

Homework 4

The goal of this homework is get you familiar with inheritance, virtual functions, pure virtual functions, and heterogeneous containers.

1. You need to design and implement a colorful Shape class with one pure virtual function `computeArea()`, two data members for the X and Y location of the object, one data member for the color (which can be “black”, “white”, or “red”), and one function `printColor()` that prints out the color.
2. You need to design and implement a Square class that needs to provide a concrete implementation of `computeArea()` and one additional data member for the edge length.
3. You need to design and implement a Circle class that needs to provide a concrete implementation of `computeArea()` and an additional data member for the radius.
4. In your main function, you need to design a heterogeneous container that holds 4 Square objects and 2 circle objects.
5. In your main function, you need to go through every element of the heterogeneous container and output their area sizes and colors.

Due: January 24th, 11:59PM, 2019.

Turn in one file via handin: the zip file of your whole NetBean directory. The name of your file should be: `LastName_FirstName`. For example, if your name is John Smith, you should turn in two files: `Smith_John.zip`.