**SPRAWOZDANIE**

Zajęcia: Grafika komputerowa

Prowadzący: prof. dr hab. Vasyl Martsenyuk

**Laboratorium 9**

**Data 29.05.2022**

**Temat: Konstruowanie obiektów z użyciem Three.js**

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Informatyka I stopień,

stacjonarne,

4 semestr,

Gr. 2a

# Polecenie:

Celem jest konstruowanie modelu figury szachowej zgodnie z wariantem zadania używając three.js w oparciu na omówione na zajęcie metody konstruowania obiektów.

# Wprowadzane dane:

function createWorld() {  
  
 renderer.setClearColor("black"); // Background color for scene.  
 scene = new THREE.Scene();  
  
 // ------------------- Make a camera with viewpoint light ----------------------  
  
 camera = new THREE.PerspectiveCamera(30, canvas.width/canvas.height, 0.1, 100);  
 camera.position.z = 60;  
 var light; // A light shining from the direction of the camera; moves with the camera.  
 light = new THREE.DirectionalLight(0x404040,3);  
 light.position.set(5,5,5);  
 camera.add(light);  
 scene.add(camera);  
  
 //------------------- Create the scene's visible objects ----------------------  
  
 var base1;  
 base1 = new THREE.Mesh(  
 new THREE.CylinderGeometry(6.9,7,2,128,1),  
 new THREE.MeshPhongMaterial(  
 {  
 color:0xffffff,  
 specular: 0x000000,  
 shininess: 16,  
 shading: THREE.FlatShading  
 }));  
  
 base1.position.x=0;  
 base1.position.z=0;  
 base1.position.y=-10;  
 scene.add(base1);  
  
 var base2;  
 base2 = new THREE.Mesh(  
 new THREE.CylinderGeometry(7.1,7.2,1,128,1),  
 new THREE.MeshPhongMaterial(  
 {  
 color:0xffffff,  
 specular: 0x000000,  
 shininess: 16,  
 shading: THREE.FlatShading  
 }));  
  
 base2.position.x=0;  
 base2.position.z=0;  
 base2.position.y=-11;  
 scene.add(base2);  
  
 var collar1;  
 collar1 = new THREE.Mesh(  
 new THREE.CylinderGeometry(4.5,4.5,1,128,1),  
 new THREE.MeshPhongMaterial(  
 {  
 color:0xffffff,  
 specular: 0x000000,  
 shininess: 16,  
 shading: THREE.FlatShading  
 }));  
  
 collar1.position.x=0;  
 collar1.position.z=0;  
 collar1.position.y=6;  
 scene.add(collar1);  
  
 var collar2;  
 collar2 = new THREE.Mesh(  
 new THREE.CylinderGeometry(6,4,2.5,128,1),  
 new THREE.MeshPhongMaterial(  
 {  
 color:0xffffff,  
 specular: 0x000000,  
 shininess: 16,  
 shading: THREE.FlatShading  
 }));  
  
 collar2.position.x=0;  
 collar2.position.z=0;  
 collar2.position.y=7;  
 scene.add(collar2);  
  
 var sphere;  
 sphere = new THREE.Mesh(  
 new THREE.CylinderGeometry(6,6,3,128,1),  
 new THREE.MeshPhongMaterial(  
 {  
 color:0xfffffff,  
 specular: 0x000000,  
 shininess: 16,  
 shading: THREE.FlatShading  
 }));  
  
 sphere.position.x=0;  
 sphere.position.z=0;  
 sphere.position.y=9.5;  
 scene.add(sphere);  
  
  
 //------------------------------------  
 var height=0.15;  
 var step=0.5;  
 var tempCore;  
 var i;  
 var prevRadius=6.7;  
 for(i=1;i<=100;i++)  
 {  
  
 tempCore = new THREE.Mesh(  
 new THREE.CylinderGeometry(prevRadius-(step/(i)),prevRadius,height,128,1),  
 new THREE.MeshPhongMaterial(  
 {  
 color:0xFFFFFF,  
 specular: 0x000000,  
 shininess: 16,  
 shading: THREE.FlatShading  
 }));  
  
 tempCore.position.x=0;  
 tempCore.position.z=0;  
 tempCore.position.y=-9+(i-1)\*(height);  
 scene.add(tempCore);  
 prevRadius= prevRadius-(step/i);  
 }  
  
 }

# Wykorzystane komendy:

[https://github.com/99lucky8/Grafika-komputerowa.git](https://github.com/Mieri013/GrafikaKomputerowa/tree/main/lab9)

# Wyniki działania

