

CircleArea Class Description

The last three questions of the exam ask you to write methods of a Java class called `CircleArea` that can be used to compute the area of a circle given its radius. Skeleton code for this class can be downloaded from the link in the exam instructions. The picture below shows the application window just after the “Calculate” button has been clicked.

The application has two text fields, one in which the user can enter the radius of a circle (as a `double` number) and the other which is used to display the area of the circle (as a `double` number with two places after the decimal point). The second text field should not be editable.

The “Calculate” button should get the radius entered by the user from the radius text field as a `String`, convert it to a `double` number, compute the area of the circle ($\text{Math.PI} * \text{radius} * \text{radius}$), and display it in the area text field. If the radius entered is not a valid `double` number, handle the resulting `NumberFormatException` by displaying the string “Invalid radius” in the area text field instead. The “Clear” button should clear the text of both text fields.

