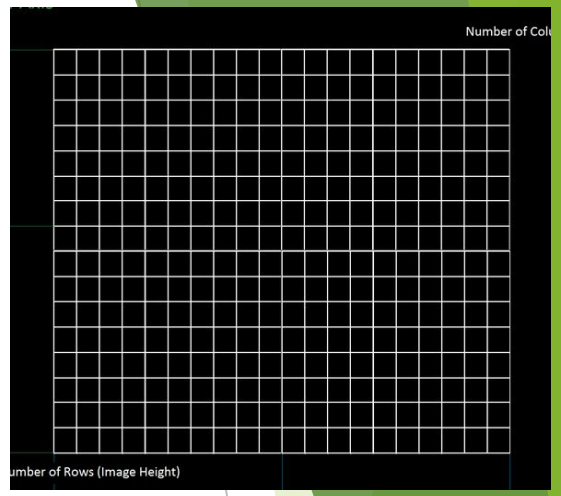
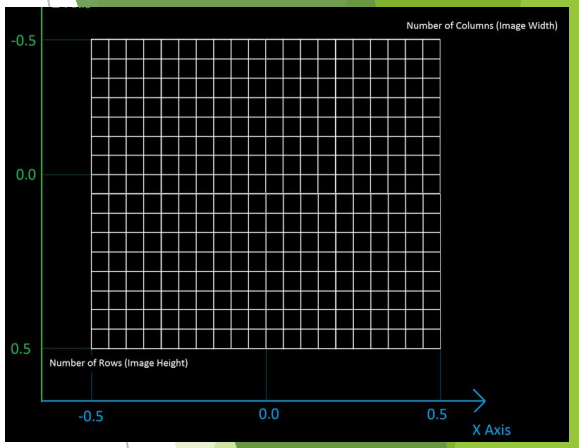
Lab 06
Rasterization -Line

Use the 2D grid you created from previous Lab

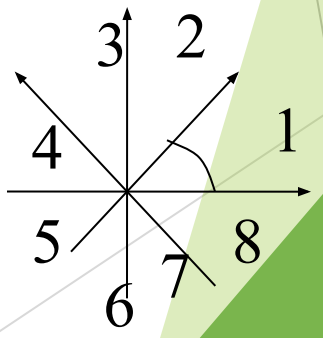


- Clickable 2D Grid
  - Provide a popup menu to select the grid dimensions: (10 or 15 or 20 etc…)
  - Draw a 2D grid based on the selected dimension.
    - The default is 10 ▫ x: (-10 ~ 10), y: (-10 ~ 10)
    - The origin (0,0) is at center
    - When the user select 15, the grid will be re-drawn to: x: (-15 ~ 15), y: (-15 ~ 15)
  - When the user click on one of the cell
    - draw/fill the cell
      - You will need to implement a function to convert coordinates
      - Print out the coordinate (x, y) of this cell on the console window

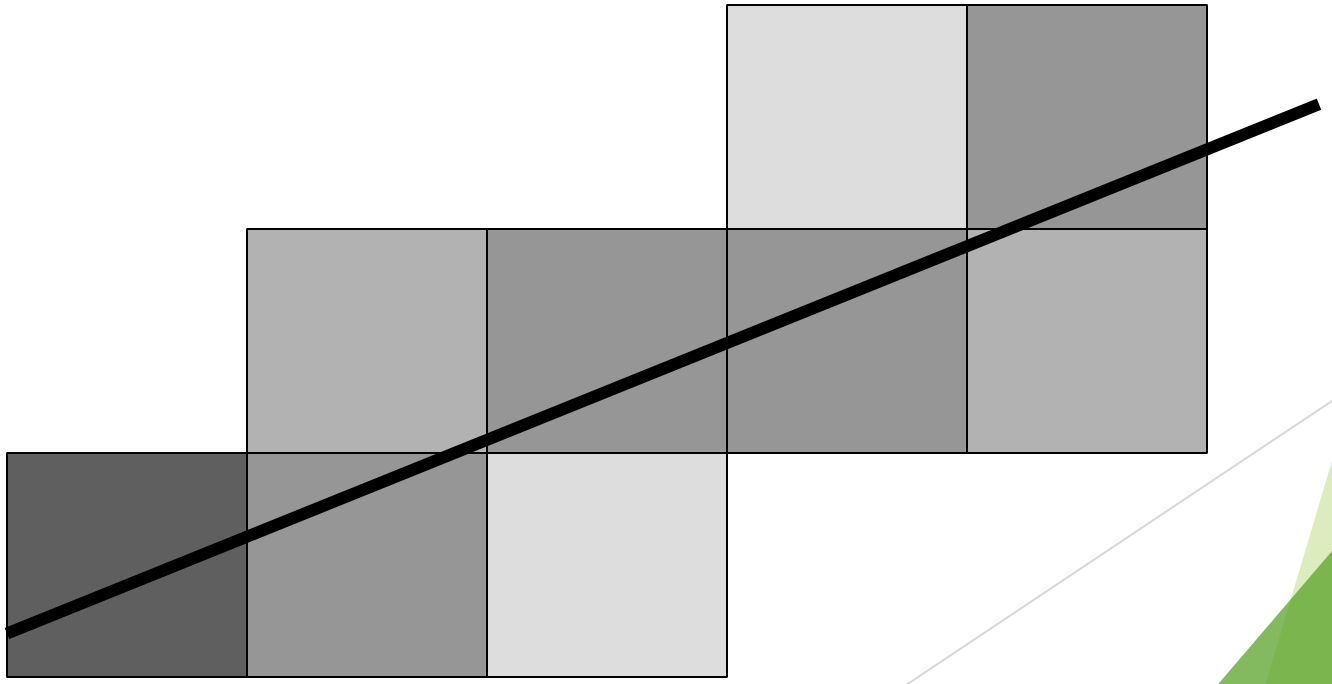
midpoint algorithm



- Select two endpoints
- Use midpoint algorithm to draw the pixels along the line
  - Draw and print out all the pixels represent the line
  - Print out the coordinate (x, y) OF EACH PIXELS
  - Considering all regions
    - (First 2 region for 30%, the rest regions total 20%)
- anti-aliasing algorithm
  - A popup menu to switch between midpoint/anti-aliasing algorithm



- Visualize your result!



Requirement

- Do not use other libraries. Only OpenGL API (gl, glu, glut) is allowed
- Write comments in your code
- Turn in your code and demo video