

**School of Computer Science and Engineering**

Report on Lab 1: Visualisation using Polygons

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| **Course Module:** | CZ2003 Computer Graphics and Visualisation |
| **CZ2003 Lab Group:** | SSP5 |

Examine how the colour of the shape defined in diffuseColor field can be changed. Note that the color value must be real numbers between 0 and 1. See what happens if the color values are less than 0 or greater than 1.

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| **Shape** | **Notes** |
|  | diffuseColor 0 0 1  This means that red= 0, green=0, blue=1  diffuseColor 0 1 0  This means that red= 0, green=1, blue=0 |
|  | diffuseColor 1 0 1  This means that red= 1, green=0, blue=1 |
|  | diffuseColor 1 -1 1  This means that red= 1, green=-1, blue=1 |
|  | diffuseColor 1 0 9 #red=1, green=0, blue=9  diffuseColor 1 0 50 #red=1, green=0, blue=50  For the second picture:  I have set the red to 1 and blue to 9. The colour changed from magenta to purple.  For the last picture:  I have ser the red to 1 and blue to 50. The colour remains the same purple as the colour shown when I set blue to 50. |

Make a 2D regular hexagon and a 3d cube

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| **2D Regular Hexagon** | **Notes** |
| “Hexagon Exp.vrml” | I used 5 vertices to create this hexagon  Using Right Hand rule, it shows where the colour of the shape is displayed |

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| **3D Cube** | **Notes** |
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Breif report explaining what each file defines

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| **File** | **Notes** |
| “CoordinateAxes.wrl” | This file shows where coordinates X,Y and Z are placed in this application. |
| “CSGsolid.wrl” | This file shows a cube with rounded corners, with a small circle hole in the middle of the cube.  This can be attained by subtracting the cylinder from the cube |
| “curve.wrl” |  |
| “cylinder.wrl” | This file contains a cylindrical shape. |
| “FVRML.wrl” |  |
| “morphing.wrl” | * Ana nimation of it morphing from shape 1 to shape 2   This file contains an animation of it mo |
| “polygons.wrl” |  |
| “solid.wrl” |  |
| “sphere.wrl” |  |
| “surface.wrl” |  |