**EXPERIMENT – 5**

1. **Changes the positions of object using slider in sceneView.**

import UIKit

import SceneKit

import ARKit

class ViewController: UIViewController, ARSCNViewDelegate {

@IBOutlet var sceneView: ARSCNView!

@IBOutlet var Xslider: UISlider!

@IBOutlet var Yslider: UISlider!

@IBOutlet var Zslider: UISlider!

let configuration = ARWorldTrackingConfiguration()

override func viewDidLoad() {

super.viewDidLoad()

// Do any additional setup after loading the view, typically from a nib.

sceneView.delegate = self

sceneView.showsStatistics = true

sceneView.debugOptions = [ARSCNDebugOptions. showWorldOrigin]

}

override func viewWillAppear(\_ animated: Bool) {

super.viewWillAppear(animated)

sceneView.session.run(configuration)

}

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

showShape()

}

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

sceneView.session.pause()

sceneView.scene.rootNode.enumerateChildNodes { (node, \_) in

if node.name == "sphere" {

node.removeFromParentNode()

}

}

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

}

func showShape() {

let node = SCNNode()

node.geometry = SCNSphere(radius: 0.05)

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

node.position = SCNVector3(Xslider.value, Yslider.value,Zslider.value)

node.name = "sphere"

sceneView.scene.rootNode.addChildNode(node)

}

}