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Foundations of Programming - Assignment 1, Module 1

1/24/2023

Algorithm:

1. Import Math and While library
2. Prompt user to enter a radius
 - a. If the user enters a valid number, cast it as a float to radius variable
 - b. If the user enters something other than a number, alert them and have them retry
 - c. If the user enters a number less than or equal to 0, alert them and have them retry
3. Calculate the circumference:
 - a. Get the value of pi from the math library
 - b. Multiply by 2 and by radius
 - c. Save value to cir variable
4. Calculate the area:
 - a. Square radius
 - b. Get the value of pi from the math library
 - c. Multiply pi by radius squared
 - d. Save value to area variable
5. Calculate the volume
 - a. Divide 4 by 3
 - b. Get the value of pi from the math library
 - c. Multiply 4/3 by pi
 - d. Cube radius
 - e. Multiply cubed radius and previous result
 - f. Save value to volume variable
6. Output circumference with label and rounded value
7. Output area with label and rounded value
8. Output volume with label and rounded value
9. Exit Program