Assignments

Introduction to Computer Graphics laboratory, 2016/17/I

I will certainly check your solution for Problem 3, Problem 6 and Problem 7. You should choose two more from Problem 2, Problem 4, Problem 5, and Problem 8 (the first one is not an option). For example, you can defend Problem 3, 4, 5, 6, 7 or Problem 2, 3, 6, 7, 8, etc. You can defend your codes at the time of our last two class, which will be held on 13th December and 20th December, 4pm–6pm. You can choose one date between these two.

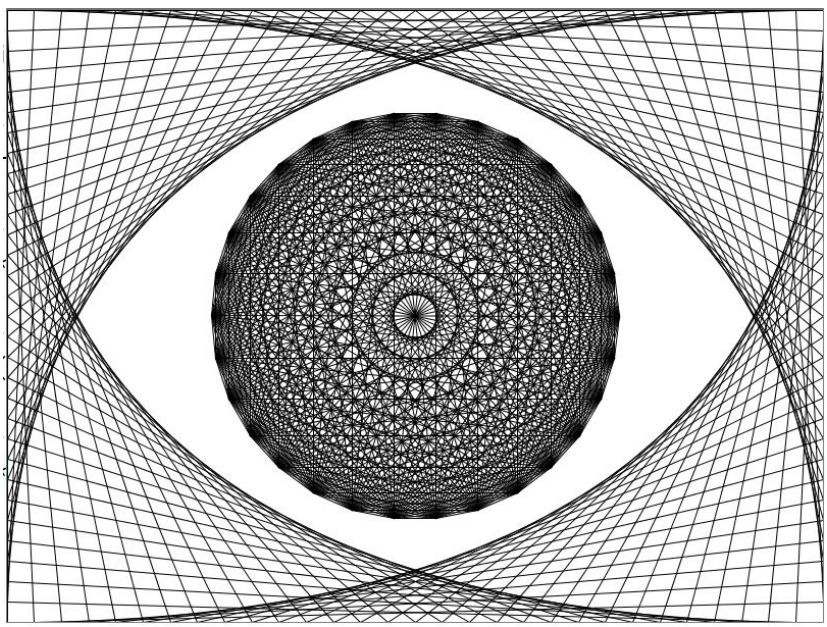
So the problems we mentioned this semester are the following.

1. Create a simple drawing with Processing, a face with eyes, ears, mouth, etc. Use only the basic shapes of Processing.

2. The drawing area should be filled with points by using a nested loop as we studied and should contain two line segments. The points should be colorized according to on which side of the line segments they are lying. One endpoint of one line segment should be movable using a key on the keyboard.

3. Draw two line segments and their intersection point if it exists. Both endpoints of a line segment should be movable by using the keyboard.

4. Draw the following line art figure based on the sample we created together.

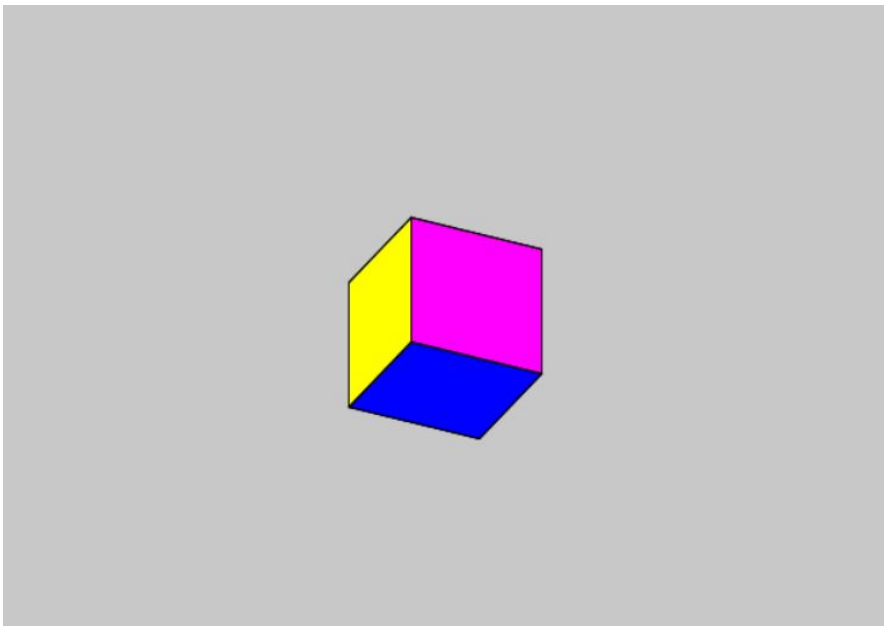


5. Implement the midpoint circle and line drawing algorithms in our grid model, based on the code I have sent you through the Neptun system.

6. Draw a Bézier curve based on five control points. Use the Bernstein polynomials, the points should be movable by mouse. Draw the control polygon as well.

7. Finish the face visibilty sample that I have sent to you through the Neptun system. The result should show the whole cube drawn by only its *visible* faces. We should be able to rotate the cube around the x and y axes by pressing different keys on the keyboard. Each visible face should have a unique colour.

   A screenshot with an acceptable output.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8. Soon...