

Tom's Farm- a Cow Simulation

This is summary of the project (mmn17, Computer Graphics).

An extra feature was added: the legs move (using $\sin()$ for smoothness) as the cow walks.

The project:

- implements OpenGL functions to create shapes, lighting, a menu and user controls (via keyboard and/or mouse).
- Uses an external asset- stb_image.h for loading texture files onto the cow and floor (grass).
- Implements some basic math functions to control the view and object (cow) transformations.
- Main libraries used: GL/glut, cmath.

Controls:

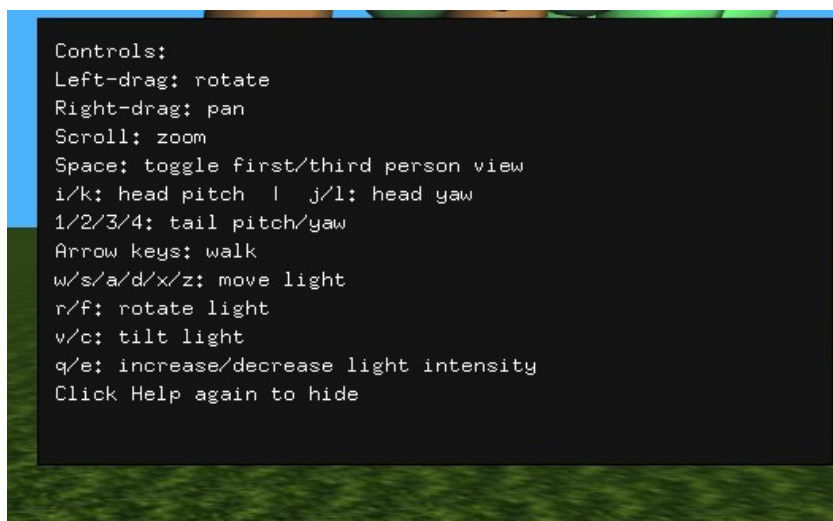
- Left-drag: rotate
- Right-drag: pan
- Scroll: zoom
- Space: toggle first/third person view
- i/k: head pitch | j/l: head yaw
- 1/2/3/4: tail pitch/yaw
- Arrow keys: walk
- w/s/a/d/x/z: move light
- r/f: rotate light
- v/c: tilt light
- q/e: increase/decrease light intensity
- Click Help again to hide

Menu layout:



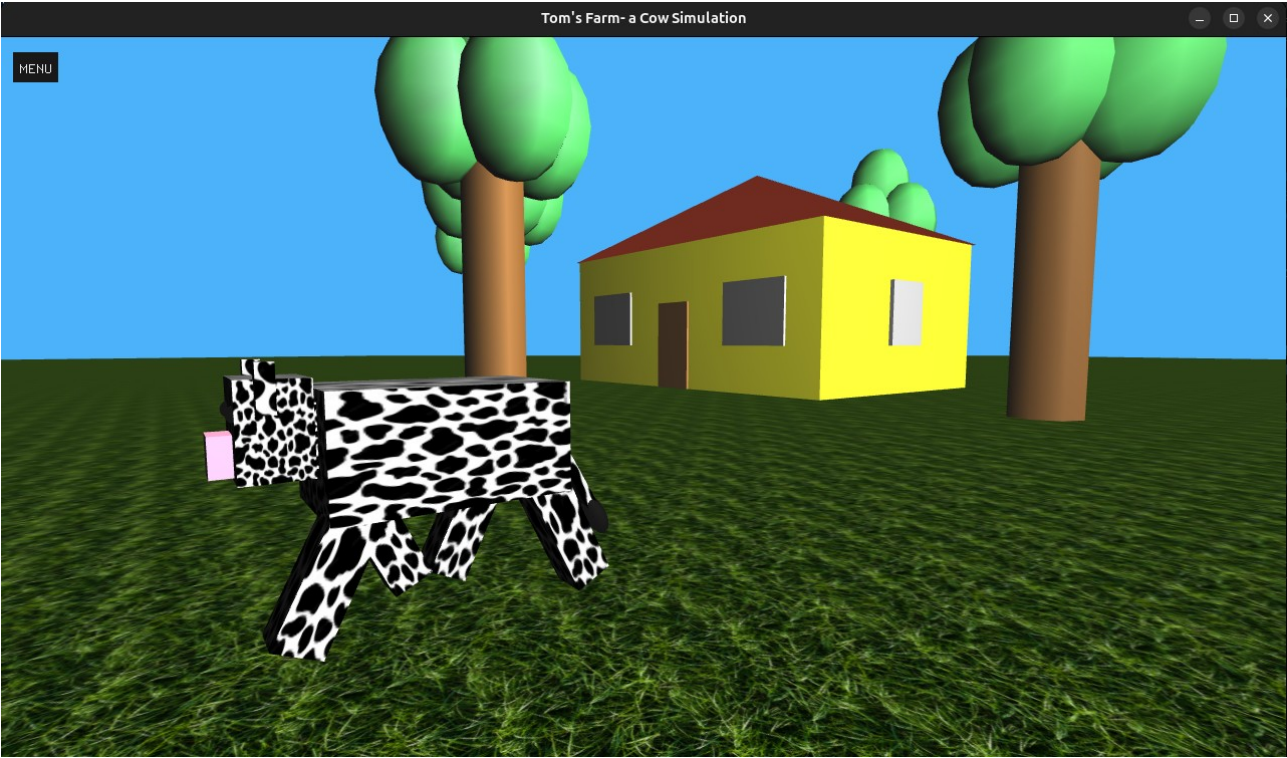
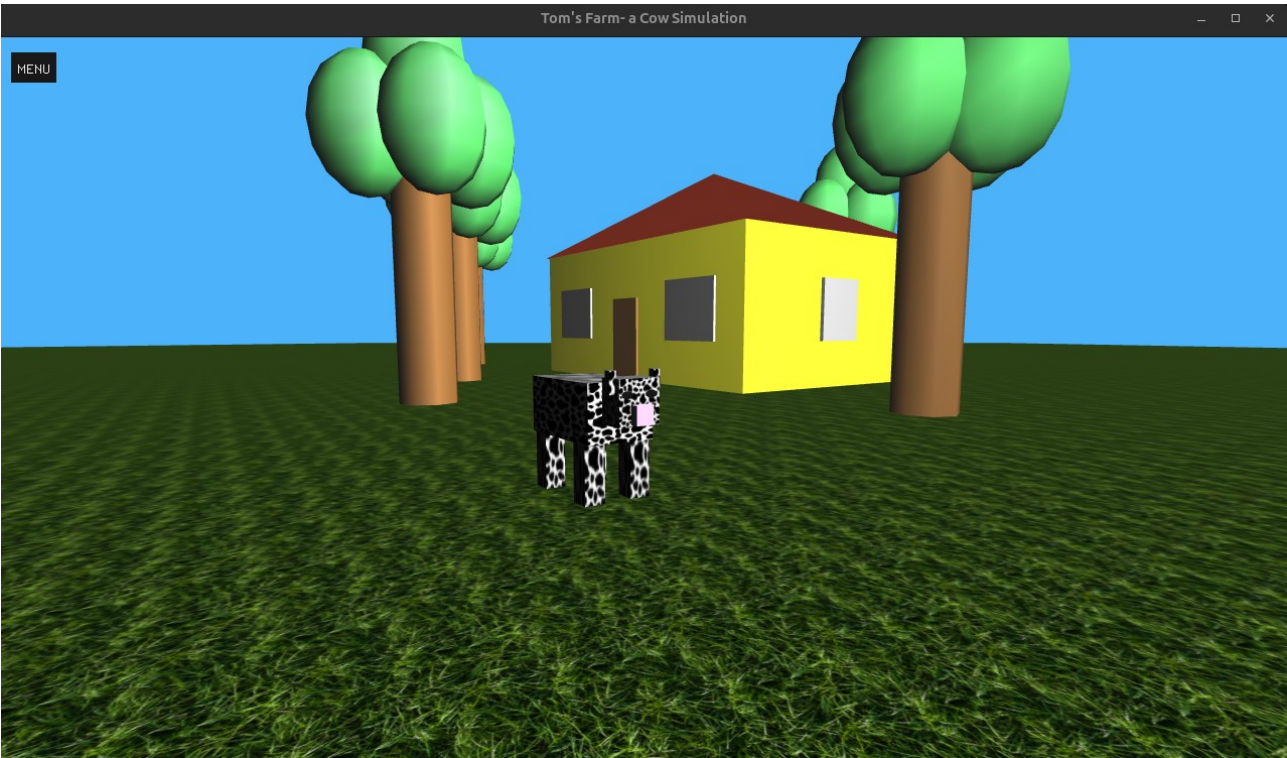
Ambient lighting intensity can be controlled by the user.

Help layout:

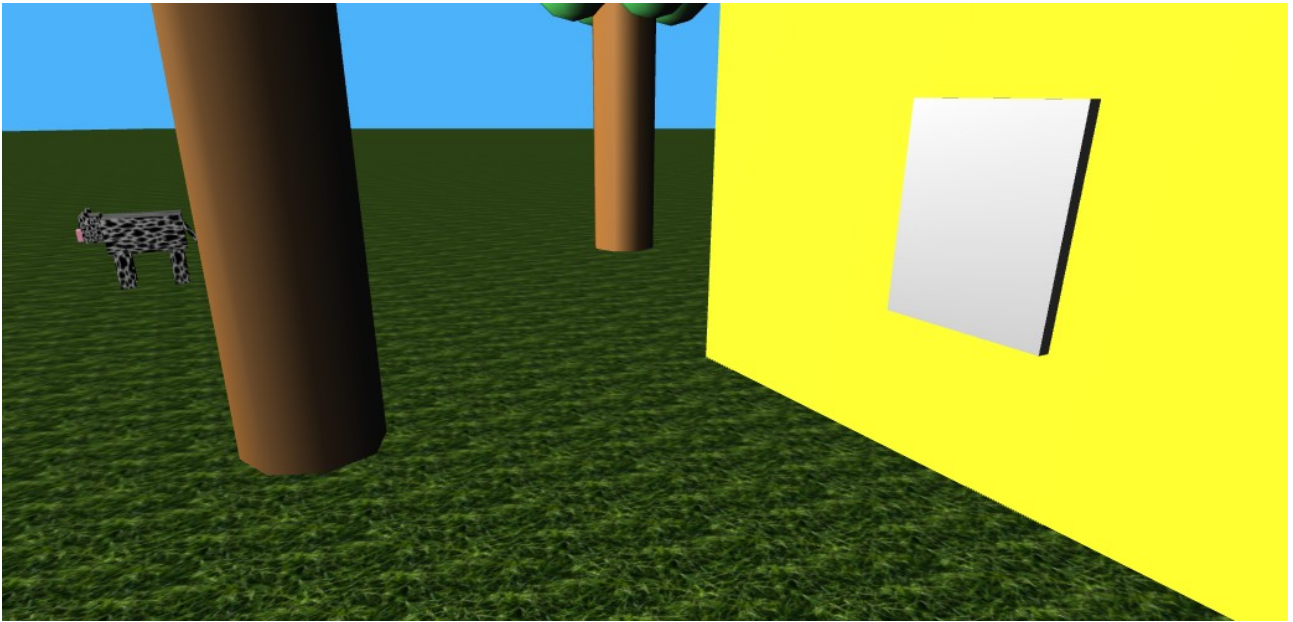


All controls are shown.

Main farm screenshot:



Shiny light-silver window (metallic, you know... for security):



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