Lab Exam: Out of 25

1. Write a python function named **show_dimension** that can take an array as a parameter and returns the number of dimensions.

   (2 marks)

2. Write a python function named **compute_cross_product** that can take two arrays as a parameter and returns the cross product of the two arrays.   (3 marks)

3. A) Draw a 500 by 400 pixel canvas using pygame. Make it in a function named **main**. Set the **title** of your canvas. Add an **event** to your canvas so that it quits when **Space key** is pressed in your keyboard. Fill the canvas with **white** color.   (3 marks)

   B) On your canvas above, draw a red **line** that has a **width** of 3 & a **length** of 200 pixels. Let the point of origin (or the start position) be (50, 50).   (3 marks)

   C) DRAW ETHIOPIAN Flag (green, yellow, red colored three rectangles)   (3 marks)

   D) Draw a point (make it purple) on the middle of the flag you drew.   (3 marks)

4. Write a Python code to draw a triangle, colored purple, using PyGame and OpenGL.   (4 marks)

5. Write a Python function that takes two points P1(x1, y1) and P2(x2, y2) to draw a line thru P1 and P2 using PyGame and OpenGL.
   HINT: Use **GL_LINES**, **glVertex2f** and **glColor3f**

   Syntax:
   ```
   def draw_line(x1, y1, x2, y2):
     glBegin(....)

     //your code here

     glEnd()
   ```
   (4 marks)