

Lab Report 1

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1. Installing required libraries:

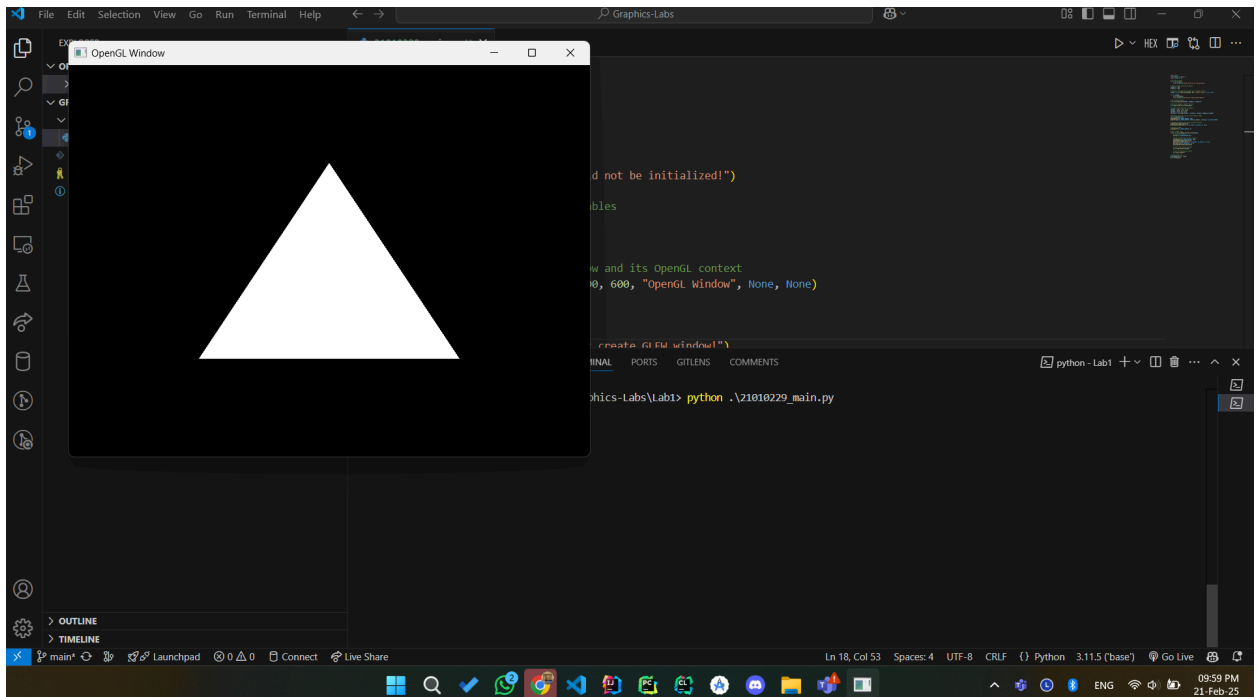
```
C:\Users\Armia>pip install glfw
Collecting glfw
  Downloading glfw-2.8.0-py2.py27.py3.py30.py31.py32.py33.py34.py35.py36.py37.py38.p39.p310.p311.p312.p313-none-win_amd64.whl.metadata (5.4 kB)
  Downloading glfw-2.8.0-py2.py27.py3.py30.py31.py32.py33.py34.py35.py36.py37.py38.p39.p310.p311.p312.p313-none-win_amd64.whl (559 kB)
    559.4/559.4 kB 1.3 MB/s eta 0:00:00
Installing collected packages: glfw
Successfully installed glfw-2.8.0

C:\Users\Armia>pip install pyrr
Collecting pyrr
  Downloading pyrr-0.10.3-py3-none-any.whl.metadata (832 bytes)
Collecting numpy (from pyrr)
  Using cached numpy-2.2.3-cp311-cp311-win_amd64.whl.metadata (60 kB)
Collecting multipledispatch (from pyrr)
  Downloading multipledispatch-1.0.0-py3-none-any.whl.metadata (3.8 kB)
  Downloading pyrr-0.10.3-py3-none-any.whl (46 kB)
    46.8/46.8 kB 335.3 kB/s eta 0:00:00
  Downloading multipledispatch-1.0.0-py3-none-any.whl (12 kB)
  Using cached numpy-2.2.3-cp311-cp311-win_amd64.whl (12.9 MB)
Installing collected packages: multipledispatch, numpy, pyrr
Successfully installed multipledispatch-1.0.0 numpy-2.2.3 pyrr-0.10.3

C:\Users\Armia>pip install numpy
Requirement already satisfied: numpy in c:\users\armia\miniconda3\lib\site-packages (2.2.3)

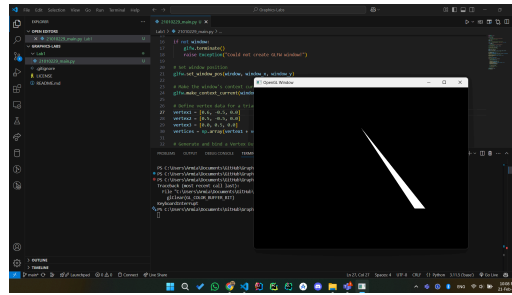
C:\Users\Armia>pip install PyOpenGL PyOpenGL_accelerate
Collecting PyOpenGL
  Using cached PyOpenGL-3.1.9-py3-none-any.whl.metadata (3.3 kB)
Requirement already satisfied: PyOpenGL_accelerate in c:\users\armia\miniconda3\lib\site-packages (3.1.9)
  Downloading PyOpenGL-3.1.9-py3-none-any.whl (3.2 MB)
    3.2/3.2 MB 1.3 MB/s eta 0:00:00
Installing collected packages: PyOpenGL
Successfully installed PyOpenGL-3.1.9
```

2. Try the source code in the link:

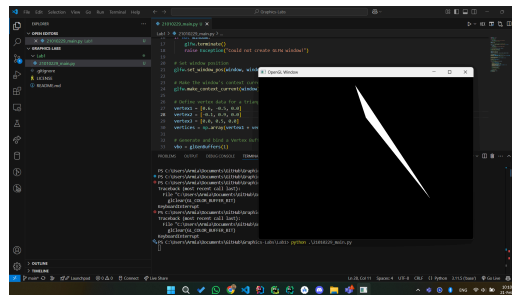


3. Trying different values:

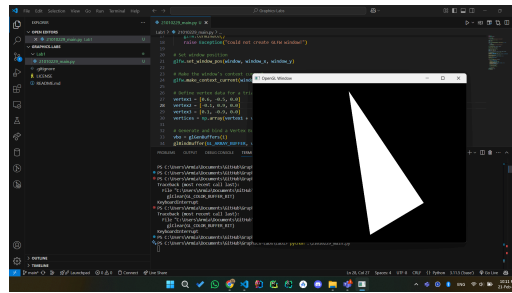
a. Vertex1 = [0.6, -0.5, 0.0]



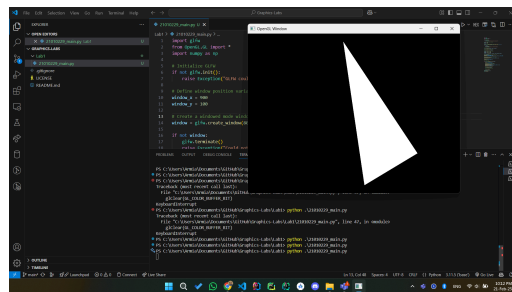
b. Vertex2 = [-0.1, 0.9, 0.0]



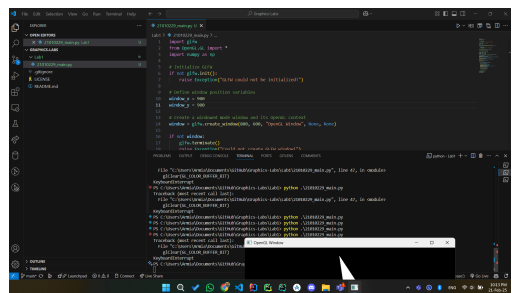
c. Vertex3 = [0.1, -0.9, 0.0]



d. Window_x = 900



e. Window_y = 200



4. The location of the origin (0,0) is up left

