Opened: Sunday, 26 January 2025, 12:00 AM
Due: Sunday, 2 February 2025, 11:59 PM

Note:

1. Use only Visual Studio code type your program and run your code.
2. Always follow industry coding best practices.
3. To compile your file, follow the steps below
   - Save your file as a .cpp file
   - Go to the location where you have stored the file via terminal
   - Compile as "**g++ –o objectfilename filename.cpp**"
   - Run as "**./objectfilename**"

1. Write a C++ menu-driven program to determine whether a number is a Palindrome, Armstrong, or Perfect Number. Normal variable and array declarations are not allowed. Utilize dynamic memory allocation (DMA). Design proper functions, maintain boundary conditions, and follow coding best practices. The menu is as follows,

   a. Palindrome
   b. Armstrong Number
   c. Perfect Number
   d. Exit

2. Write a C++ menu-driven program that calculates and displays the area of a square, cube, rectangle, and cuboid. Consider length as the side value for the square and cuboid. Identify proper data members and member functions. Design and create an appropriate class for the given scenario. Maintain proper boundary conditions and follow coding best practices. The menus are as follows,
   a) Square
   b) Cube
   c) Rectangle
   d) Cuboid
   e) Exit
Files to be submitted

1. Pointer CPP file

2. Classes CPP file

Grading summary

Hidden from students	No
Participants	64
Submitted	0
Needs grading	0
Time remaining	7 days 3 hours