# Project B: Rocket and Windmill

CS 351

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**User’s Guide:**

Arrow keys aim the camera without moving it: Left/right arrow keys rotate view left/right; up/down arrow keys tilt up/down. WASD keys move the camera without rotating it: W/S keys move forwards/backwards in direction-of-gaze; A/D keys ‘strafes’ camera left/right at current altitude.

**Results:**

A screenshot of a computer

Description automatically generated with medium confidence

Figure 1 Side-by-Side Viewports.

On the left is perspective Camera with 35-degree vertical field-of-view. On the right is orthographic camera with width, height matching perspective camera's view-frustum size measured at -z = (far-near)/3

A picture containing surface chart

Description automatically generated

Figure 2 Auto Resizing.

When changing browser window width, canvas will be automatically re-sized to fill the full width of browser window and at exactly (70%) of its height.

A screenshot of a computer

Description automatically generated with medium confidence

Figure 3 Moving the camera without rotating it.

One the left is a moved camera by using WASD keys. WASD keys move the camera without rotating it: W/S keys move forwards/backwards in direction-of-gaze; A/D keys ‘strafes’ camera left/right at current altitude.

A picture containing graphical user interface

Description automatically generated

Figure 4 Aiming the camera without moving it.

Figure 4 shows a changed camera view without moving it by using arrow keys. Arrow keys aim the camera without moving it: Left/right arrow keys rotate view left/right; up/down arrow keys tilt up/down.