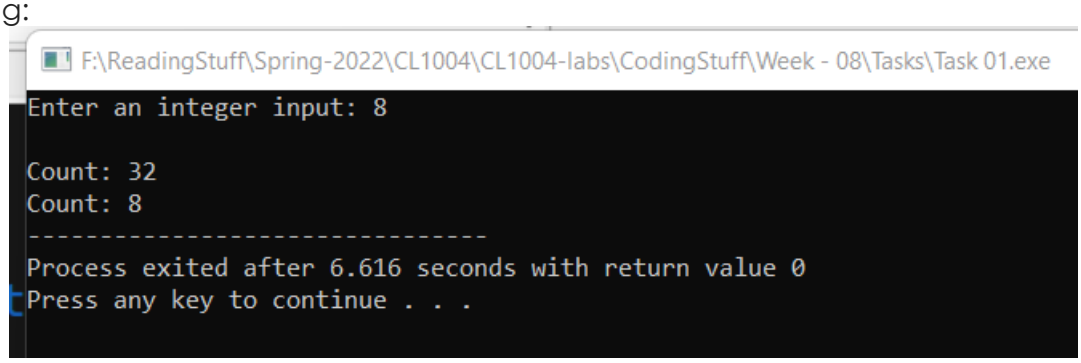
Lab Tasks:

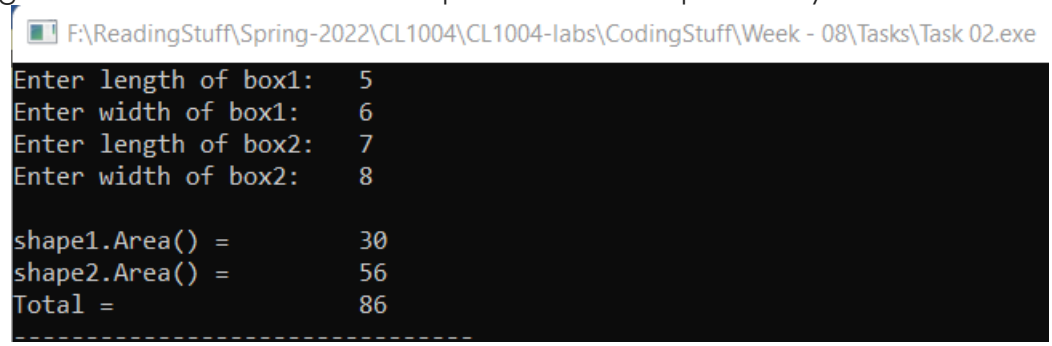
Task 01:

Write a program to overload decrement operator -- in such a way that when it is used as a prefix, it multiplies a number by 4 and when it is used as a postfix then it divides the number by 4. Your program must aks the user for the input which will be passed by contructor like following:



Task 02:

Write a program that will apply the concept of operator overloading on + operator to add the areas of shape1 and shape2. Name of class is "shape" while shape1 and shape2 are the objects of class shape. Use the same Area() function for both objects.
Your program must aks the user for the input which will be passed by contructor like following:



Task 03:

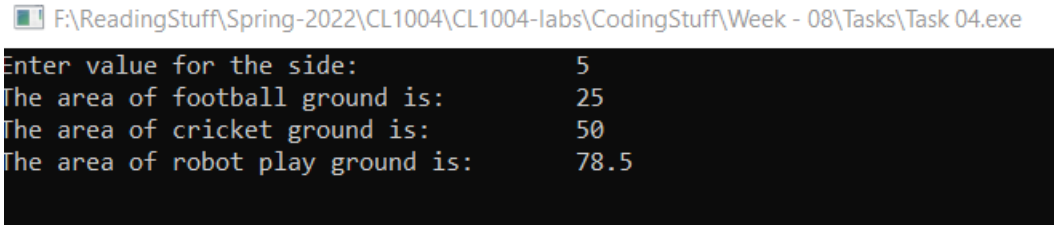
Write the following program to show the working of friend class. Define two classes i-e "printClass" and "perimeter". Perimeter class finds perimeter using length and breadth values where length and breadth values are private. Make "printClass" a friend of "perimeter" class. Once this is done, create an object in main class to calculate perimeter and pass this object to printClass to display perimeter.

Task 04:

You are assigned a task in ACM developer day which is to find out the area of football ground, cricket ground, and a place for robot playing. The mentioned places are square, rectangle and circular in shape. You are given only one side length for football ground which

can be user input by using constructor only and is private. Then there is a constraint that the width of cricket ground is equal to football side but the length is twice, while the robotic play ground radius is equal to the given football side. There is another constraint that you can only use the football given side for finding out the area of cricket ground, and robotic ground along with football ground.

(Hint: you can use friend class to access the given side of football class).



Task 05:

You are asked to write a program which will be used for conversion of daily temperature from farenheit to kelvin and celcius. The daily temprature must be user input in parent class with name DailyTemprature and can be accessed in other two classes TempKelvin and TempCelcius with help of friend functions. Sample output for 32F is given below.

Formulas are given below:

$(T)_K = 5/9\ (T)_F + 459.67$

$C = 5/9 \times (F - 32)$