CSE423 Lab Assignment 1

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```python
# Task_1

gl.glClear(gl.GL_COLOR_BUFFER_BIT)

gl.glPointSize(4)

gl.glColor3f(1.0,1.0,0)


for i in range(50):

  i = 0

  gl.glBegin(gl.GL_POINTS)

  x = np.random.uniform(-1,1)

  y = np.random.uniform(-1,1)

  gl.glVertex2f(x,y)

  gl.glEnd()

  i=i+1


img_buf = gl.glReadPixelsub(0, 0, WIDTH, HEIGHT, gl.GL_RGB,
gl.GL_UNSIGNED_BYTE)

img = np.frombuffer(img_buf, np.uint8).reshape(HEIGHT, WIDTH, 3)[::-1]

show.image(img/255.0)
```

Task_2

```python
gl.glClear(gl.GL_COLOR_BUFFER_BIT)
gl.glPointSize(4)


#Roof
gl.glColor3f(0,128,255)
gl.glBegin(gl.GL_TRIANGLES)
gl.glVertex2f(0,0.94)
gl.glVertex2f(-0.6,0.4)
gl.glVertex2f(0.6,0.4)
gl.glEnd()


#House Structure
gl.glColor3f(0,128,255)
gl.glBegin(gl.GL_LINES)
gl.glVertex2f(-0.6,0.4)
gl.glVertex2f(-0.6,-0.8)
gl.glVertex2f(-0.6,-0.8)
gl.glVertex2f(0.6,-0.8)
gl.glVertex2f(0.6,-0.8)
gl.glVertex2f(0.6,0.4)
gl.glVertex2f(0.6,0.4)
gl.glVertex2f(-0.6,0.4)
gl.glEnd()
```

```python
#Door
gl.glColor3f(1.0,1.0,0)
gl.glBegin(gl.GL_LINE_STRIP)
gl.glVertex2f(-0.19,-0.8)
gl.glVertex2f(-0.19,-0.2)
gl.glVertex2f(0.19,-0.2)
gl.glVertex2f(0.19,-0.8)
gl.glEnd()


#Door_Knob
gl.glBegin(gl.GL_POINTS)
gl.glVertex2f(0.13,-0.4)
gl.glEnd()


#Windows
gl.glColor3f(0,128,255)
gl.glBegin(gl.GL_LINE_STRIP)
gl.glVertex2f(-0.25,0)
gl.glVertex2f(-0.25,0.25)
gl.glVertex2f(-0.5,0.25)
gl.glVertex2f(-0.5,0)
gl.glVertex2f(-0.25,0)
gl.glEnd()
```

```python
gl.glBegin(gl.GL_LINE_STRIP)

gl.glVertex2f(0.25,0)

gl.glVertex2f(0.25,0.25)

gl.glVertex2f(0.5,0.25)

gl.glVertex2f(0.5,0)

gl.glVertex2f(0.25,0)

gl.glEnd()


img_buf = gl.glReadPixelsub(0, 0, WIDTH, HEIGHT, gl.GL_RGB,
gl.GL_UNSIGNED_BYTE)

img = np.frombuffer(img_buf, np.uint8).reshape(HEIGHT, WIDTH, 3)[::-1]

show.image(img/255.0)
```