

# Introduction to Computer Graphics: Personal Project

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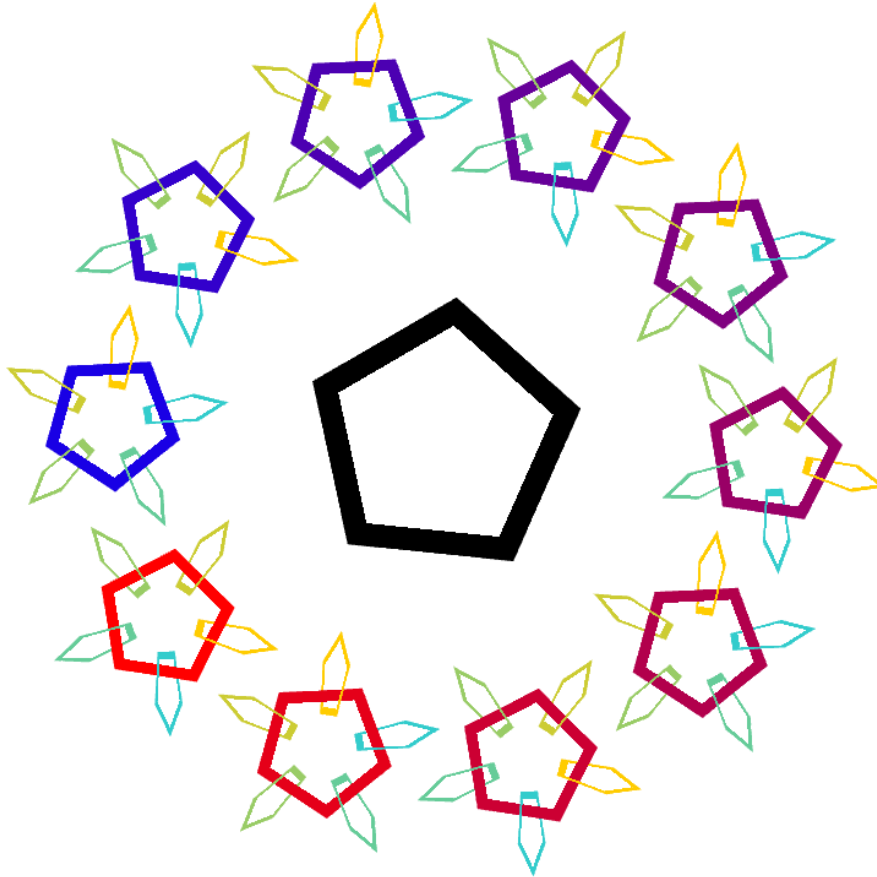


Figure 1:

**Instructions:** The project is to be sent by mail (`camille.schreck@inria.fr`). The title of the mail should start with [PROJET ENSG]. The project should be a file called *projet\_name\_surname.zip* with an archived repository containing your files, or a file *projet\_name\_surname.html* if you have only one.

*The code should be commented*

## Pentagons

1. Create a pentagon centered on zero in the plane ( $xy$ ) using 5 triangles (Figure 2 left).
2. Empty the inside of the pentagon using the `discard` command and the `uv` coordinates (Figure 2 right).
3. Make the pentagon rotate around itself on the  $z$  axis.

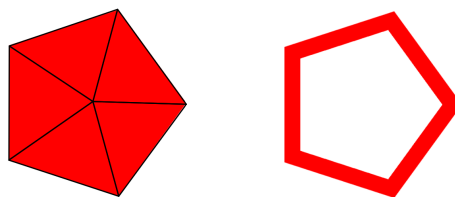


Figure 2:

## Orbites

1. Create a circle of  $n$  pentagons rotating around the center of the scene in the plane ( $xy$ ) (Figure 3).
2. Make the pentagons also rotate around themselves.
3. Around each of these pentagons, make a circle of new smaller pentagons such that they are interleaved with the bigger ones (see Figure 1) and make them rotate around them.

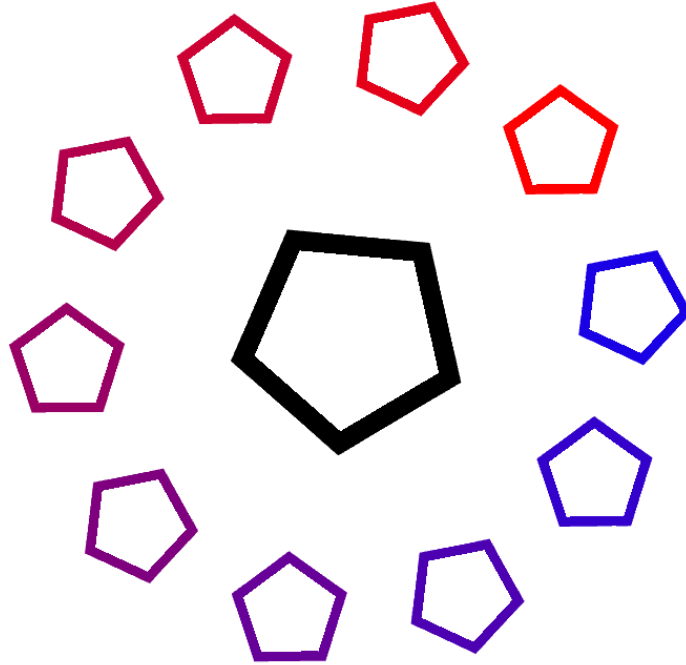


Figure 3:

## Pentacman

1. In a new project, modify the  $uv$  coordinates and the fragment shader such that one of the triangles of the pentagon only keep its two inside borders (see Figure 4).

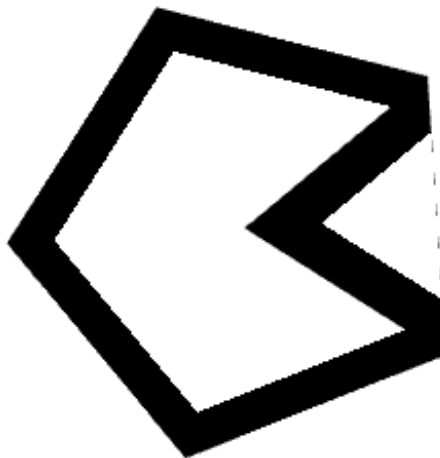


Figure 4: