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Simple but elegant core idea. Lots of variations you could explore. Try to lay out your main path of development plus pick a few variations to explore along the way. Perhaps each take one small variation to implement?

19/20

Project Proposal

The subject of the Team 05 animation will be the collisions of colored particles. The particles will be of some shape (ideas: sphere, cube, pyramid) and different colors (RGB). The particles will be scattered, at random, across a black background. If two particles of differing color collide, they will merge to form a larger particle. Particles of the same color will "bounce" off of each other or "repel" each other. In addition, the newly formed particle will combine the colors of its "parent" particles with respect to the additive color model (*i.e.* light combination; *ex. If a red and green particle collide with one another, it will turn into one bigger yellow particle*). Once enough particles collide together to form a large, white particle, it will then explode or "pop" and disperse the smaller colored particles it was originally formed with. This will give us the opportunity to experiment with lighting, motion effects, and blending. We have decided to implement this project in Java using OpenGL since this will give each team member equal opportunity to work on the animation itself. In addition, one of us will play the role as a group leader to insure that this project is progressing. As we design our detailed plan, we will have a more precise idea of what each of our roles will look like.

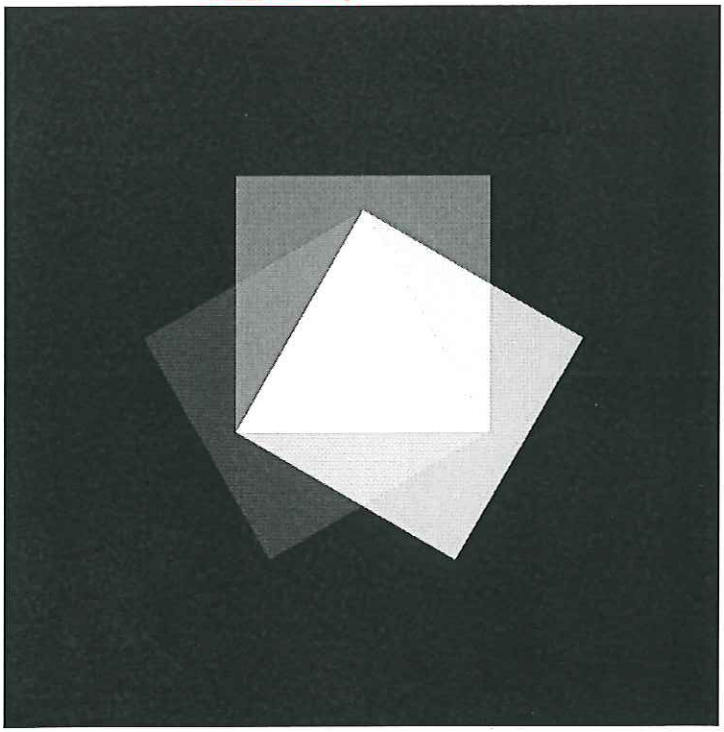
Also, make sure you set a specific goal and define your success criteria. How will you assess what you've made?

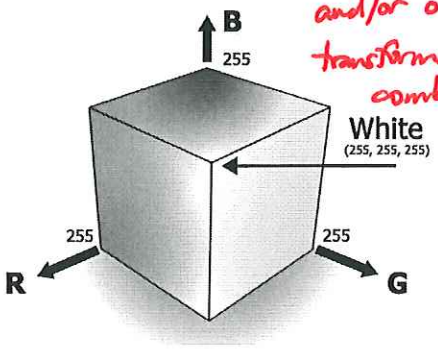
***Note: if this concept turns out to be more easily implemented than we expect, we will add additional functionality. The additional functionality would be utilizing "cookie cutter" like objects to attract and repel certain particles (ex. a heart shaped outline-- attracts red particles, repels all others).*

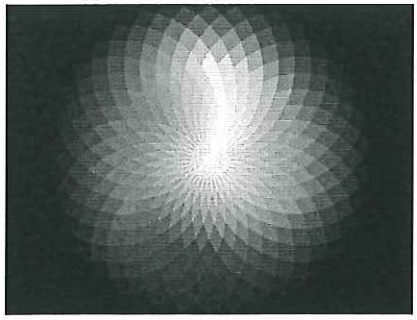
You could do this with walls and a set of shape and/or color attracting "gravity" areas

How about adding some interaction, e.g. to pick and drop a shape+color choice?

Inspirational imagery for additive color (acquired via Google image search):







Also consider exploring other color models and/or other color transformations upon combination/collision.