calculateBoundingBox()

Calculates the position and size of the smallest box that contains the geometry.

A bounding box is the smallest rectangular prism that contains the entire geometry. It's defined by the box's minimum and maximum coordinates along each axis, as well as the size (length) and offset (center).

Calling `myGeometry.calculateBoundingBox()` returns an object with four properties that describe the bounding box:

```
// Get myGeometry's bounding box.
let bbox = myGeometry.calculateBoundingBox();

// Print the bounding box to the console.
console.log(bbox);

// {
//  // The minimum coordinate along each axis.
//  min: { x: -1, y: -2, z: -3 },
//
//  // The maximum coordinate along each axis.
//  max: { x: 1, y: 2, z: 3},
//
//  // The size (length) along each axis.
//  size: { x: 2, y: 4, z: 6},
//
//  // The offset (center) along each axis.
//  offset: { x: 0, y: 0, z: 0}
// }
```

Examples

```
// Click and drag the mouse to view the scene from differe
angles.

let particles;

function setup() {
  createCanvas(100, 100, WEBGL);

  // Create a new p5.Geometry object with random spheres.
  particles = buildGeometry(createParticles);

  describe('Ten white spheres placed randomly against a gray
background. A box encloses the spheres.');
}

function draw() {
  background(50);

  // Enable orbiting with the mouse.
  orbitControl();

  // Turn on the lights.
  lights();

  // Style the particles.
  noStroke();
  fill(255);

  // Draw the particles.
  model(particles);

  // Calculate the bounding box.
  let bbox = particles.calculateBoundingBox();
```

Returns

Object: bounding box of the geometry.

This page is generated from the comments in src/webgl/p5.Geometry.js . Please feel free to edit it and submit a pull request!

Related References

calculateBoundingBox
Calculates the position and size of the smallest box that contains the geometry.

clearColors
Removes the geometry's internal colors.

computeFaces
Computes the geometry's faces using its vertices.

computeNormals
Calculates the normal vector for each vertex on the geometry.