**ACE\_TRACK - Mensuration Calculator**

This is a simple C program that allows users to calculate the area and perimeter/circumference of basic geometric shapes: Circle, Rectangle, and Triangle.

**How to Compile and Run**

Follow these steps to compile and run the program on your local machine:

**Prerequisites**

* **C Compiler:** You need a C compiler installed on your system.
  + **Windows:** It is assumed you have a compiler like GCC (from MinGW) installed and configured in your system's PATH.
  + **macOS:** You should have Xcode Command Line Tools installed (includes clang).
  + **Linux:** GCC is usually available through your distribution's package manager.

**Compilation**

1. **Save the code:** Save the provided C code as PROJECT.c (or any other .c file name you prefer) in a directory on your computer.
2. **Open a terminal or command prompt:** Navigate to the directory where you saved the PROJECT.c file.
3. **Compile the code using GCC (or your preferred C compiler):**

gcc PROJECT.c

* + This command uses the GCC compiler to compile PROJECT.c and creates an executable file named a (on Linux/macOS) or a.exe (on Windows).

**Running the Program**

After successful compilation, you can run the executable:

1. **In the same terminal or command prompt:**
   * **Windows (using Command Prompt or PowerShell):**

.\a.exe

1. **Follow the on-screen instructions:** The program will present a menu allowing you to choose a shape and enter its dimensions. It will then calculate and display the area and perimeter/circumference.

**Usage**

1. Run the program.
2. Enter the number corresponding to the shape you want to calculate:
   * 1 for Circle
   * 2 for Rectangle
   * 3 for Triangle
   * 4 to Exit
3. The program will prompt you to enter the necessary dimensions for the chosen shape (radius for a circle, length and width for a rectangle, and the lengths of three sides for a triangle).
4. Enter the values and press Enter. The program will display the calculated area and perimeter/circumference.
5. The menu will reappear, allowing you to perform more calculations or exit the program.

**Notes**

* The program includes basic input validation to ensure that you enter numeric values for the dimensions.
* For the triangle, the program uses Heron's formula to calculate the area and includes a check for invalid triangle dimensions (where the sum of any two sides must be greater than the third side).

Feel free to contribute to this project or use it as a learning tool!