TP5: Land digital Model

Use config of previous practice.

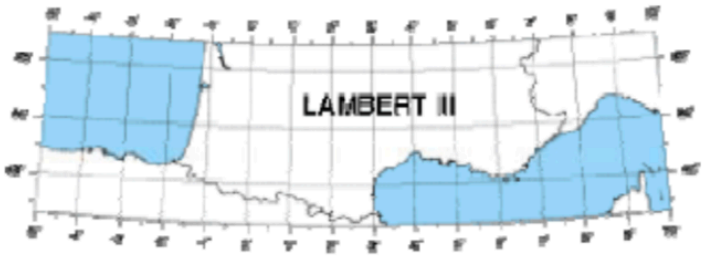
Write a class Terrain that will allow the creation and visualization of a 3D terrain made up of regular triangles. You have the declarations fo this class in the downloaded TP5 source code.

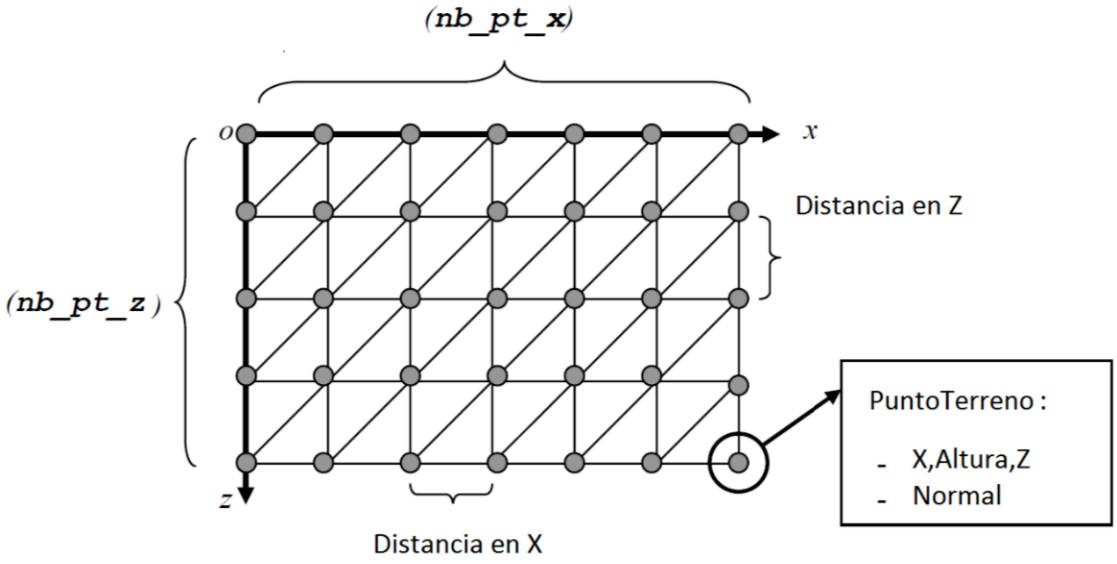
1. Creation

Fill up the method load(char *filename) of the class terrain. Fill up the table “lista_puntos”. On the MNT file the terrain is discretized with a point for every 50 meters.

```
MNT  1.0  dep_13 metre  0.01  790000.00(1)  165000.00(2)  50.00(3)  -50.00(4)  101(5)
101(6)  metre  1
```

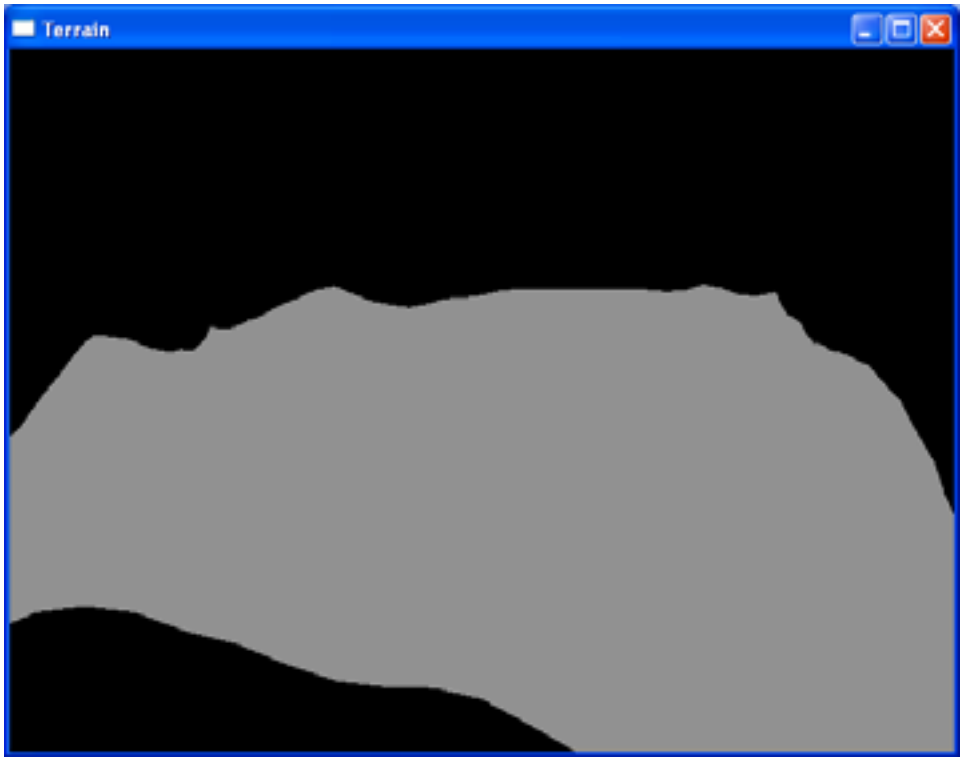
(1) coordenada x en Lambert III de la esquina noroeste
(2) coordenada y en Lambert III de la esquina noroeste
(3) distancia entre dos puntos segun X
(4) distancia entre dos puntos segun Z
(5) Cantidad de puntos en x
(6) Cantidad de puntos en z





2. Visualization

Implement the method display(). For now it looks like this:



3. Texture

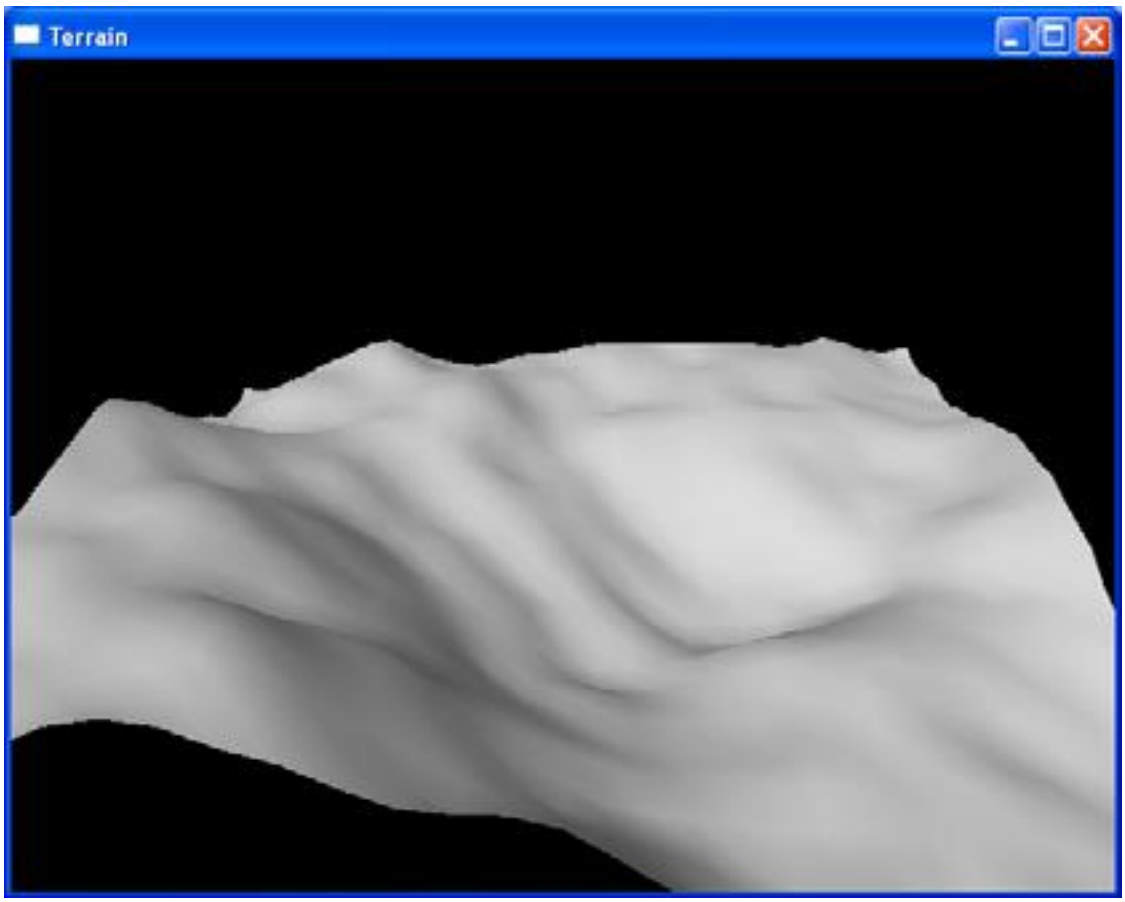
Use the class TextureManager to load fontvieille.tga.

Fill method computeTexCoord() to compute the texture coords.

Modify display() method to so now uses the loaded texture.

4. Calculate normals.

The terrain is not correctly illuminated. We need to specify the normals for every triangle but we want a smooth surface so instead specify a normal for every vertex.


Terrain