**EXPERIMENT – 6**

1. **Add different shapes in sceneView.**

import UIKit

import ARKit

import SceneKit

class ViewController: UIViewController, ARSCNViewDelegate {

@IBOutlet var sceneView: ARSCNView!

let config = ARWorldTrackingConfiguration()

@IBAction func boxBtn(\_ sender: UIButton) {

let shape = SCNBox()

let node = SCNNode()

node.geometry = shape

node.geometry?.firstMaterial?.diffuse.contents = UIColor.orange

node.position = SCNVector3(0,0,-5)

let scene = SCNScene()

sceneView.scene = scene

scene.rootNode.addChildNode(node)

}

@IBAction func sphereBtn(\_ sender: UIButton) {

let shape = SCNSphere()

let node = SCNNode()

node.geometry = shape

node.geometry?.firstMaterial?.diffuse.contents = UIColor.orange

node.position = SCNVector3(0,0,-5)

let scene = SCNScene()

sceneView.scene = scene

scene.rootNode.addChildNode(node)

}

@IBAction func coneBtn(\_ sender: UIButton) {

let shape = SCNCone()

let node = SCNNode()

node.geometry = shape

node.geometry?.firstMaterial?.diffuse.contents = UIColor.orange

node.position = SCNVector3(0,0,-5)

let scene = SCNScene()

sceneView.scene = scene

scene.rootNode.addChildNode(node)

}

@IBAction func cylinderBtn(\_ sender: UIButton) {

let shape = SCNCylinder()

let node = SCNNode()

node.geometry = shape

node.geometry?.firstMaterial?.diffuse.contents = UIColor.orange

node.position = SCNVector3(0,0,-5)

let scene = SCNScene()

sceneView.scene = scene

scene.rootNode.addChildNode(node)

}

@IBAction func pyramidBtn(\_ sender: UIButton) {

let shape = SCNPyramid()

let node = SCNNode()

node.geometry = shape

node.geometry?.firstMaterial?.diffuse.contents = UIColor.orange

node.position = SCNVector3(0,0,-5)

let scene = SCNScene()

sceneView.scene = scene

scene.rootNode.addChildNode(node)

}

@IBAction func torusBtn(\_ sender: UIButton) {

let shape = SCNTorus()

let node = SCNNode()

node.geometry = shape

node.geometry?.firstMaterial?.diffuse.contents = UIColor.orange

node.position = SCNVector3(0,0,-5)

let scene = SCNScene()

sceneView.scene = scene

scene.rootNode.addChildNode(node)

}

@IBAction func tubeBtn(\_ sender: UIButton) {

let shape = SCNTube()

let node = SCNNode()

node.geometry = shape

node.geometry?.firstMaterial?.diffuse.contents = UIColor.orange

node.position = SCNVector3(0,0,-5)

let scene = SCNScene()

sceneView.scene = scene

scene.rootNode.addChildNode(node)

}

@IBAction func floorBtn(\_ sender: UIButton) {

let shape = SCNFloor()

let node = SCNNode()

node.geometry = shape

node.geometry?.firstMaterial?.diffuse.contents = UIColor.orange

node.position = SCNVector3(0,0,-5)

let scene = SCNScene()

sceneView.scene = scene

scene.rootNode.addChildNode(node)

}

@IBAction func resetBtn(\_ sender: UIButton) {

sceneView.session.pause()

sceneView.session.run(config, options: [.resetTracking])

}

override func viewDidLoad() {

super.viewDidLoad()

sceneView.delegate = self

sceneView.debugOptions = [ARSCNDebugOptions .showWorldOrigin, ARSCNDebugOptions .showFeaturePoints]

}

}