



Project B: Reflective Raytracing Marvels

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USER GUIDE:

Basic Controls:

Use you mouse to interact with the scene

- Press the left button and drag the mouse to look around in the scene.

Use W, A, S, D to move in the scene.

Press T to trace the Image

Press the Scene button to change the scene.

Advanced Controls:

The program has DAT-GUI based user interactions and therefore most of the features, are interactable from the drop-down menu at the top right of the webpage.

There are three elements the user can interact with through the DAT.GUI menu:

- **Ray Tracer Settings:** These settings include the settings that impact how the image is rendered as and has the following sub settings:
 - o **Anti-Aliasing:** The user can select which anti-aliasing he would like the image to be processed with
 - o **Jittered:** If the check box is ticked a 'Jittered' Anti-aliasing will be performed on the image.
 - o **Recursions:** This dictates how many reflection recursions deep the Ray-Tracer should go.
- **World Light Settings:** These settings are for the world light in the scene which is always switched 'On'. It has the following settings:
 - o **Position:** The user can adjust the position of the light.
 - o **Colour:** The user can adjust the different colours for the light.
- **Portable Light Settings:** This is the settings for the second portable light in the scene as a default this light is always switched off, but you can enable this from the DAT.GUI Menu.

***NOTE: AFTER SELECTING ANY OF THE SETTINGS PLEASE PRESS RELOAD OF THE PARTICULAR SETTING TO ENSURE THE CHANGES ARE SAVED AFTER WHICH PRESS 'T' TO TRACE THE IMAGE AGAIN.**

RESULTS:

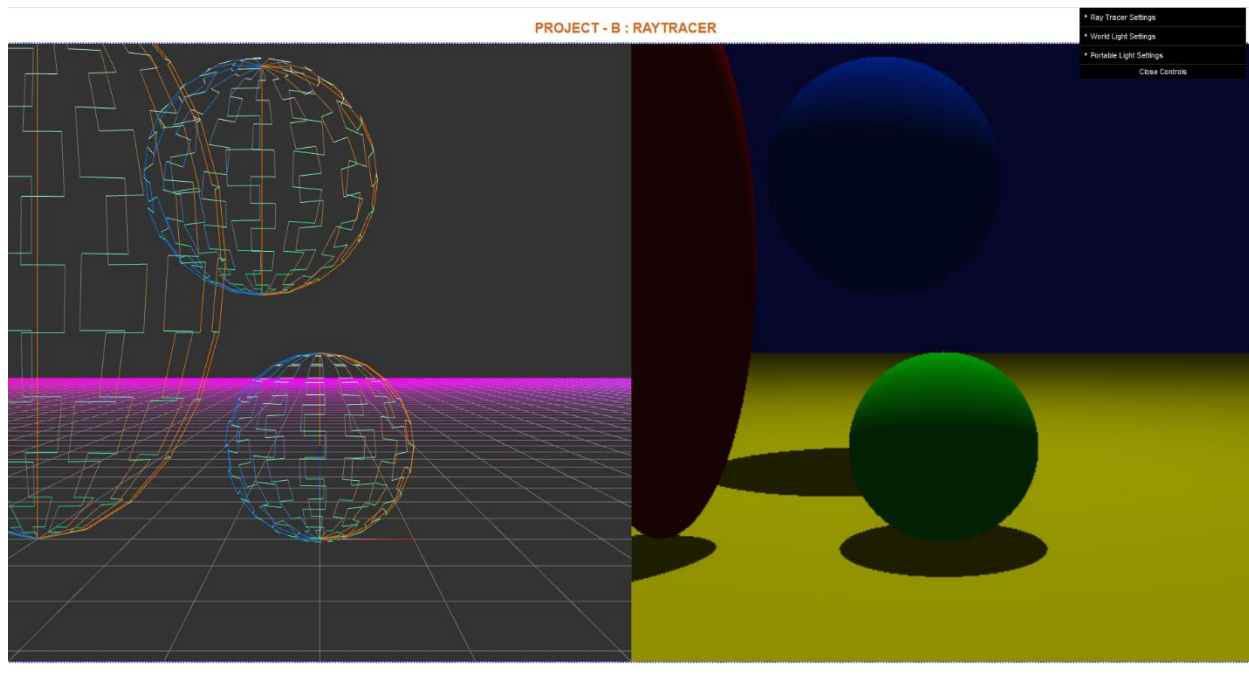


Figure 1: The start-up screen of the program

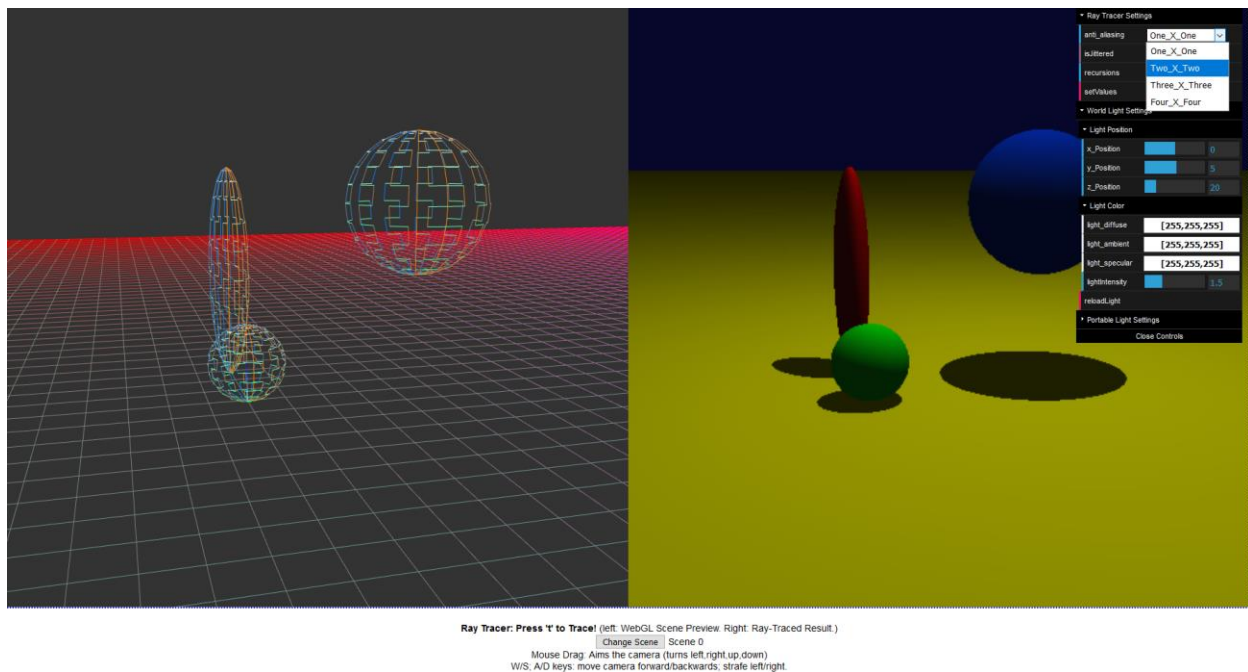


Figure 2: Changing Anti-aliasing from DAT.GUI Menu

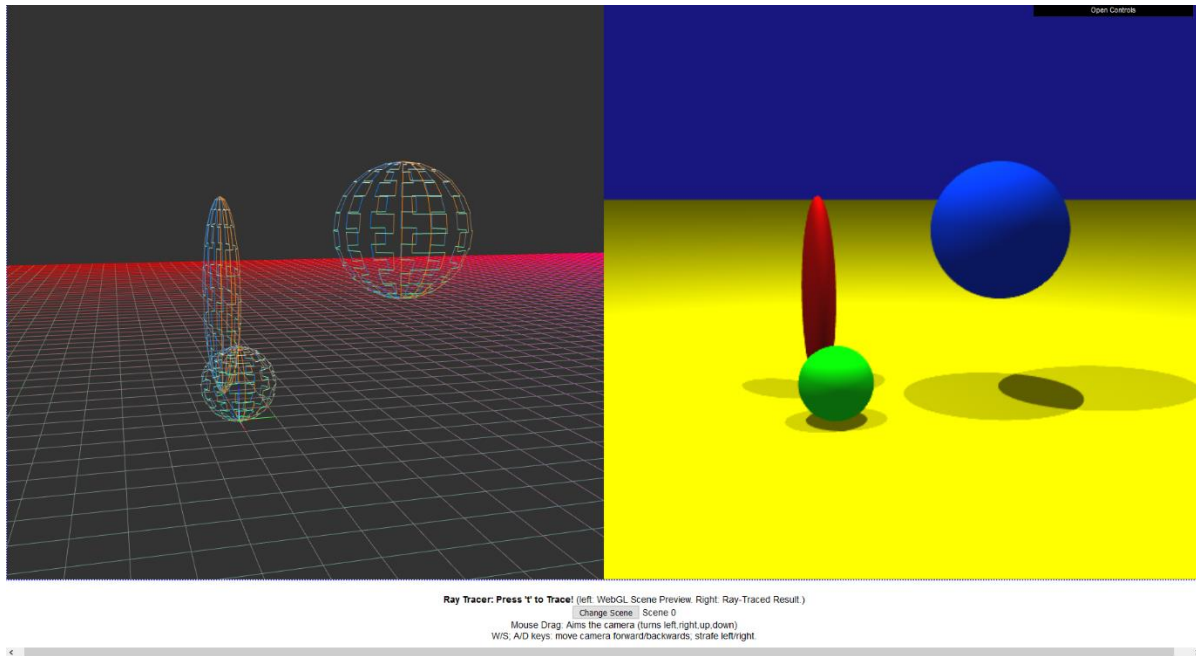


Figure 3: Multiple Lights Toggles showcasing different shadows and Union of two shadows.

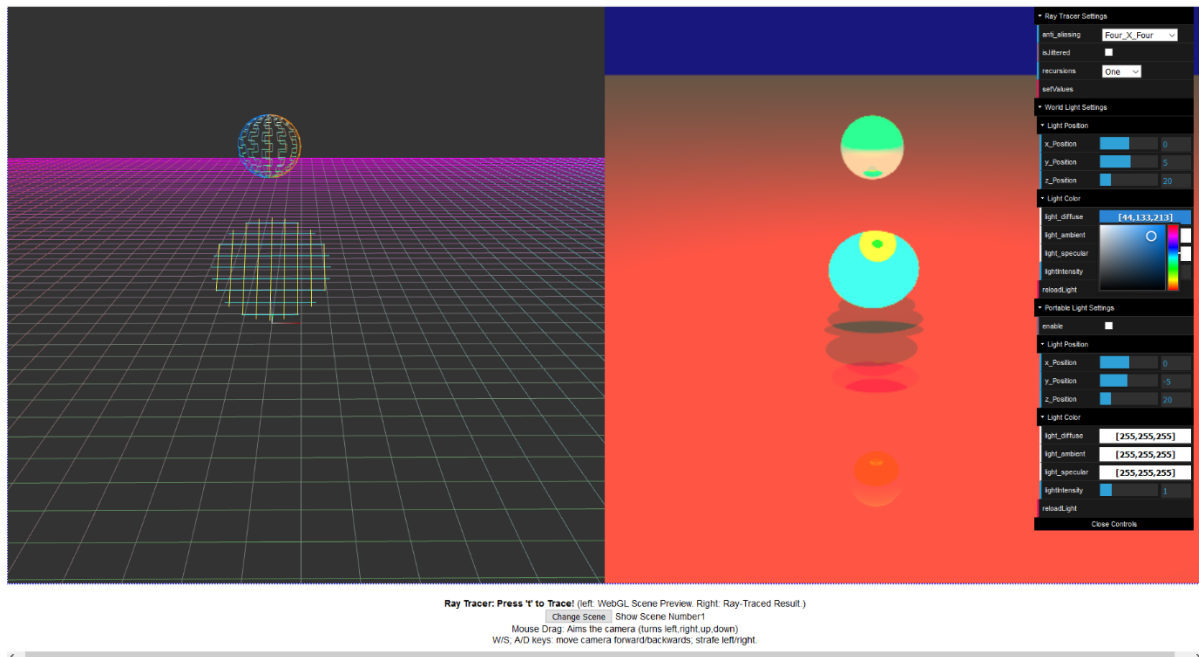


Figure 4: Changing the Colour of World Light to get Different Results

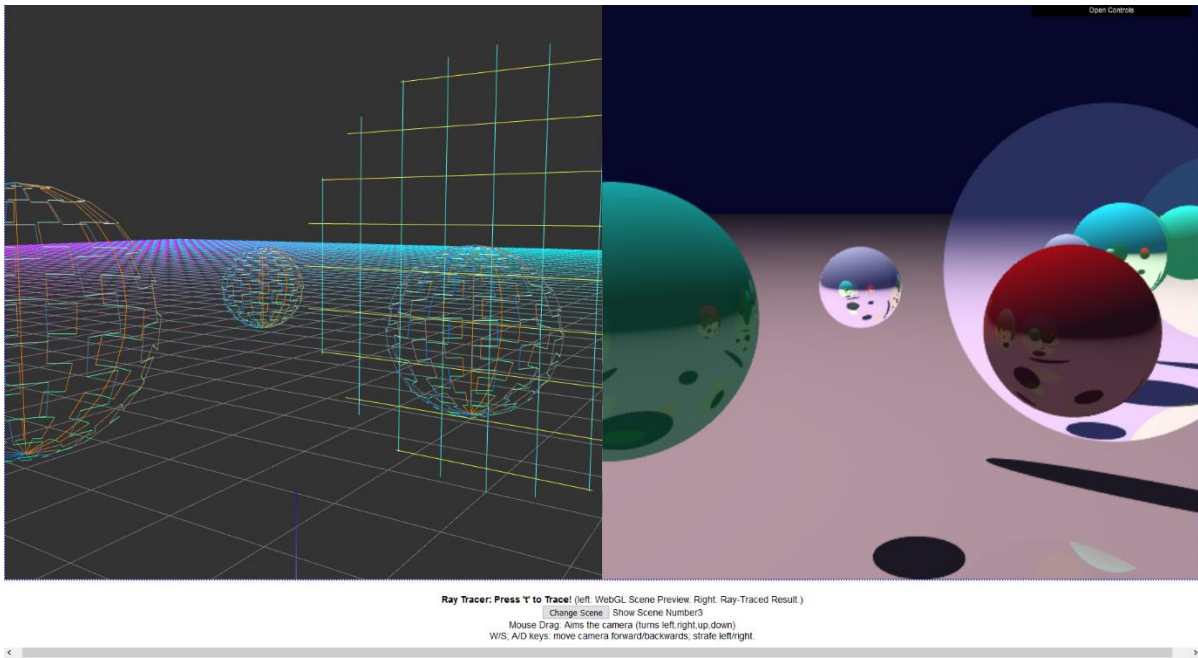


Figure 5: Multiple reflections with and Anti-Aliasing of 4x4