# 08. Destructors, Constructors and Copy-Assignment

Write C++ code for solving the tasks on the following pages.

Code should compile under the C++03 or the C++11 standard.

Submit your solutions here: <https://judge.softuni.bg/Contests/1280/08-CPlusPlus-OOP-Inheritance-and-Polymorphism> (select “Compete” when prompted)

Any code files that are part of the task are provided under the folder **Skeleton**.

Please follow the exact instructions on uploading the solutions for each task.

NOTE: the Judge system treats each .cpp file as a compilation unit, compiles each such file and links them together to create the final executable, which is checked against the tests.

# Task 1 – Shapes

You are given code which reads information about one of 3 possible shapes

* a Circle (defined by radius and center)
* a Rectangle (defined by width, height and center)
* a CoordinateSystemCenter (not really a shape, always has (0, 0) as its center and an area of 0)

The provided code does not have the definition for the base Shape class – your task is to create it and any members necessary for the code to compile and accomplish the task described.

### Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| c 1 3 2 | Circle at (3.00, 2.00), area: 3.14 |
| x | Center at (0.00, 0.00), area: 0.00 |