

# Lighting in Game

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❖

```
typedef enum _D3DLIGHTTYPE {
    D3DLIGHT_POINT = 1,
    D3DLIGHT_SPOT = 2,
    D3DLIGHT_DIRECTIONAL = 3,
    D3DLIGHT_FORCE_DWORD = 0x7fffffff
} D3DLIGHTTYPE;
```

❖

(diffuse color, specular color)  
(ambience color)

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- ❖ Point Light
- ❖ Omnidirectional Light

- ❖ :

- ❖



# Spot Lights

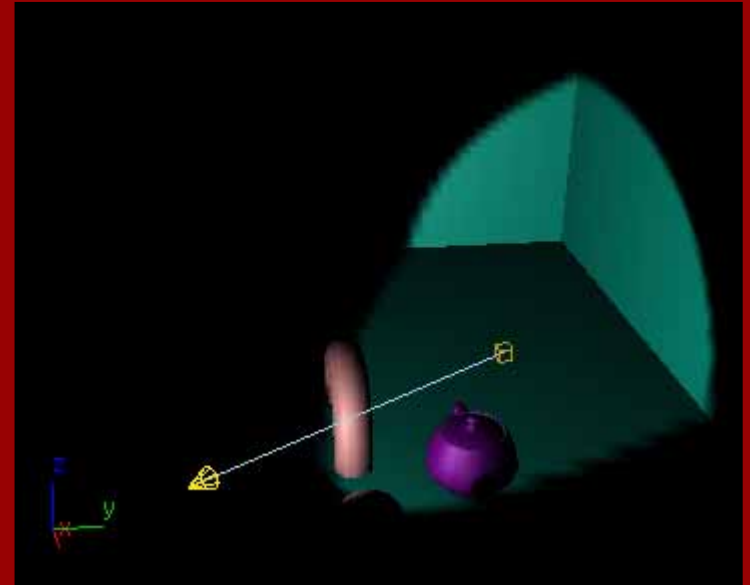
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- ❖ Spot Lights

- ❖ :

- , ...

- ❖



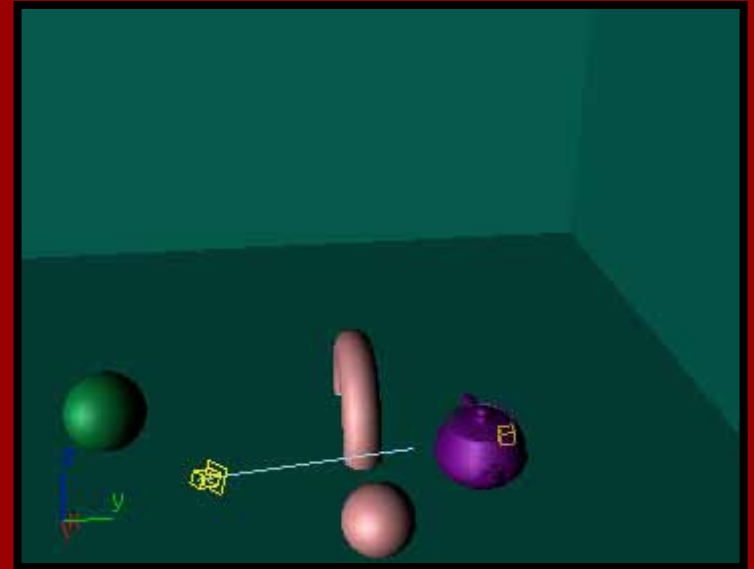
# Directional Lights

❖ Directional Lights

❖ :

❖ 가 가

❖ :



# Ambience light

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Ambient light

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# Area Light, Line Light



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❖ = Ambient Light + Diffuse Light +  
Specular Light (+ Emissive Light)

❖ = Diffuse + Specular + Glossy



# Diffuse Light Ambient Light





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·  
Specular  
Glossy



# Specular

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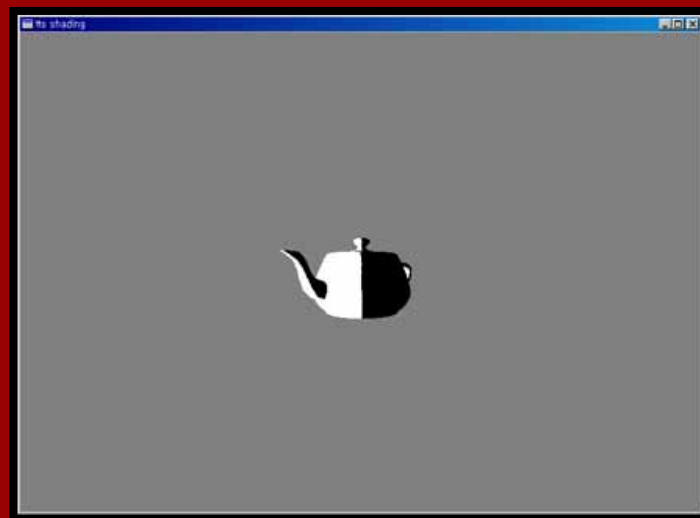


(Reflection) :

source가



uv





가 :  
가



가 :  
가 ,

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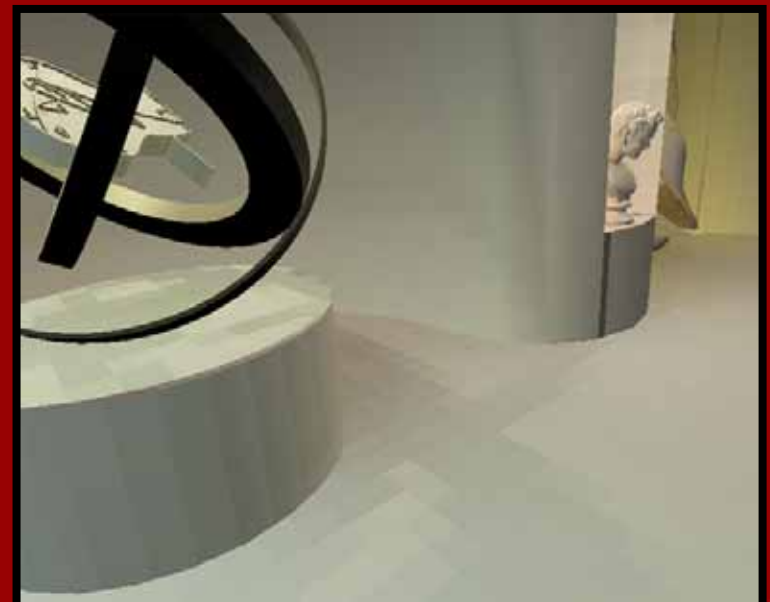
## ❖ Diffuse

(Modulate2x, Modulate4x)

## ❖ Specular



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- ❖ Jeremy Birn, Digital Lighting & Rendering, New riders,
  - ❖ Alan Watt, 3d computer graphics 3d edition, Addison-wesley
  - ❖ Erin Lengyel, Mathematics for 3d game programming & computer graphics, Charles river media, chapter 6
  - ❖ Issac Victor Kerlow, The art of 3d computer animation and imaging, wiley, chapter 8