SSGMCE/FRM/32-B

SHRI SANT GAJANAN MAHARAJ COLLEGE OF ENGG. LABORATORY MANUAL

PRACTICAL EXPERIMENT INSTRUCTION SHEET

EXPERIMENT TITLE:
Write a program in VRML for positioning of shapes.

EXPERIMENT NO.: SSGMCE/WI/IT/01/8IT06/01 ISSUE NO.: 00 ISSUE DATE: 14.01.2023

REV. DATE: REV. NO.: DEPTT.: INFORMATION TECHNOLOGY

PAGE: 1 OF 3

SEMESTER: VIII

1.0) AIM:

Write a program in VRML for positioning of shapes.

2.0) SCOPE:

- To understand positioning and appearance of shapes.
- To understand transformation

LABORATORY: Virtual and Augmented Reality (8IT06)

3.0) FACILITIES/ APPARATUS:

i) **Software:** VRML Browser(Cortona)

4.0) THEORY:

This is a VRML (Virtual Reality Modeling Language) program that defines a 3D scene consisting of a blue cylinder and a red sphere. VRML is a markup language used to describe 3D scenes for the web.

The program begins with specifies the encoding type of the VRML file.

The program defines two nodes, Shape and Transform, which are used to specify the appearance and position of objects in the scene.

The first node, Shape, defines a blue cylinder with a radius of 0.1 and a height of 3.0. The appearance of the cylinder is defined using the Appearance node, which specifies a blue Material with a diffuse color of (0.1, 0.1, 0.9).

The second node, Transform, specifies a translation of (0, 2.5, 0), which moves the pen (the coordinate system used to draw objects in the scene) up by 2.5 units in the y-axis. The children of the Transform node are defined as a single Shape node, which specifies

PREPARED BY:	APPROVED BY: (H.O.D.)
PROF.MS.P.P BUTE	PROF. A. S. MANEKAR

SSGMCE/FRM/32-B

LABORATORY: Virtual and Augmented Reality (8IT06)

	SHRI SANT GA	Janan Maharaj	COL	LEGE OF ENG	E. LABORATORY MANUAL		
	PRACTICAL EXPERIMENT INSTRUCTION SHEET						
SSGMCE	EXPERIMENT TITLE :						
Write a program in VRML for positioning of shapes.							
EXPERIMENT NO. : SSGMCE/WI/IT/01/8IT06/01 ISSUE NO. : 00 ISSUE DATE : 14.01.2023							
DEV DATE :		DEV/ NO ·	DED	TT · INFORMATIO	NI TECHNOLOGY		

PAGE: 2 OF 3

SEMESTER: VIII

a red sphere with a radius of 1. The appearance of the sphere is defined in the same way as the cylinder, but with a diffuse color of (1, 0, 0) to produce a red color.

The overall effect of the program is to create a simple 3D scene with a blue cylinder and a red sphere, with the sphere positioned above the cylinder. The program can be rendered in a VRML viewer or integrated into a web page using a VRML plugin.

```
Program
```

```
#VRML V2.0 utf8
```

```
# Draw a blue cylinder - a first node specifying an object
# Watch out: radius and height are floating numbers!
Shape {
 geometry Cylinder {
   radius 0.1
   height 3.0}
 appearance Appearance {
   material Material { diffuseColor 0.1 0.1 0.9 }
}
Transform {
 # Move the pen up - a second node specifying a translation
 # and a red sphere
 translation 0 2.5 0
 children [
   Shape {
     geometry Sphere { radius 1 }
     appearance Appearance {
      material Material { diffuseColor 1 0 0 }
```

PREPARED BY:	APPROVED BY: (H.O.D.)
PROF.MS.P.P BUTE	PROF. A. S. MANEKAR

SHRI SANT GAJANAN MAHARAJ COLLEGE OF ENGG. LABORATORY MANUAL

PRACTICAL EXPERIMENT INSTRUCTION SHEET

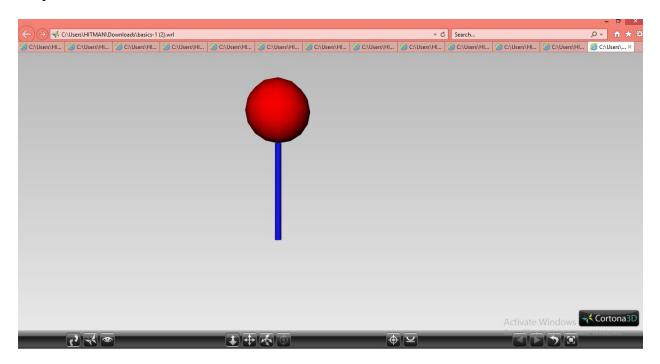
EXPERIMENT TITLE:
Write a program in VRML for positioning of shapes.

EXPERIMENT NO.: SSGMCE/WI/IT/01/8IT06/01 ISSUE NO.: 00 ISSUE DATE: 14.01.2023

REV. DATE: REV. NO.: DEPTT.: INFORMATION TECHNOLOGY

LABORATORY: Virtual and Augmented Reality (8IT06) SEMESTER: VIII PAGE: 3 OF 3

Output



5.0) Conclusion:

Executed VRML program for positioning of shapes on the browser.

PREPARED BY:	APPROVED BY: (H.O.D.)
PROF.MS.P.P BUTE	PROF. A. S. MANEKAR