# Department of Computing

# CS361: Computer Graphics

# Class: BSCS

# Lab05: Object Transformation

**CLO2: Develop program to implement 3D Scenes**

# Date: 2h Oct, 2018

# Time: 9:00- 12:00

# Lab 5: Object Transformation

# Introduction

The **CanvasRenderingContext2D**.rotate() method of the Canvas 2D API adds a rotation to the transformation matrix. The angle argument represents a clockwise rotation angle and is expressed in radians.

**Objectives**

After performing this lab students should be able to:

Perform basic transformations.

**Tools/Software Requirement**

For testing HTML 5, CSS, JS

**References:**

<https://developer.mozilla.org/en-US/docs/Web/API/CanvasRenderingContext2D/rotate>

<https://github.com/toji/gl-matrix>

<http://learningwebgl.com/blog/?p=28>

**Lab Task**

Create a hexagon and a pentagon. Rotate them by an angle. The angle is controlled by a slider. You can implement dat.gui instead of implementing the slider in the HTML **[1].** Translate the pentagon by 0.5 and hexagon by -0.5 on x-axis.

You **must** pass the rotation and the translation matrix separately to the vertex shader for the task.

**Deliverable**

Upload your code with snap shots of the output.