

Pygame workshop plan:

- Spend a few minutes getting everyone set up, laptops on and plugged in, show them how to install pygame (will save a few minutes for anyone who needs to install python too but everyone should have python installed already)
- Show them how to import pygame, give them shell code for a basic pygame window that includes the window itself, the caption, the clock to cap the framerate and control the speed, the event handler loop, and the quit section (pygame is too complicated to explain in the time I have allotted, so I skip explaining most of this)
- Explain the very basics of the shell code, encourage them to experiment with it
- Explain how to draw basic shapes like rectangles, circles, and lines, and give them some time to try it themselves, learn how it works, and work out any bugs or miscommunication involved
- Explain how they can update their game screen every frame, show them where to do it
- Show them how to handle key presses and have the program respond, show them which keys can be used and which constants correspond to which keys
- Show them how to add images, help students set up a subfolder and add images to it if necessary
- Show them how to resize images and convert them into a form usable by pygame, and show them how to assign images to a variable
- Challenge them to create a simple game where one player, represented by an image or shape, must evade a second player. This uses all the concepts covered so far, like image drawing, shape drawing, event listeners, screen updating, framerate capping (to control the speed of the program), etc