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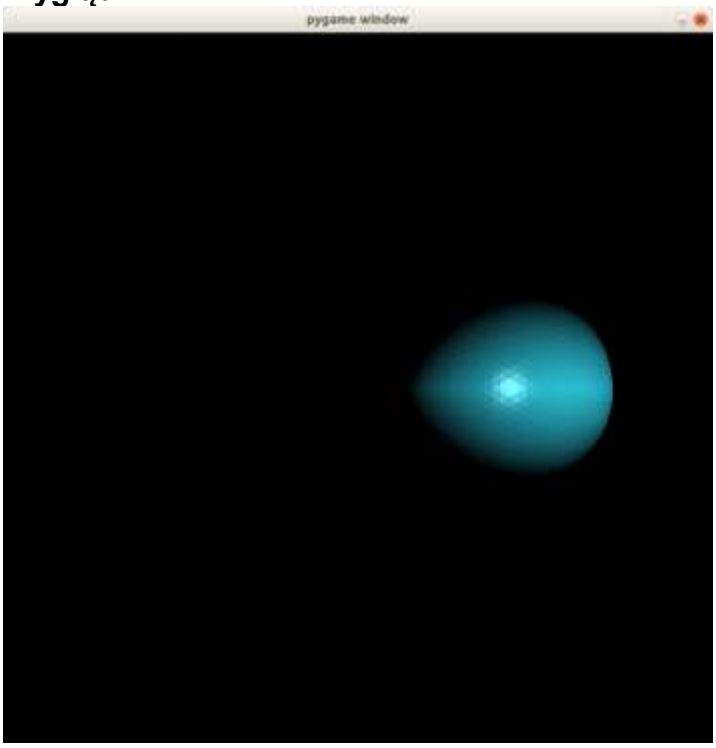
Grafika Komputerowa

Oświetlenie – konspekt

Obsługa

- Q, A = translacja x
- W, S = translacja y
- E, D = translacja z

Wygląd



Matematyka

```
def compute_colour(self, triangle):

    triangle_center = preprocessing.normalize(self.get_triangle_center(triangle).reshape(1, 1)).reshape( 1,1)
    triangle_normal = preprocessing.normalize(self.get_triangle_normal(triangle, triangle_center).reshape(1, 1))
    light_dir = preprocessing.normalize(self.get_light_dir(triangle_center, self.light_source))

    diffuse = np.array(self.light_source.albedo) * self.light_source.intensity * max(0, np.dot(triangle_normal, -1*light_dir))

    reflection = self.reflect(light_dir, triangle_normal);
    power = 0
    try:
        power = math.pow(np.maximum(0, np.dot(reflection, -1*triangle_center)[0]), self.light_source.n)
    except OverflowError:
        power = sys.maxsize
    specular = self.light_source.intensity * power
    colour = diffuse * self.light_source.kd + specular * self.light_source.ks
    return colour.reshape( 1,1)
```