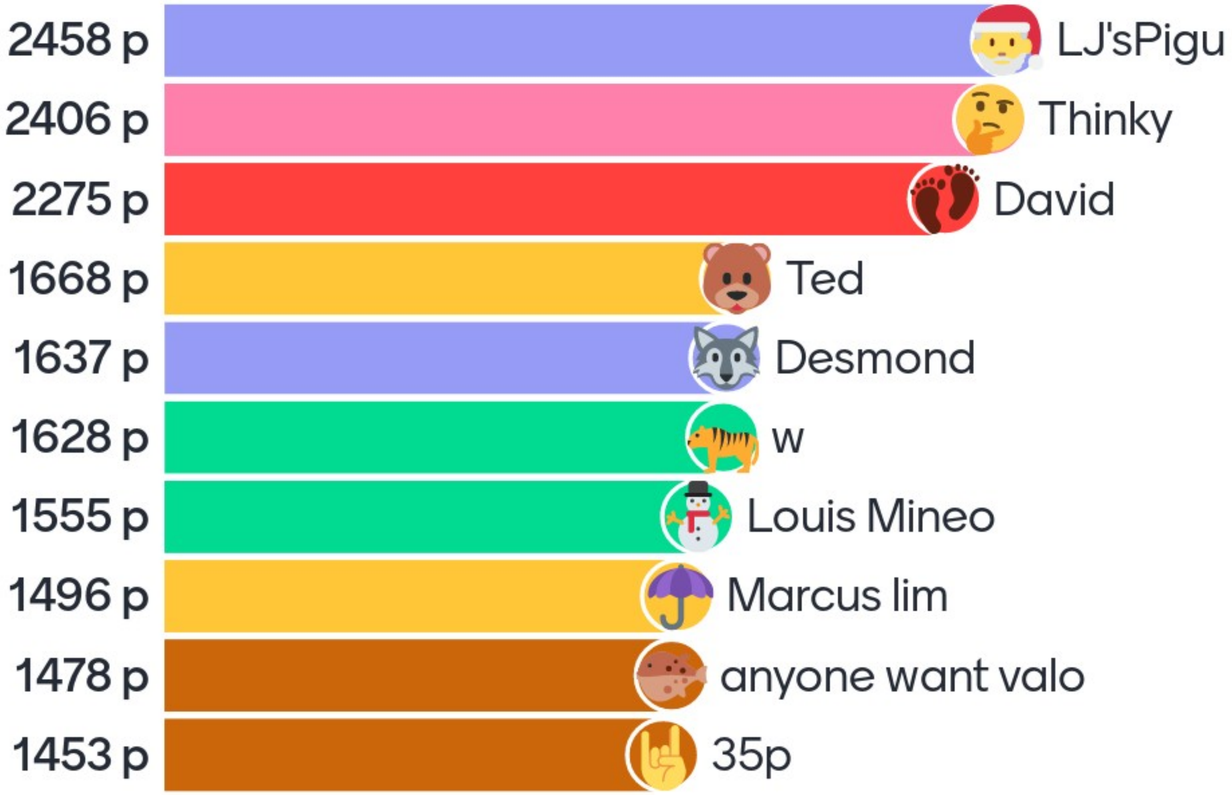
Mentimeter

Image-based approach

- → 360 photos/videos
- → more accessible to untrained creators
- → limited to static surroundings
- → sometimes 3D reconstruction used to bridge towards model-based

2

Leaderboard



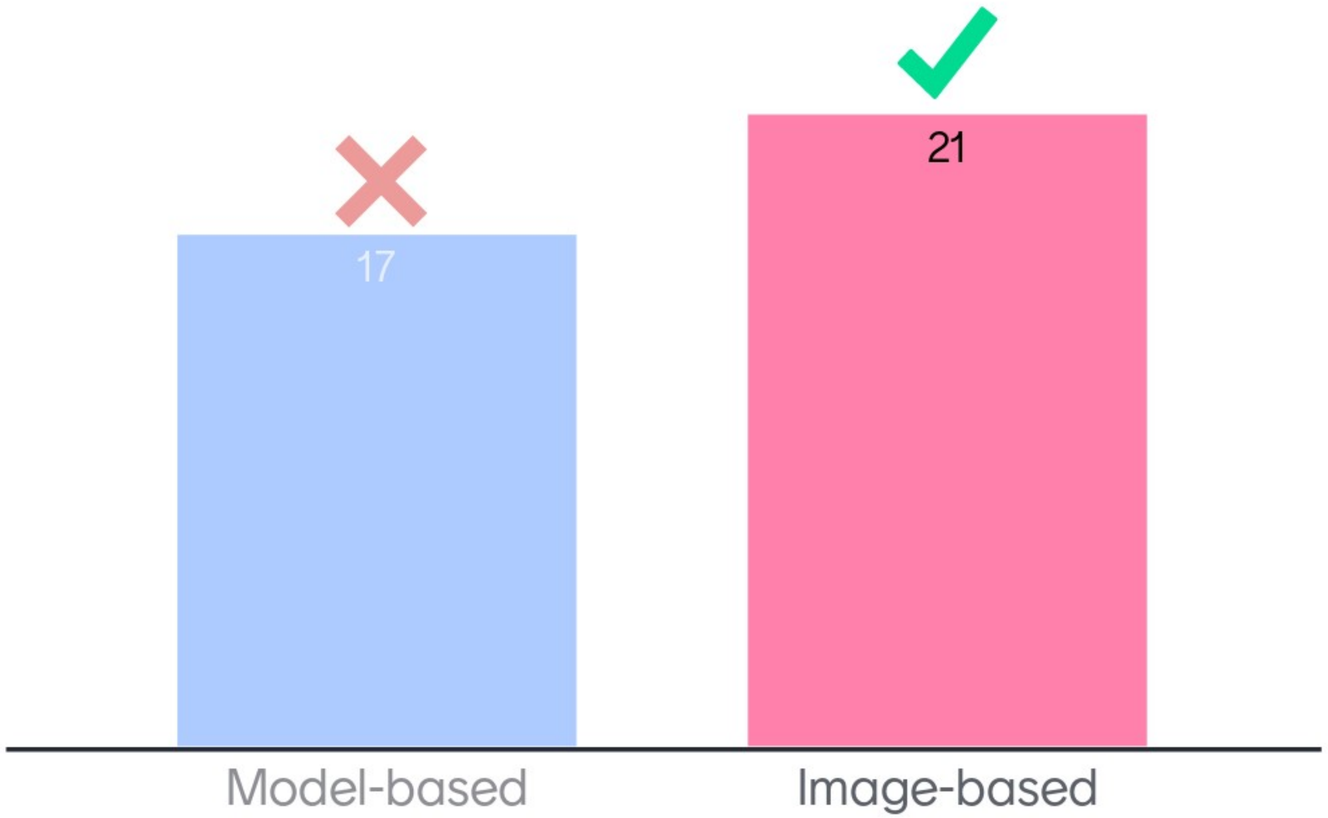
Mentimeter

Image-based approach

1

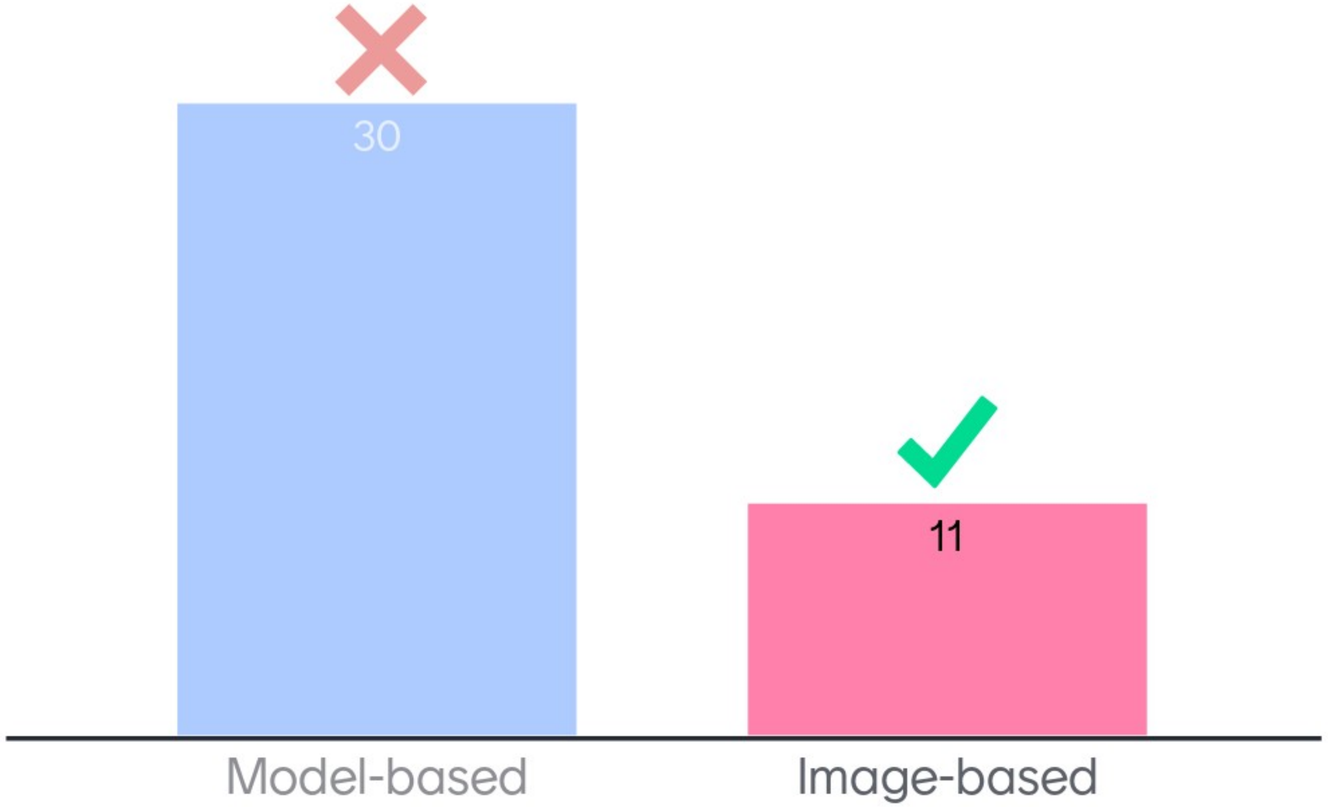
Mentimeter

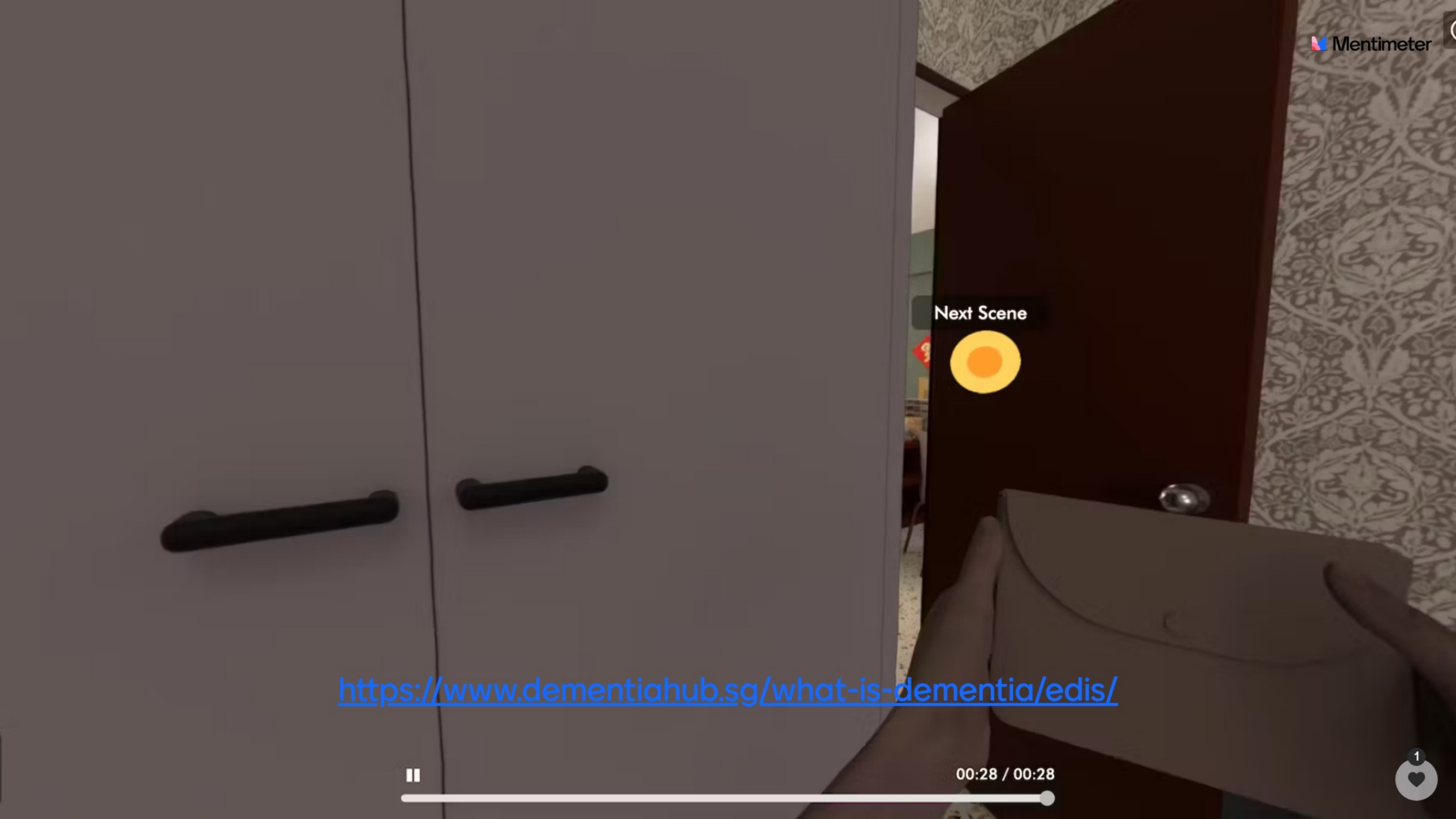
What is the optimal approach?



Mentimeter

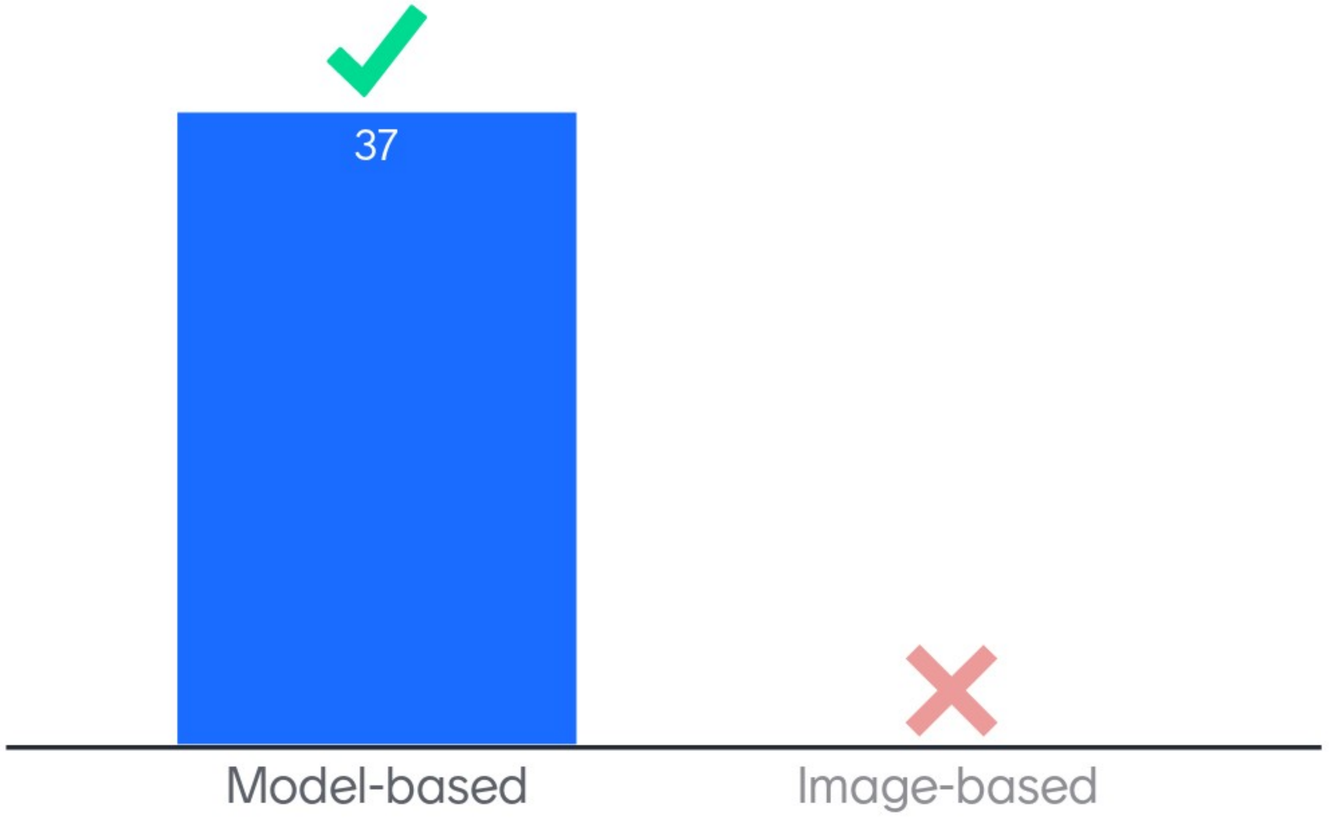
What is the optimal approach?




Mentimeter
Next Scene
https://www.dementiahub.sg/what-is-dementia/edis/
00:28 / 00:28
1

Mentimeter

What is the optimal approach?



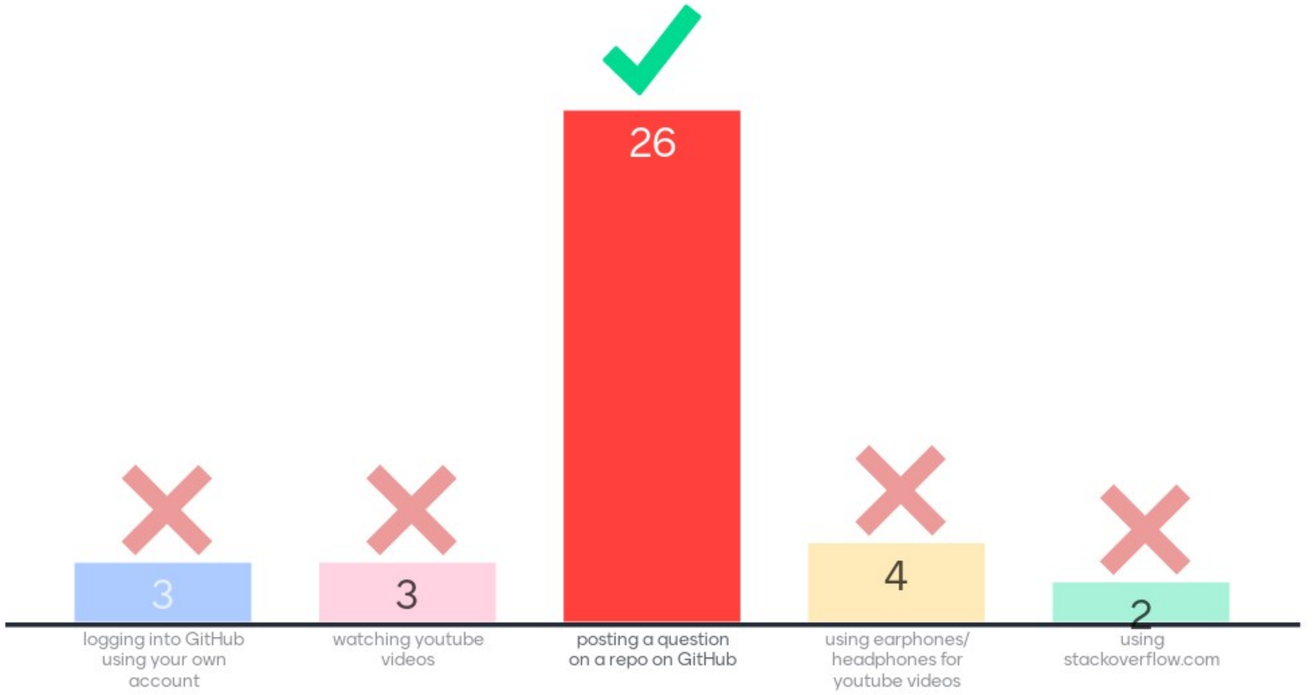
Mentimeter

Other considerations

- artistic styles
- existing resources
- https://oncyber.io/platypunkartcollection

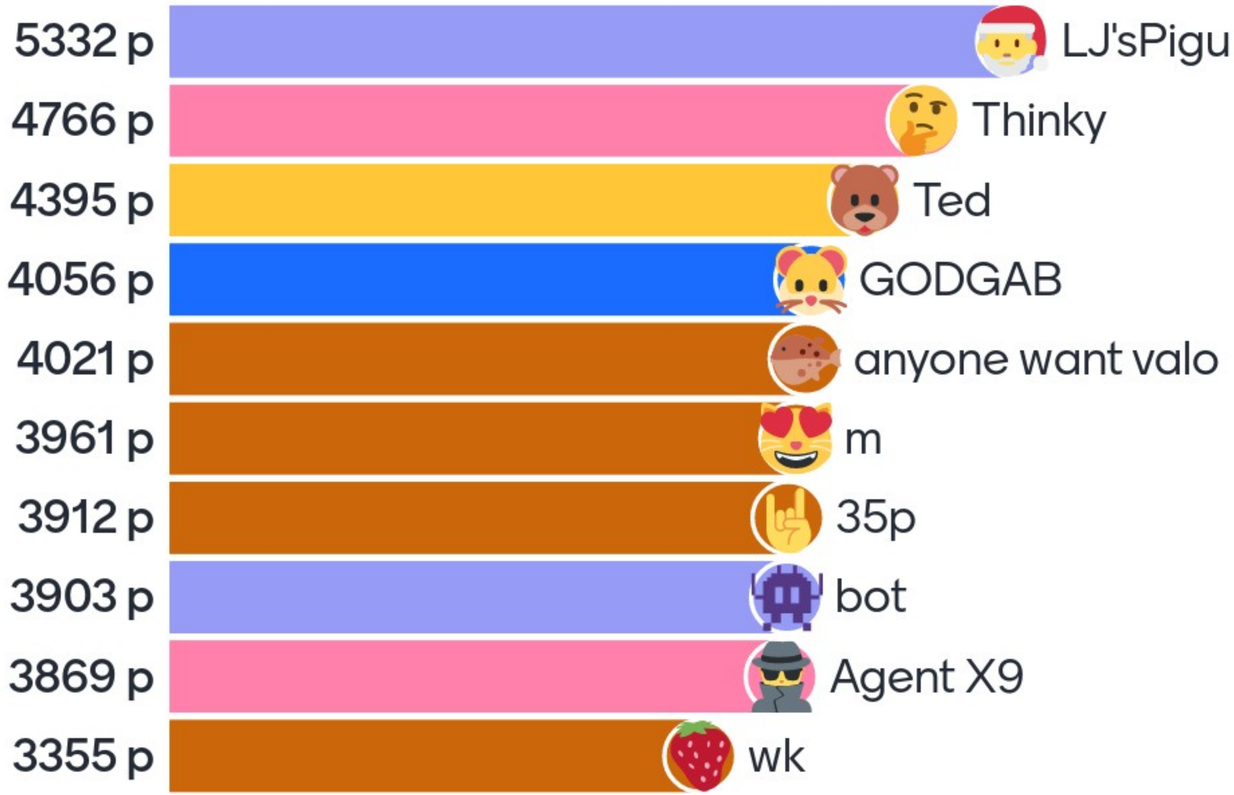
Mentimeter

What is not allowed during QUIZ01?



1

Leaderboard



Ask me anything

15 questions
0 upvotes