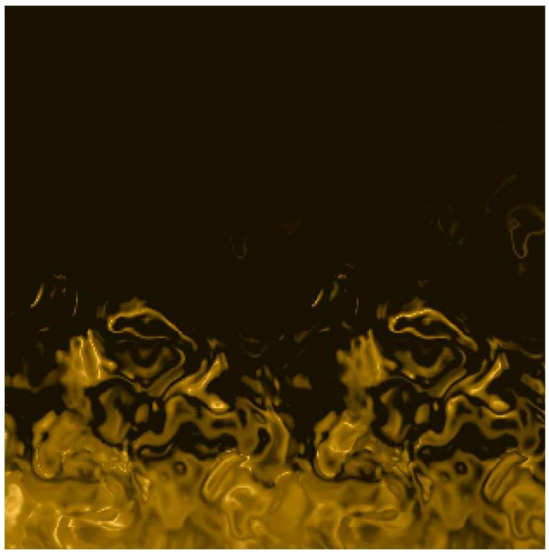
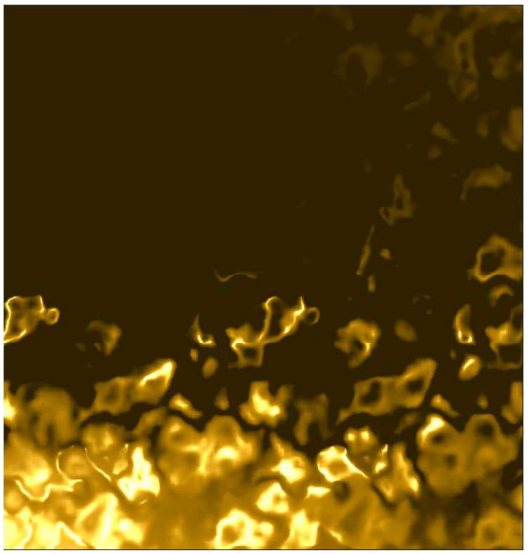
Behind the scene

1. The flame

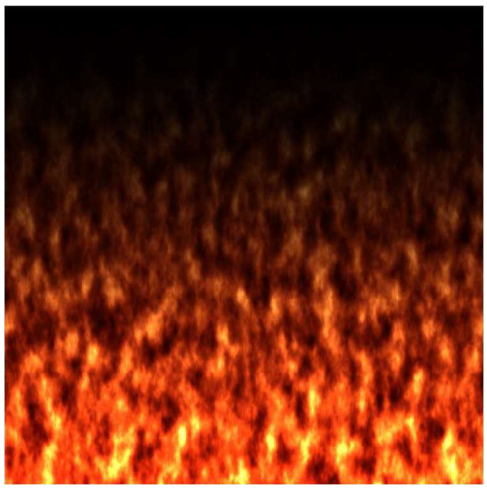
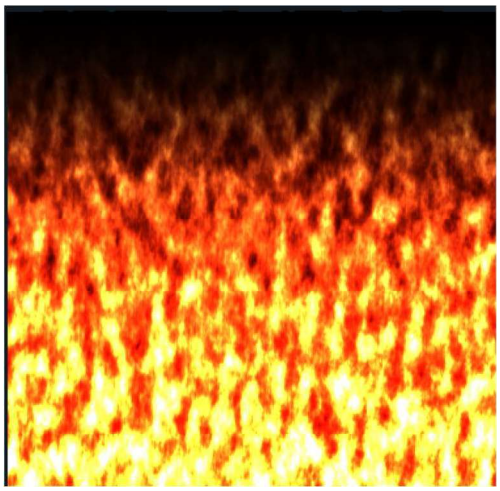
Preliminary work:

Initially, I developed a fire effect by leveraging a noise texture, adjusting distortion through a range of strengths from 0 to 1, and implementing a gradient mask to regulate the fire's size. Additionally, I employed sinusoidal bump mapping to enhance the effect. However, upon examining the resulting image, it appears to resemble noise with characteristics akin to smoke.

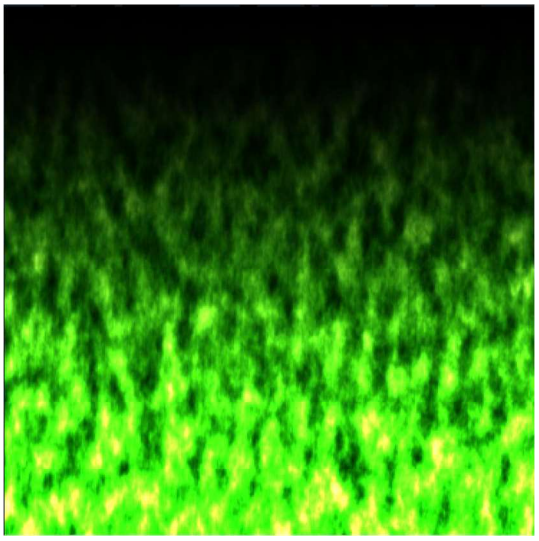



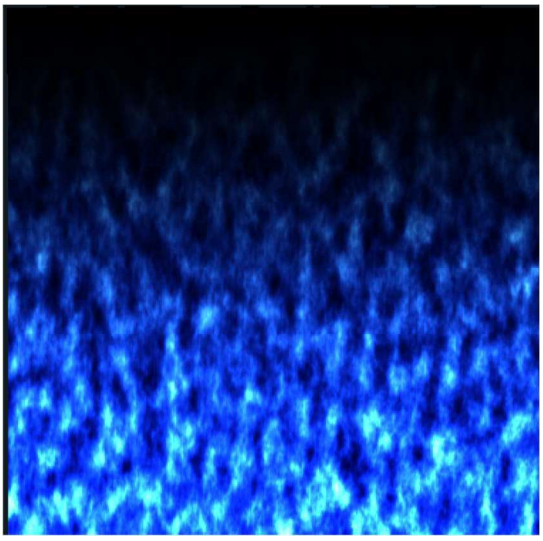
Final product:

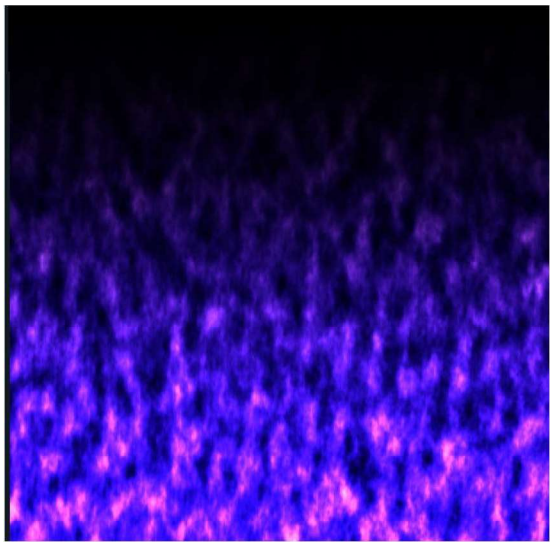
After further research, I discovered a tutorial video on Youtube that revealed a key technique: generating fire effects directly from noise elements (points) rather than relying on texture files. By carefully adjusting distortion and applying a mask following this new approach, I achieved an improved fire effect.

In Glman, the scene comes to life through dynamic adjustments to time (iTime) and fire intensity (uKa). Additionally, the fire's color can be altered to switch among red, blue, green, or a blend of these colors, resulting in purple.

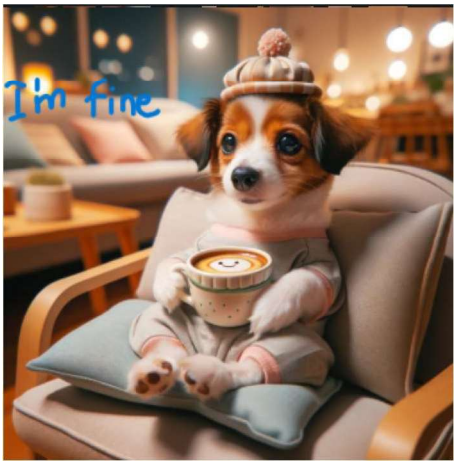






2. **The rest of the background (dog, house, coffee, couch, and text)**

The background image featuring a dog was created by ChatGPT, using the prompt: "generate an image of a cute dog holding a cup of coffee." Then, I used MsPaint to overlay the phrase "I'm fine" onto the image.



Then, I converted the image into a BMP format and used a mixing function to integrate it with the fire effect.

3. Final result

The first image is from the old fire water effect. The second image is from the new fire effect. The third image emerges from blending the two fire effects together.

References

Fires: https://www.shadertoy.com/view/XsXSWS

WebGL2: 076: Noise Distortion Fire: https://www.youtube.com/watch?v=uT5w3Bwhk4s&t=2342s