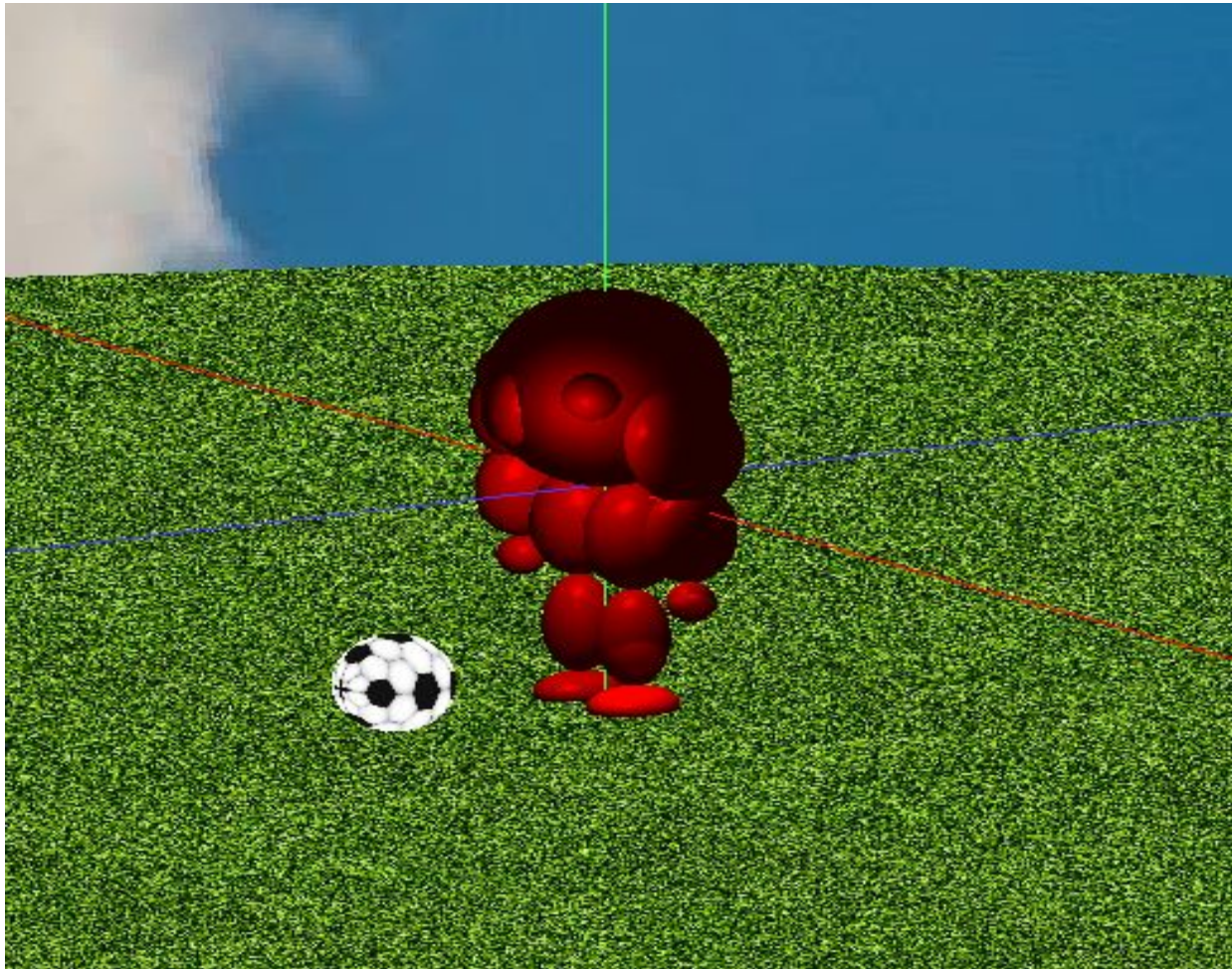


PROJECT

Computer Graphics And Visualization

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Instructions to compile and run:

This project has been developed with the additional libraries and configuration issues of Practise 4. The images must be inserted in the project root folder.

Description of the Project:

This project consists in an upgrade of practise 3b that includes the functionalities learnt in the previous practises. Also has been developed:

- Two menus by left clicking (scene menu and camera menu).
- Doll upper limbs implementation and XZ movement.
- Creation of footballs in the three axis.
- Selection mode by right clicking. (Doll rotation and footballs XZ movement)
- Two Isometric camera rotation movements.
- Differents scenes with materials, textures and lights.
- Ball driving animation.

User's Manual:

- ***Mouse controls:***

Right Click Display the menus.

Left click Selection mode.

-Rotate doll around Y axis.

-Move footballs in Z axis (left or right mouse movement) or X axis (up or down movement).

- **Footballs creation:**

Increases or decreases footballs. (WARNING, creating too many footballs will produce lag)

1|2 Remove or add footballs in the X axis.

3|4 Remove or add footballs in the Y axis.

5|6 Remove or add footballs in the Z axis.

- **Doll controls:**

x|X Positive or negative X axis movement.

z|Z Positive or negative Z axis movement.

q|Q Positive or negative doll rotation (around X axis).

w|W Positive or negative thigh1, tibia1 and foot1 rotation.

e|E Positive or negative tibia1 and foot1 rotation.

r|R Positive or negative foot1 rotation.

t|T Positive or negative thigh2, tibia2 and foot2 rotation.

y|Y Positive or negative tibia2 and foot2 rotation.

u|U Positive or negative foot2 rotation.

i|I Positive or negative arm1, elbow1 and hand1 rotation.

o|O Positive or negative elbow1 and han1 rotation.

p | ***P*** Positive or negative hand1 rotation.

a | ***A*** Positive or negative arm2, elbow2 and hand2 rotation.

s | ***S*** Positive or negative elbow2 and hand2 rotation.

d | ***D*** Positive or negative hand2 rotation.

m Animation.

- **Material controls:**

f | ***F*** Increase or decrease by 0.1 R component of diffuse coefficient.

g | ***G*** Increase or decrease by 0.1 R component of specular coefficient.

h | ***H*** Increase or decrease by 10 the phong exponent.

- **Spotlight controls:**

j | ***J*** Increase or decrease by 0.2 in the X axis.

k | ***K*** Increase or decrease by 0.2 in the Y axis.

- **Camera controls:**

I | ***L*** Move an Isometric cinematic camera.

n | ***N*** Decrement or increment distance to the near plane.

- | **+** Zoom in or zoom out.

c Isometric camera rotation movement (only available on isometric camera).

v Change the type of projection.

b set axes
