CSE 167 (WI 2025) Exercise 1.1 Andrew Onozuka A16760043 1/17/2025

The VertexBuffer contains the 2D coordinates of the vertices. We are given:

Top left ear: (-0.625, 0.75)
Left inner ear: (-0.25, 0.25)
Right inner ear: (0.25, 0.25)
Top right ear: (0.625, 0.75)

Bottom left: (-0.625, -0.625)Bottom right: (0.625, -0.625)

VertexBuffer = (-0.625, 0.75, -0.25, 0.25, 0.25, 0.25, 0.625, 0.75, -0.625, -0.625, 0.625, -0.625)

Triangles are the simplest polygon for rendering, and OpenGL uses triangles as the fundamental unit for rendering. We get triangles 1-4 by breaking it down into triangles by grouping three vertices at a time.

1. Triangle 1: (0, 1, 4)

Connects Top left ear $(0) \rightarrow$ Left inner ear $(1) \rightarrow$ Bottom left (4).

2. Triangle 2: (1, 2, 4)

Connects Left inner ear $(1) \rightarrow \text{Right inner ear } (2) \rightarrow \text{Bottom left } (4)$.

3. Triangle 3: (2, 5, 4)

Connects Right inner ear $(2) \rightarrow Bottom right (5) \rightarrow Bottom left (4)$.

4. Triangle 4: (2, 3, 5)

Connects Right inner ear $(2) \rightarrow \text{Top right ear } (3) \rightarrow \text{Bottom right } (5).$

IndexBuffer = (0, 1, 4, 1, 2, 4, 2, 5, 4, 2, 3, 5)

