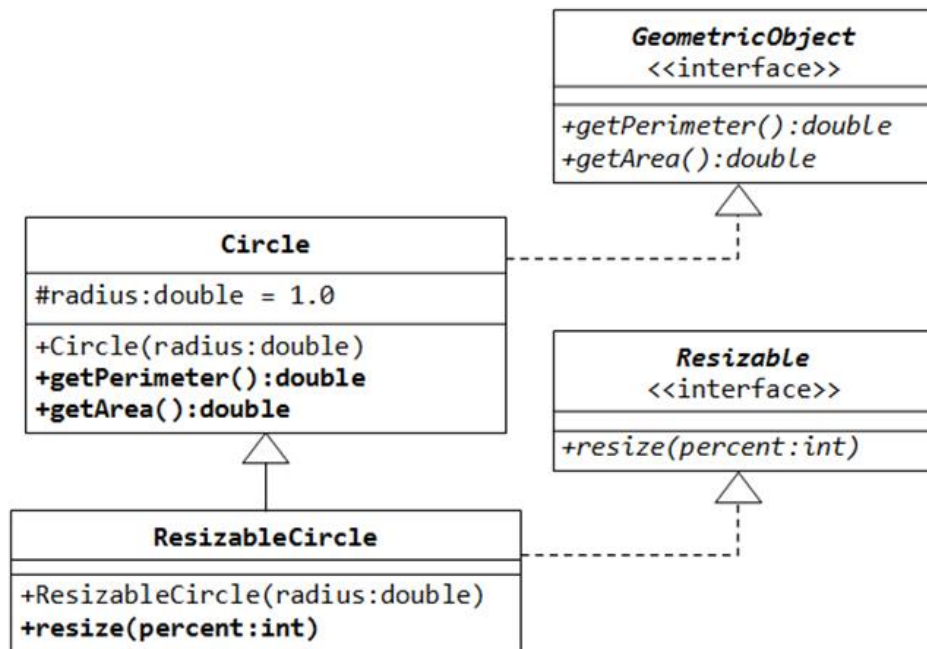


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- Write the **interface** called **GeometricObject**, which declares two **abstract methods**: `getPerimeter()` and `getArea()`, as specified in the class diagram. (Perimeter : $2\pi r$, Area : πr^2)
- Write the implementation class **Circle**, with a variable **radius**, which **implements** the interface **GeometricObject**.
 - You must get the radius as a user input.
 - radius must be a positive number (radius ≥ 0).
 - If user enters a negative value, program should ask for the radius value again by prompting “**Negative values are not allowed, Please re-enter a positive value :**”
- The class **ResizableCircle** is defined as a **subclass** of the class **Circle**, which also **implements** an **interface** called **Resizable**, as shown in class diagram. The **interface Resizable** declares an **abstract method** `resize()`, which modifies the dimension (radius) by the given percentage. Write the interface Resizable and the class ResizableCircle.
 - You must get the **percent** as a **user input**.
 - percent** must be an integer number between -100 and +100 ($-100 \leq \text{radius} \leq +100$), User input value is positive it will increase the radius value while negative value will decrease the radius value by given percentage.)
 - If user enters an invalid value, program should ask for the percent value again by prompting “**Value entered is invalid, Please re-enter a value between -100 to +100 :**”.

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- d. Write a test program called **TestCircle** to **test** the methods defined in **Circle** and **ResizableCircle**.
- i. Create a circle object with radius **7.0**
 - 1. Display perimeter and area of the above created circle.
 - 2. Reset the radius as **14.0** and display radius, perimeter and area of the above created circle.
 - ii. Create a resizablecircle object with radius **7.0**
 - 1. Display perimeter and area of the above created resizablecircle.
 - 2. Resize the radius by **+100%** and display new radius, perimeter and area.
 - 3. Reset the radius as **7.0**, Resize the radius by **-100%** and display new radius, perimeter and area.