Computer Graphics
Exercises 1

1) Encapsulate the indexed triangle renderer in separate structs/classes, headers and functions. Take note that state-setting methods do not need to be called each frame.

2) Write an input class that will be fed using SDL window messages in order to store keyboard and mouse state. Function names can be chosen freely, example names are provided below.

  a) Implement the functions get_key, get_key_down and get_key_up, which should each take a parameter (such as an **SDL_KeyCode**). For clarification:
  - get_key_down(key) → is this key currently being pressed?
  - get_key_pressed(key) → was this key pressed down in this exact frame?
  - get_key_released(key) → was this key released in this exact frame?

  b) Implement the same for mouse input using get_button_down, get_button_pressed, get_button_released with the same rules as in a). Find the corresponding SDL event type in the SDL documentation (google is your friend).

  c) Implement the functions get_mouse_pos and get_mouse_delta, which both return a vector of length two containing both x and y of the requested coordinates. Again, find the SDL event type and how to access the motion data using SDL documentation.
  - get_mouse_pos() → current mouse position in screen coordinates
  - get_mouse_delta() → how much the mouse moved since last frame