Project3: Texture Mapping - An introduction[1] to OpenGL Textures

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Abstract

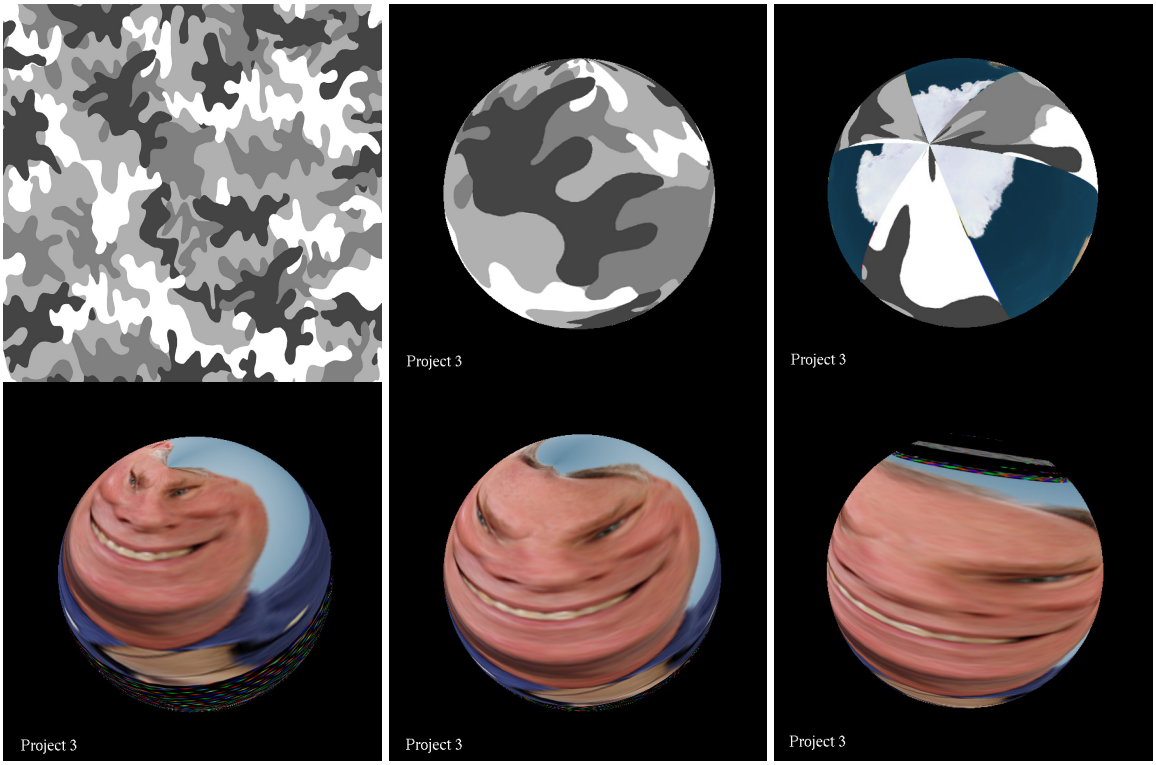
Texture mapping is one of the most fundamental tools in game and movie creators hand for adding an extra pinch of realism to their way of story telling. In this assignment we explored this feature using a simple program.

1 REQUIREMENTS

The following requirements were set for this assignment:

1) Correctly draw the blob-ish object
2) Correctly draw the normal-texture object
3) Correctly draw the distorted-texture object
4) Extra Credit

2 SOLUTION



Link to Video: Main assignment and extra credit

2.1 Setup

For this assignment we used the provided functions to Draw the circle and read in the texture. These functions were defined in two provided files:

- sphere.cpp
- bmptotexture.cpp

These two files have two specific functions:

```
void MjbSphere( float radius, int slices, int stacks )
 // and
unsigned char *BmpToTexture( char *filename, int *width, int *height )
```

2.2 Extra Credit:

There are two ways of doing this:

- We can see BmpToTexture is just an array of pointers and it allows us to combine textures by concatenating these two arrays.
- We can draw the parts of the sphere with one object, then draw arrest of the sphere and assign a different texture.

The fact that the texture is just an array of characters presents a unique opportunity. This allows us to combine these two textures in many ways in order to come up with our desired texture.