Object – Oriented Programming
C++ Project Report

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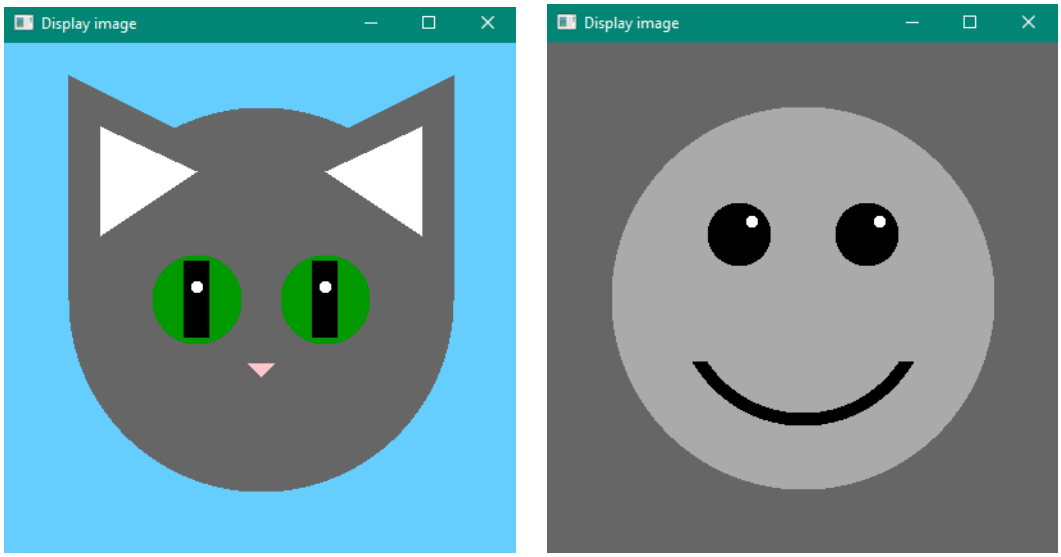

(A) (B)

Figure 1: Screenshots of produced images. (A) Colored cat. (B) Grayscale smiley face.

Pipeline

1 Cat

Pipeline for a cat drawing (see Fig. 1A):

1. Initializing the image.
2. Drawing blue rectangle which fills the whole image. (The size of the rectangle was made bigger than the image resolution in order to check that part of a shape may be outside matrix boundaries.)
3. Drawing a gray circle representing the cat's head. (Here a **BWColor** type color was passed as a parameter to check if it works on RGB matrices.)
4. Drawing a pair of gray and a pair of white triangles representing the cat's ears.
5. Drawing a pair of green circles representing the cat's eyes.
6. Drawing a pair of black rectangles representing pupils.
7. Drawing a pink triangle representing the cat's nose.
8. Drawing a pair of white circles representing highlights in the cat's eyes.

2 Smiley face

Pipeline for a smiley face drawing (see Fig. 1B):

1. Initializing the image.
2. Drawing a triangle with vertices outside the image boundaries as a background to check the required functionality.
3. Drawing light circle representing the basis of the smiley face. (From here on out **RGBColor** type colors are passed as parameters to shapes' constructors.)
4. Drawing black and light gray concentric circles with a light gray rectangle on top to create a shape of a smile.
5. Drawing a pair of black circles representing the eyes.
6. Drawing a pair of white circles representing the highlights in the eyes.