**Design Document**

**IMAGE REFERENCES**

bar\_side.jpg

<https://www.crystalgraphicsimages.com/photo/old-wood-texture_cg1p5065645c_th.jpg>

bottles.jpg

<http://bgfons.com/uploads/rainbow/rainbow_texture659.jpg>

brick\_wall.jpg

<https://www.poliigon.com/texture/bricks-01#top_slider>

ceiling.jpg

<https://www.poliigon.com/texture/plaster-17#top_slider>

light\_panel.png

<https://t6.rbxcdn.com/997bd795abeceee47363c78200a553df>

table\_top.jpg

<https://www.poliigon.com/texture/wood-planks-worn-33#top_slider>

target.png

<http://png.clipart-library.com/images4/1/archery-vector-board-4.png>

wood\_floor.jpg

<https://www.poliigon.com/texture/wood-flooring-044#top_slider>

**OBJECTS**

Plane

[image]

|  |  |  |  |
| --- | --- | --- | --- |
| **Vertex** | **x** | **y** | **z** |
| v1 | -0.5 | 0 | -0.5 |
| v2 | 0.5 | 0 | 0.5 |
| v3 | 0.5 | 0 | 0.5 |
| v4 | -0.5 | 0 | 0.5 |

|  |  |
| --- | --- |
| **Face** | **Vertices** |
| Near Face | v4, v3, v2, v1 |

Dart Fin

[image]

|  |  |  |  |
| --- | --- | --- | --- |
| **Vertex** | **x** | **y** | **z** |
| v1 | 0.01 | 0 | 0.33 |
| v2 | 0.01 | 0.15 | 0.3 |
| v3 | 0.01 | 0.15 | -0.3 |
| v4 | 0.01 | 0 | -0.66 |
| v5 | -0.01 | 0 | 0.33 |
| v6 | -0.01 | 0.15 | 0.3 |
| v7 | -0.01 | 0.15 | -0.3 |
| v8 | -0.01 | 0 | -0.66 |

|  |  |
| --- | --- |
| **Face** | **Vertices** |
| Near face | v6, v5, v1, v2 |
| Left face | v7, v8, v5, v6 |
| Right face | v2, v1, v4, v3 |
| Top face | v6, v2, v3, v7 |
| Bottom face | v3, v4, v1, v5 |
| Back face | v3, v4, v8, v7 |

Dart Board

[image]

|  |  |  |  |
| --- | --- | --- | --- |
| **Vertex** | **x** | **y** | **z** |
| v1 | -2.5 | 2.5 | 0.1 |
| v2 | 2.5 | 2.5 | 0.1 |
| v3 | 2.5 | -2.5 | 0.1 |
| v4 | -2.5 | -2.5 | 0.1 |
| v5 | -2.5 | 2.5 | -0.1 |
| v6 | 2.5 | 2.5 | -0.1 |
| v7 | 2.5 | -2.5 | -0.1 |
| v8 | -2.5 | -2.5 | -0.1 |

|  |  |
| --- | --- |
| **Face** | **Vertices** |
| Near face | v4, v3, v2, v1 |
| Left face | v1, v5, v8, v4 |
| Right face | v2, v3, v7, v6 |
| Top face | v1, v2, v6, v5 |
| Bottom face | v3, v4, v7, v8 |
| Back face | v8, v7, v6, v5 |

Table Top

[image]

|  |  |  |  |
| --- | --- | --- | --- |
| **Vertex** | **x** | **y** | **z** |
| v1 | -2 | 0.2 | 4 |
| v2 | 2 | 0.2 | 4 |
| v3 | -2 | -0.2 | 4 |
| v4 | 2 | -0.2 | 4 |
| v5 | -2 | 0.2 | -4 |
| v6 | 2 | 0.2 | -4 |
| v7 | -2 | -0.2 | -4 |
| v8 | 2 | -0.2 | -4 |

|  |  |
| --- | --- |
| **Face** | **Vertices** |
| Near face | v3, v4, v2, v1 |
| Left face | v1, v5, v7, v3 |
| Right face | v2, v4, v8, v6 |
| Top face | v1, v2, v6, v5 |
| Bottom face | v4, v3, v7, v8 |
| Back face | v8, v7, v5, v6 |

Table Leg

[image]

|  |  |  |  |
| --- | --- | --- | --- |
| **Vertex** | **x** | **y** | **z** |
| v1 | -0.1 | 1 | 0.1 |
| v2 | 0.1 | 1 | 0.1 |
| v3 | -0.1 | -1 | 0.1 |
| v4 | 0.1 | -1 | 0.1 |
| v5 | -0.1 | 1 | -0.1 |
| v6 | 0.1 | 1 | -0.1 |
| v7 | -0.1 | -1 | -0.1 |
| v8 | 0.1 | -1 | -0.1 |

|  |  |
| --- | --- |
| **Face** | **Vertices** |
| Near face | v3, v4, v2, v1 |
| Left face | v1, v5, v7, v3 |
| Right face | v2, v4, v8, v6 |
| Top face | v1, v2, v6, v5 |
| Bottom face | v4, v3, v7, v8 |
| Back face | v8, v7, v5, v6 |

Bar

[image]

|  |  |  |  |
| --- | --- | --- | --- |
| **Vertex** | **x** | **y** | **z** |
| v1 | -25 | 1.5 | 1 |
| v2 | 25 | 1.5 | 1 |
| v3 | -25 | -1.5 | 1 |
| v4 | 25 | -1.5 | 1 |
| v5 | -25 | 1.5 | -1 |
| v6 | 25 | 1.5 | -1 |
| v7 | -25 | -1.5 | -1 |
| v8 | 25 | -1.5 | -1 |

|  |  |
| --- | --- |
| **Face** | **Vertices** |
| Near face | v3, v4, v2, v1 |
| Left face | v1, v5, v7, v3 |
| Right face | v2, v4, v8, v6 |
| Top face | v1, v2, v6, v5 |
| Bottom face | v4, v3, v7, v8 |
| Back face | v8, v7, v5, v6 |

Shelf

[image]

|  |  |
| --- | --- |
| **Face** | **Vertices** |
| Near face | v3, v4, v2, v1 |
| Left face | v1, v5, v7, v3 |
| Right face | v2, v4, v8, v6 |
| Top face | v1, v2, v6, v5 |
| Bottom face | v4, v3, v7, v8 |
| Back face | v8, v7, v5, v6 |

|  |  |  |  |
| --- | --- | --- | --- |
| **Vertex** | **x** | **y** | **z** |
| v1 | -10 | 1.5 | 1 |
| v2 | 10 | 1.5 | 1 |
| v3 | -10 | -1.5 | 1 |
| v4 | 10 | -1.5 | 1 |
| v5 | -10 | 1.5 | -1 |
| v6 | 10 | 1.5 | -1 |
| v7 | -10 | -1.5 | -1 |
| v8 | 10 | -1.5 | -1 |

Light

[image]

|  |  |  |  |
| --- | --- | --- | --- |
| **Vertex** | **x** | **y** | **z** |
| v1 | -0.5 | 0.1 | 0.5 |
| v2 | 0.5 | 0.1 | 0.5 |
| v3 | -0.5 | -0.1 | 0.5 |
| v4 | 0.5 | -0.1 | 0.5 |
| v5 | -0.5 | 0.1 | -0.5 |
| v6 | 0.5 | 0.1 | -0.5 |
| v7 | -0.5 | -0.1 | -0.5 |
| v8 | 0.5 | -0.1 | -0.5 |

|  |  |
| --- | --- |
| **Face** | **Vertices** |
| Near face | v3, v4, v2, v1 |
| Left face | v1, v5, v7, v3 |
| Right face | v2, v4, v8, v6 |
| Top face | v1, v2, v6, v5 |
| Bottom face | v4, v3, v7, v8 |
| Back face | v8, v7, v5, v6 |