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Introduction to Computational Media

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### Art and the City: Visual Representations Through City Maps

One of my favorite parts of New York City is seeing the city from above; whether its from the Empire State Building or a rooftop terrace, the symmetrical, straight lines have always appealed to me. The beautiful visual capabilities of city planning plus my interest in world creation lead me to create a city map maker as my alternative art method.

Cities, in my mind, come in two shapes — gridded and freeform — and so these are both options for the user. In gridded mode, all lines snap to a grid, the size of which the user can choose, and in freeform mode all lines may curve freely. Users may also choose between four different line options: city streets, which are the default, backstreets, highways, and rivers. Each type of street varies by color or line width to allow the user to create different textures and interesting visual combinations. The canvas may be cleared by the simple press of a button.

As of the current version, due to the way that I have to handle “erasing” the grid which requires drawing over the grid in white, it is not possible to draw a gridded map that also has freeform elements, or vice versa, nor is it possible to draw a gridded map with two simultaneous grid sizes. These are functions I would like to incorporate in the future, but I ran into issues using Processing to pull them off. Clearing just the grid but not the drawings was extremely complicated; one possible solution is creating each new drawing as a PGraphics object, keeping them in an array, and then redrawing them every time the grid is turned on and off or the grid size is changed but this is extremely inefficient. In the future, I wish to become more familiar with Processing and explore its capabilities to add these functions.

When I had a user test my application, they thought that the gridded version looked strikingly similar to a subway map, and used the different colors and line weights to create a complex gridded subway system. This is not initially what I was going for, but it inspired me to add that functionality to my list of updates to add in the future as a lover of the complexity of subway systems. A different user created a gridded city that looked quite beautiful with and without the grid showing and featured a thick river. During freeform mode, my user decided to create complex roundabouts and intersecting highways that created an image in exactly the way I was hoping.