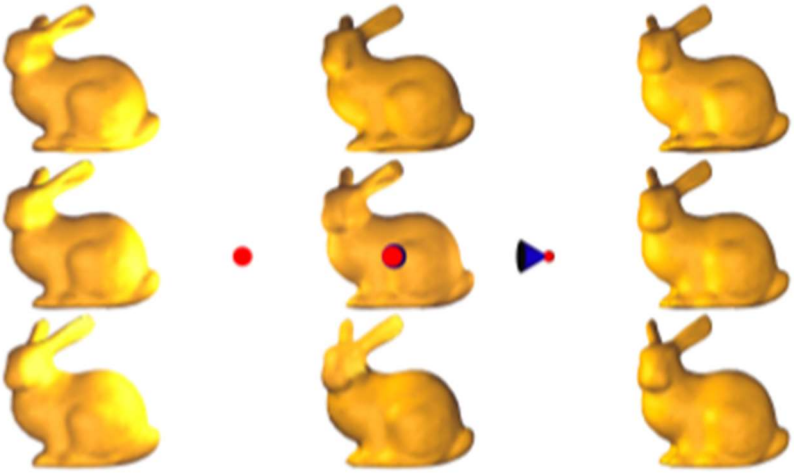
Computer Graphics



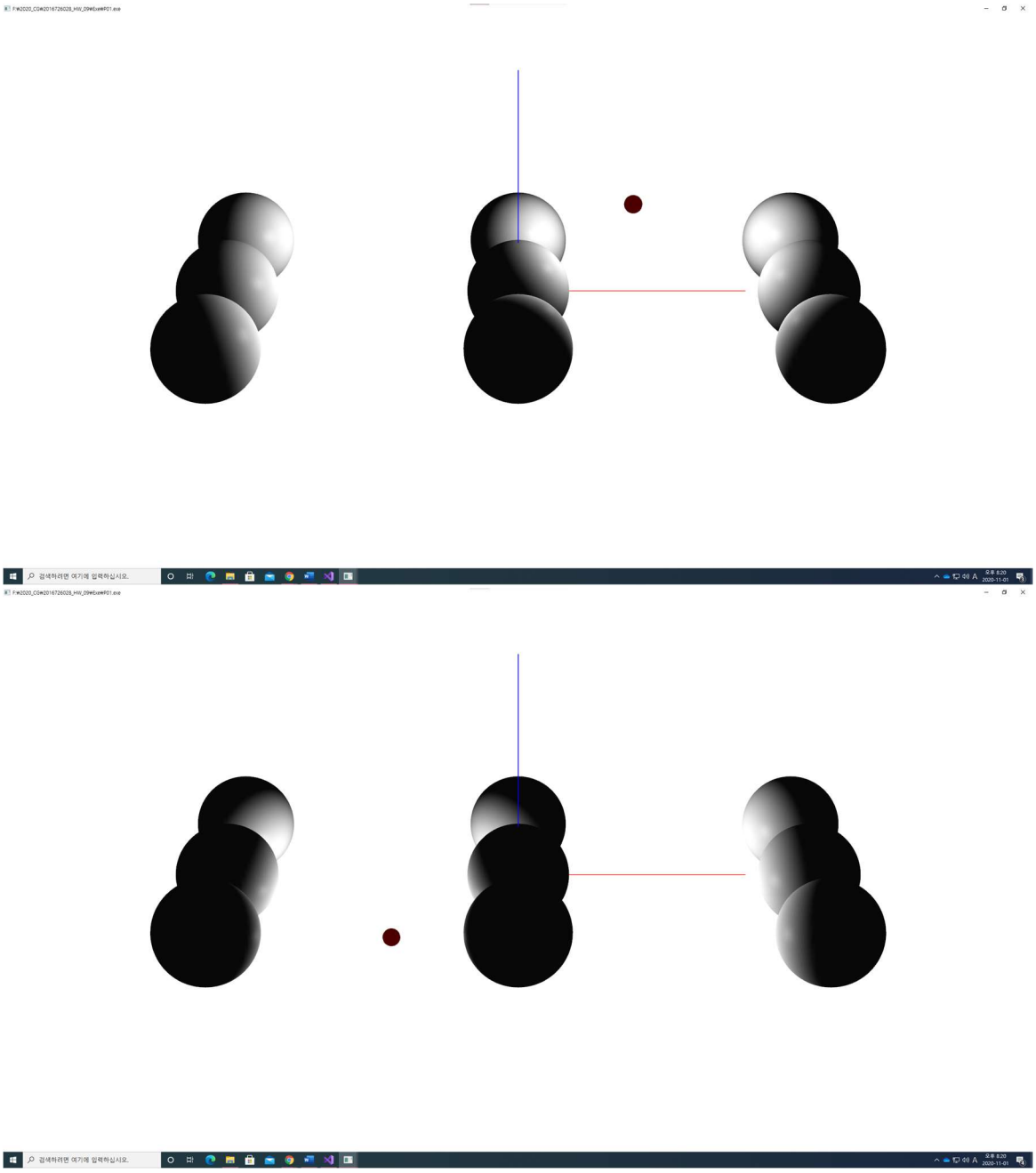
Lights and Materials

이민재 | Computer Graphics [심화전공실습 1] | 2020/11/01

	P01	P02	P03	P04	E01	Total
SCORE	1	1	1	1	1	5

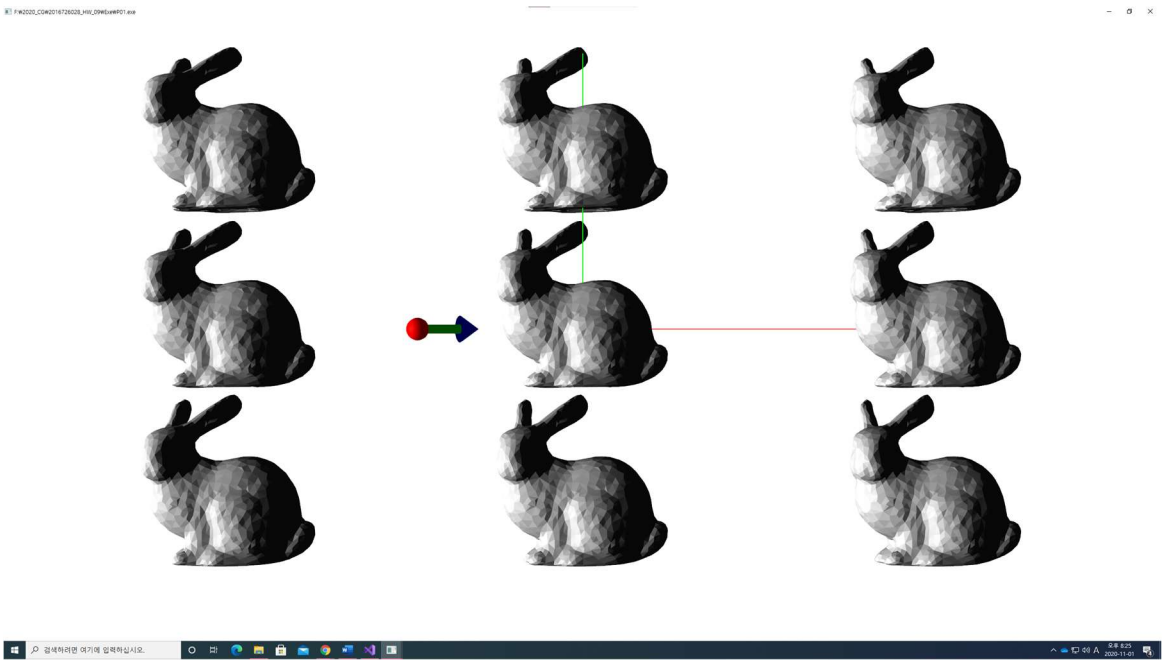
P01 (A point light rotating around 3x3 spheres)

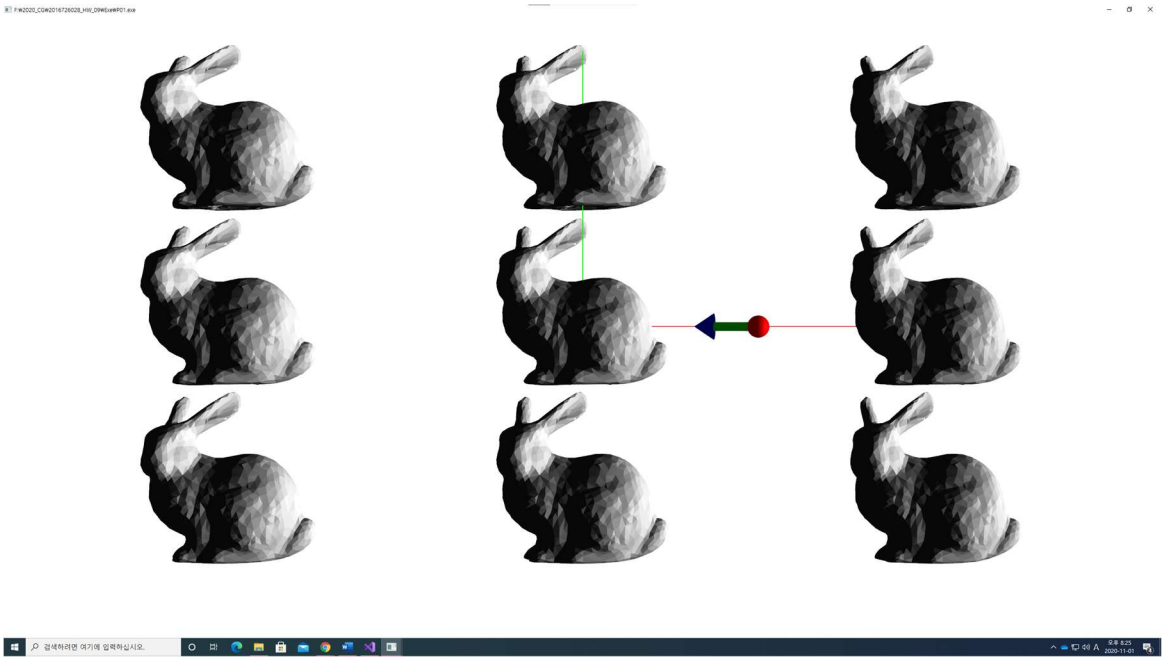
<SNAPSHOT>



P02 (A distant light rotating around 3x3 flat bunnies)

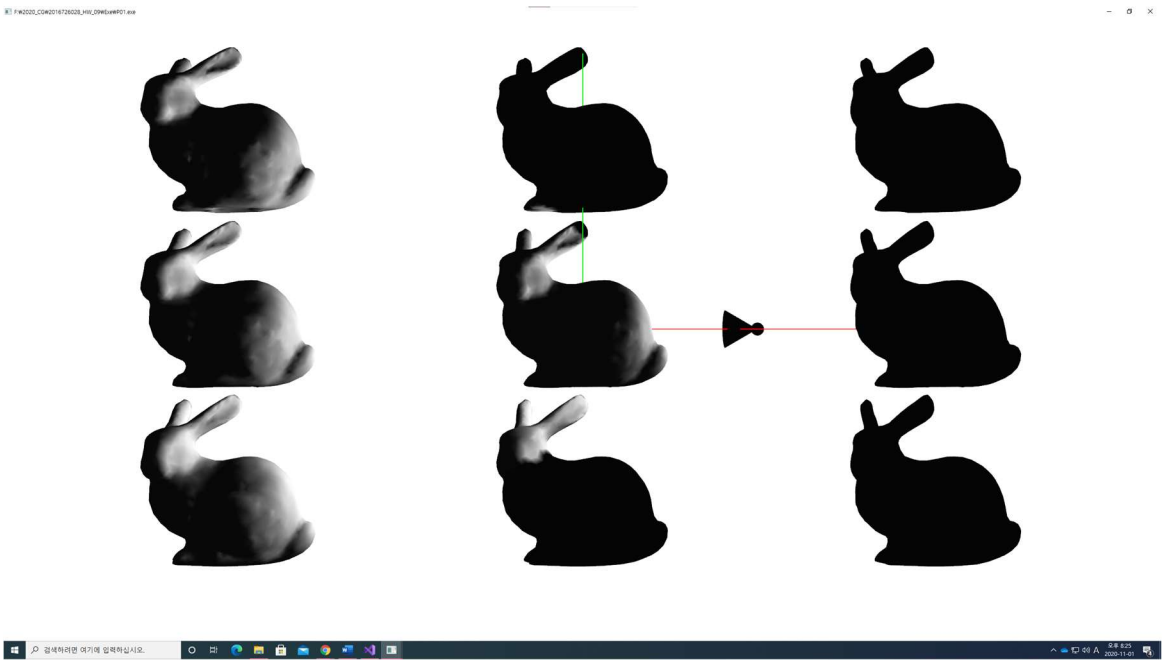
<SNAPSHOT>

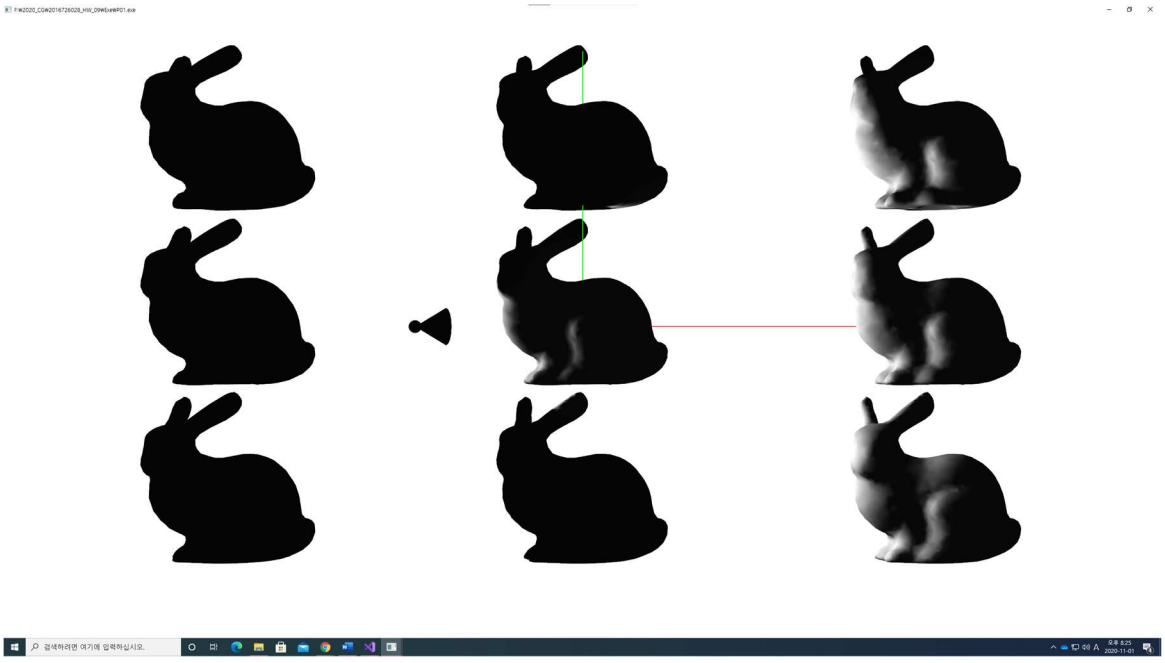




P03 (A spot light rotating around 3x3 smooth bunnies)

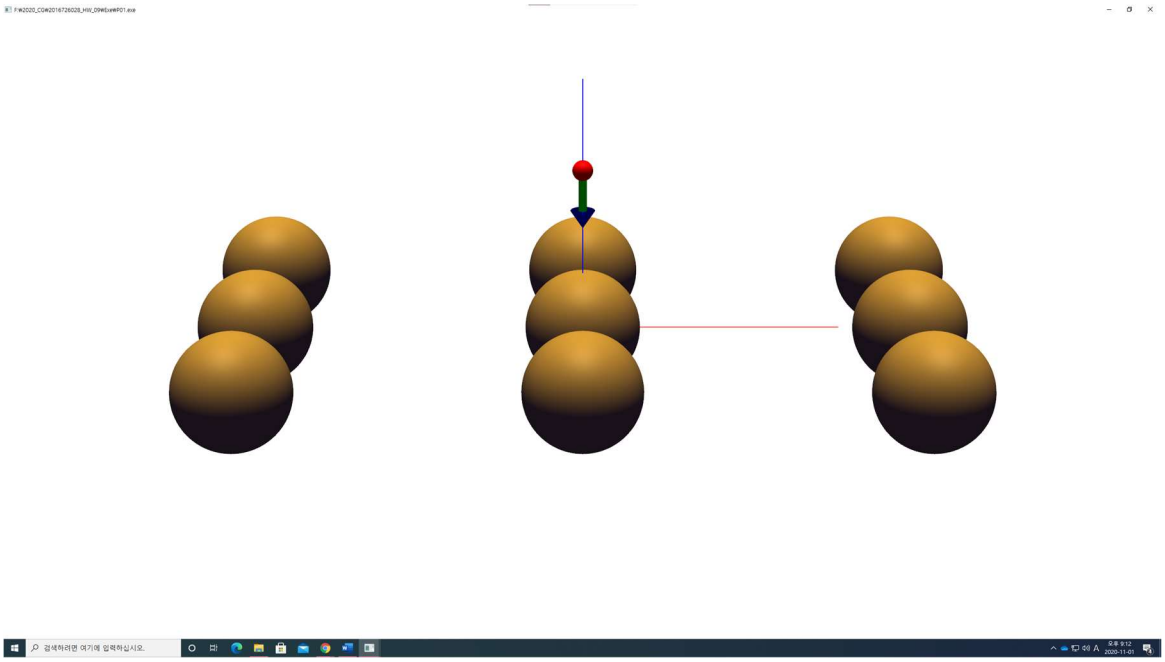
<SNAPSHOT>

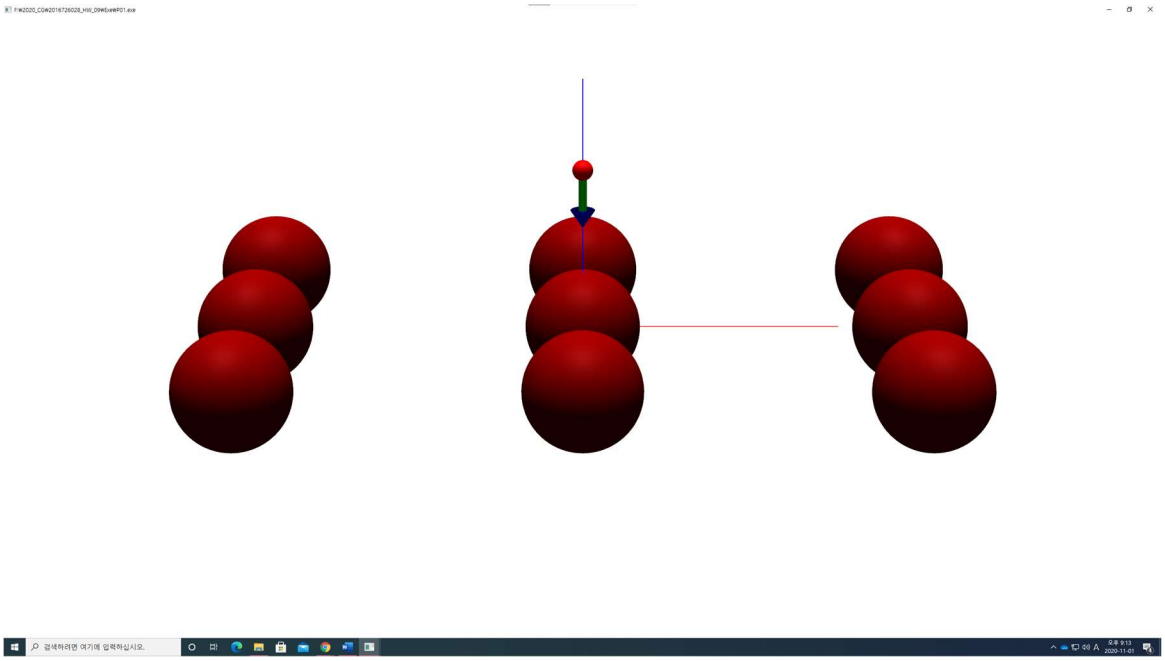


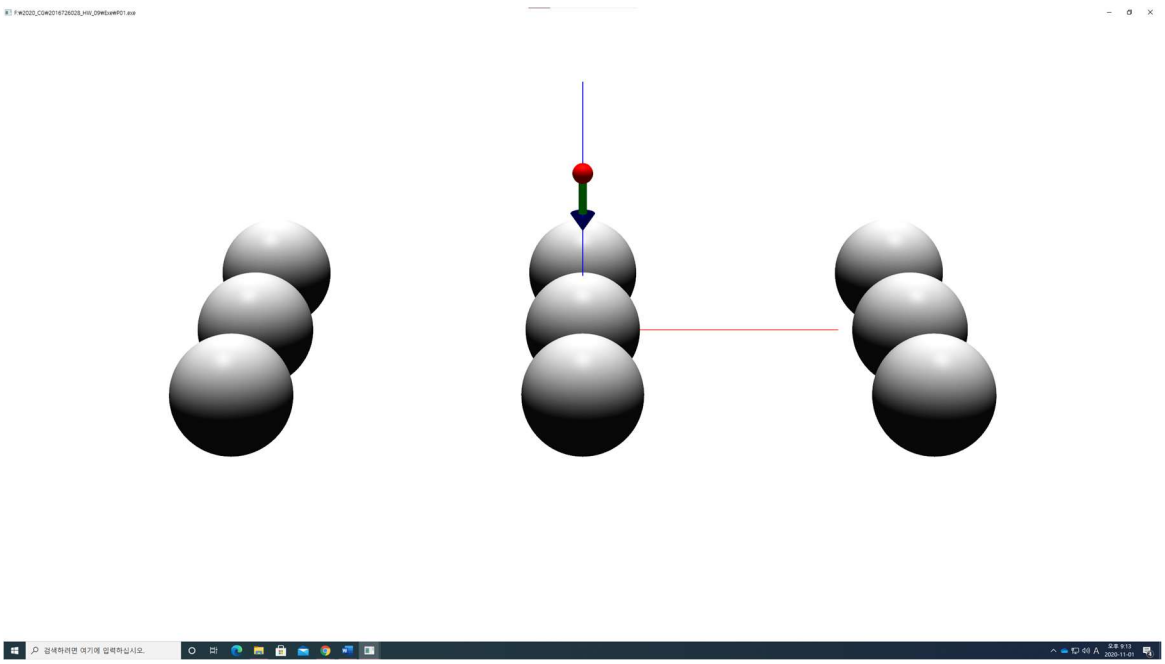


P04 (3 predefined material parameters)

<SNAPSHOT>



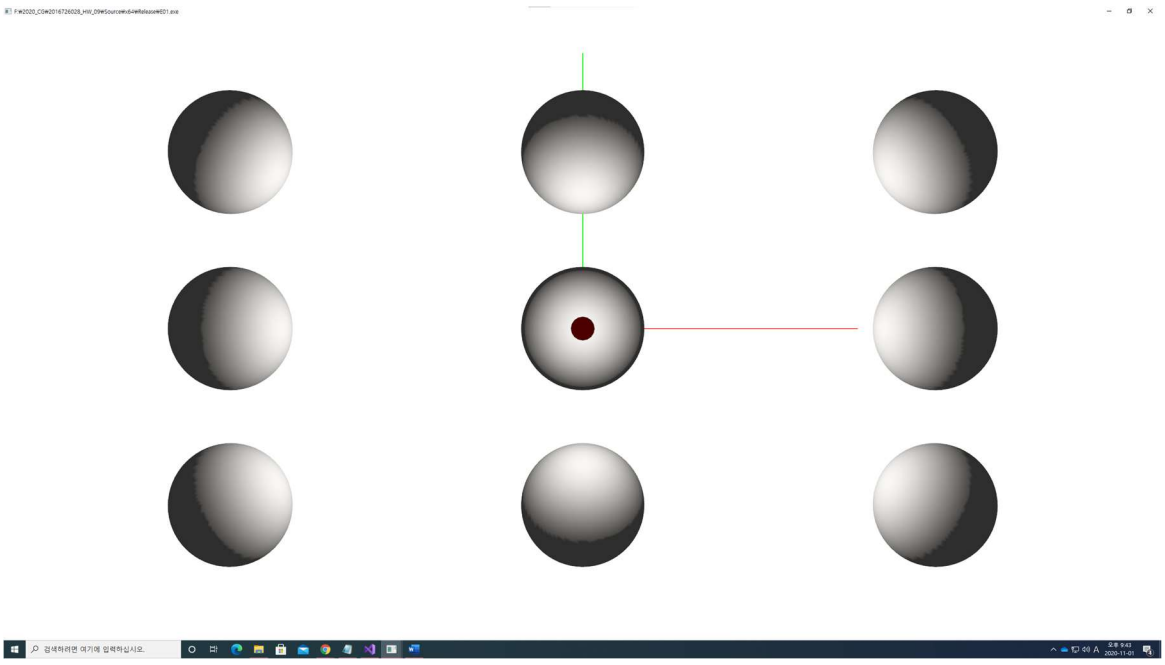




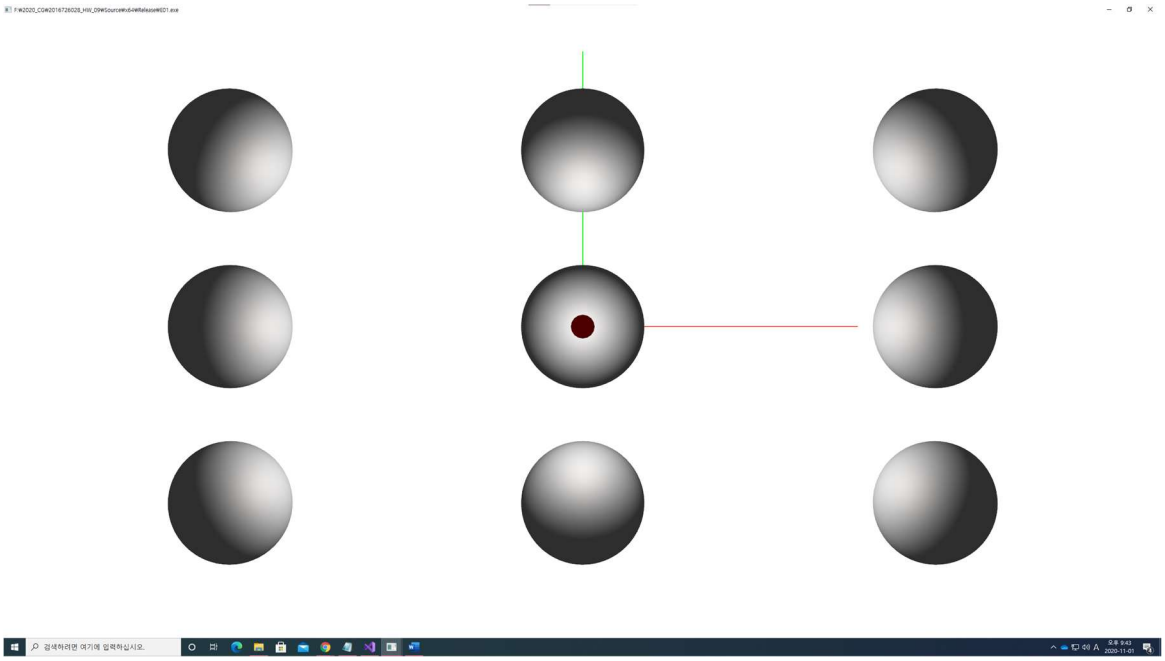
E01 (Adjust the shininess coefficient of a point light on 3x3 spheres using the arrow keys)

<SNAPSHOT>

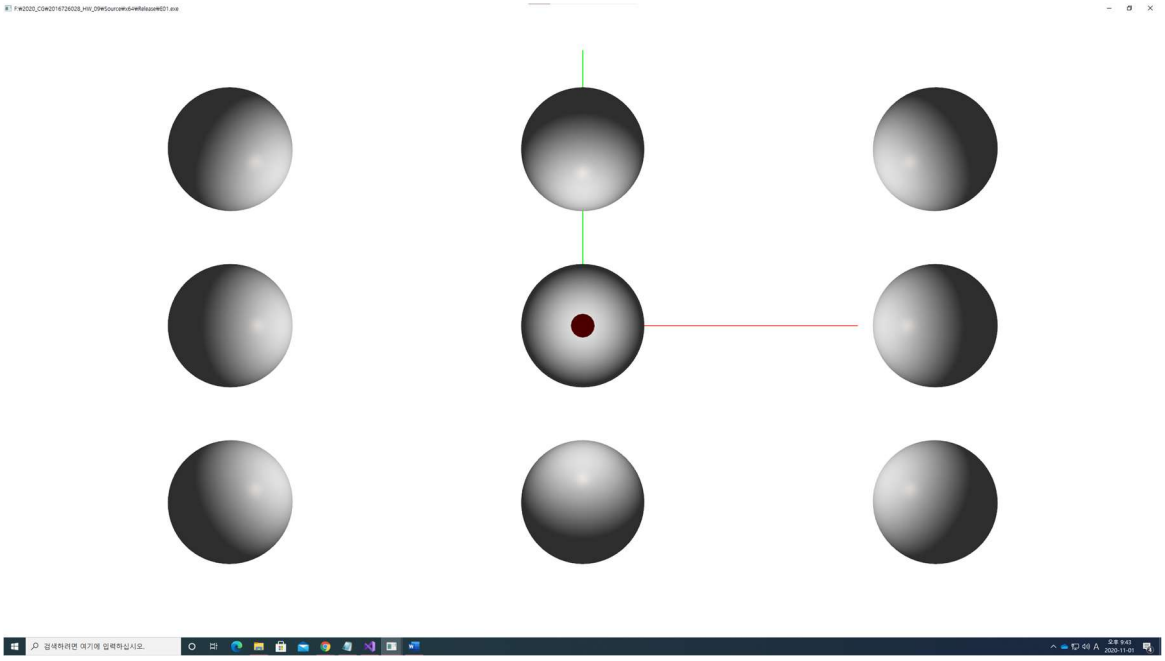
Shininess = 0



Shininess = 10



Shininess = 120



<EXPLANATION>

Shininess coefficient 를 조절하기 위하여 키보드 좌, 우를 변수 shininessValue 값에 10 만큼 더하고 빼는 코드를 할당하였다.

```
case GLFW_KEY_RIGHT: if(shininessValue<120) shininessValue += period2; break;
case GLFW_KEY_LEFT:    if(shininessValue>0)shininessValue -= period2; break;
```

그 후, 렌더링에 변화를 주기 위해 void render 함수 구현부에 glMaterialf()의 인자로써 GL_SHININESS 의 값을 shininessValue 로 변화시키는 코드를 구현하였다.

```
GLfloat mat_shininess = shininessValue;
…
                glMaterialf(GL_FRONT_AND_BACK, GL_SHININESS, mat_shininess);
```

즉 키보드 입력값에 따라 0 에서 120 까지의 mat_shininess 변화량을 가지며, 이에 따른 출력결과가 상단의 스냅샷과 같다.