Synthèse d'Images et Modélisation Géométrique - TP1-2
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3.2.2 - 1. We see a white colored teapot, in order to have a more realistic rendering of the teapot we imagine that we would have to add light and shadows.

3.2.2 - 2. With a few number of meridians and stacks we can see that the image isn't well rendered, the 'sphere' is not even a sphere, the edges are too jagged. Whereas with many meridians and stacks, we get something that more closely resembles a sphere.

3.2.3 - 1. When we resize the window, the program stretches and squeezes the teapot. Our solution is to determine which is smaller, width or height, and resize accordingly, like so:

```
if(width>height)
      glViewport((width-height)/2,0,height,height);
else
      glViewport(0,(height-width)/2,width,width);
```

3.2.4 - 1. We define a global boolean variable that changes every time we press W and, in the display function, we render a Wire or Solid object depending on the value of this boolean variable.

4.2.1 - 1. If we increase fovy the teapot seems smaller, because we are widening our field of view, we see more of the scene, vice versa when we decrease it.

4.2.1 - 2. We start to cut (clip) parts of the teapot. The volume of the scene rendered diminishes.

4.2.2 - 1. If we invert the up vector, it's as if we turn the camera upside down, so we end up seeing the teapot upside down.

4.2.2 - 2.

a) eye = (0,2,0), center = (0,0,0), upVector = (1,0,0)
b) eye = (0,0,-2), center = (0,0,0), upVector = (1,1,0)

4.3.2 - 1. GL_MODELVIEW will always take on the values of the matrix at the top of the stack, but if we don't execute the second pop, this will be the previous GL_MODELVIEW translated by (0, -2, -1). Successive calls to display (by resizing the figure) will cause successive translations and the teapots will disappear.

4.3.2 - 2. When we move the `gluLookAt(0.0,0.0,5.0,0.0,0.0,0.0,0.0,1.0,0.0)` line after the second glPushMatrix the blue teapot disappears, this happens because the camera only points in the right direction for the green and red teapots and elsewhere for the blue one.

4.3.2 - 3. When we have the gluLoadIdentity before “draw scene”, we are never giving our gluLookAt values to the matrix and that’s why we are in the default point of view.