

Data visualisation

Assignment 4.2.a

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d-stream

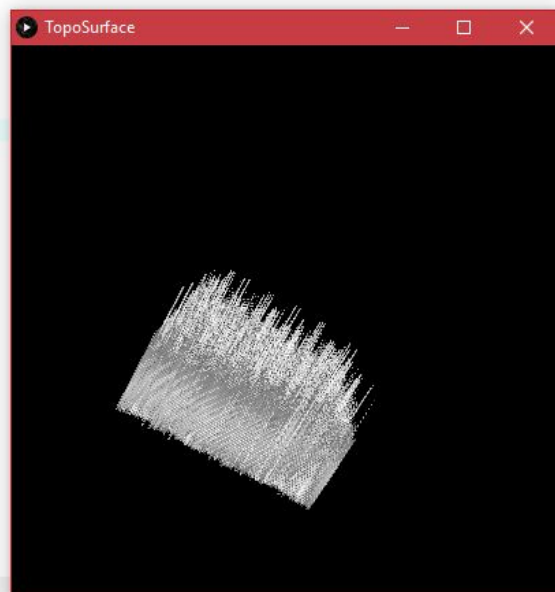
1.a) The data intends to show the topographical view of colorado. It basically shows the elevation at different parts of colorado. We can visualise the elevation by changing angles and viewing it from different angles. This is the elevation map of colorado.

```
void setup() {
  size(400,400, P3D); // elevation data is 400 by 400
  shiftX = width/2; // center the initial translation
  shiftY = height/2;
  angleX = 90;
  angleY = 90;
  angleZ = 90;
  camera_distance = 1000;

  // open a file and read its binary data
  byte b[] = loadBytes("image.bin");

  // skip 268 byte header and convert bytes to ints
  for(int i = 0; i < 400; i++)
    for(int j = 0; j < 400; j++)
      distances[i][j] = b[268 + i*400 + j] & 0xff;
}

void draw() {
  background(0);
  lights();
  // set camera to look at middle of data
  camera(200, 200, camera_distance,
        200, 200, 0,
        0.0, 1.0, 0.0);
  // interpret left mouse clicks as translates
  if(mousePressed && mouseButton == LEFT) {
    shiftX = mouseX - width/2;
  }
}
```



I changed the data set to a binary file image.bin which had the data of rainfall around dublin. I also changed the distance of camera so that visualisation is clearly seen. I changed the angles x, y and z to 90 from 0.