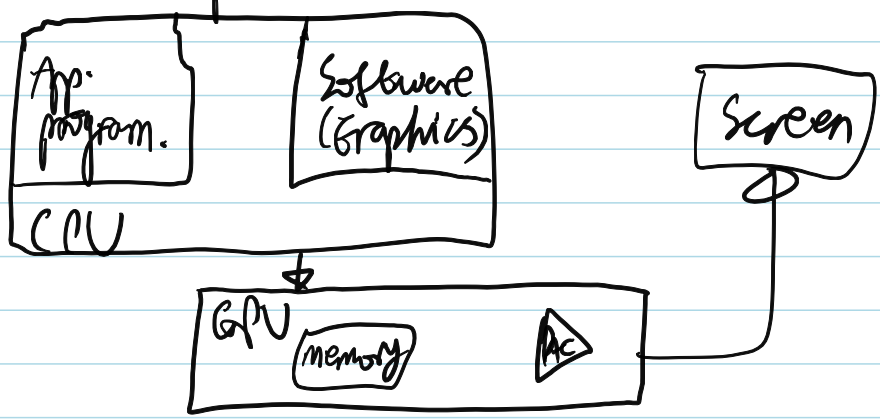
Graphics lecture 1

Image Synthesis — how we got here, architecture, Fixed prog / pipeline, CGI → real?

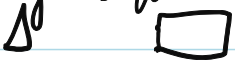
Raster graphics

- 2D array of pixels
  - Images are SAMPLED
    - more samples → better fidelity
    - APPROXIMATION
      - everything is this, in comp. graphics
      - some are better than others
- OpenGL vs. DirectX: read that
  - OGL API sits inbetween app. program and input devices
  - Functions to perform 3D graphics
  - VERY portable
- 

- Fixed pipeline: fixed algorithms applied in fixed order
  - All we can do is change parameters, NOT its shape
- Programmable pipeline: fixed order, customisable programs
  - MUST say how <vertex / fragment> shader programs are implemented

- Fixed: simple to use, fine for many purposes
  - Cons: can't CHANGE/ADD any other algos, it's deprecated

- Lines: geometry, attributes
- POLYGONS: triangles, quadlateral, Convex polygons



- Lighting and shading - Local methods include:
  - Flat
  - Gouraud
  - Phong