

Lab Exercise 4

IT1050 – Object Oriented Concepts

Semester 2, 2021

Objectives:

• Learning to add header files in Visual Studio. Net environment.

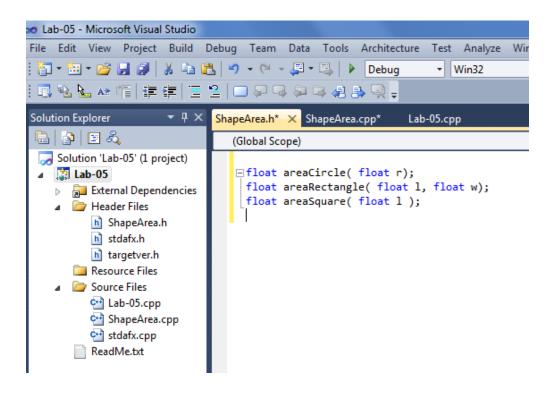
Exercise:

Consider the coding you have implemented in a single .cpp file last week (week -04)

We will see how we can add a header file and another source file to the project to separate the function implementation to several files.

Do the following tasks;

- 1. Create a new project in the Visual Studio. Net IDE. Name the project as "Lab-05"
- 2. Select Project -> Add New Item > Header File (.h). Name the file as "ShapeArea".
- 3. Type the function prototypes in this file as shown below;





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- 4. Now add another .cpp file. Select Project -> Add New Item > C++ File (.cpp). Name the file as "ShapeArea".
- 5. Implement the functions in the ShapeArea.cpp file as shown below.

Note that you have to add the following header files in the code.

```
#include "StdAfx.h"
#include <iostream>
#include "ShapeArea.h"
```

```
■ Lab-05 - Microsoft Visual Studio
File Edit View Project Build Debug Team Data Tools Architecture Test Analyze
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                      ▼ Ț × ShapeArea.h*
Solution Explorer
                                           ShapeArea.cpp* X Lab-05.cpp
 🛅 | 🚱 | 🗵 🖧
                                (Global Scope)
 Solution 'Lab-05' (1 project)
                                 □#include "StdAfx.h"
    Lab-05
                                  #include <iostream>
    External Dependencies
                                  #include "ShapeArea.h"
       Header Files
                                  using namespace std;
          h ShapeArea.h
          n stdafx.h
          n targetver.h

☐float areaCircle( float r)

       Resource Files
                                  {
       Source Files
                                      return (22/7.0*r*r);
                                 }
          Cab-05.cpp
          ShapeArea.cpp

☐ float areaRectangle( float 1, float w)

          stdafx.cpp
                                  {
          ReadMe.txt
                                      return (1*w);
                                 }

☐float areaSquare( float 1 )
                                      return (1*1);
                                 }
```

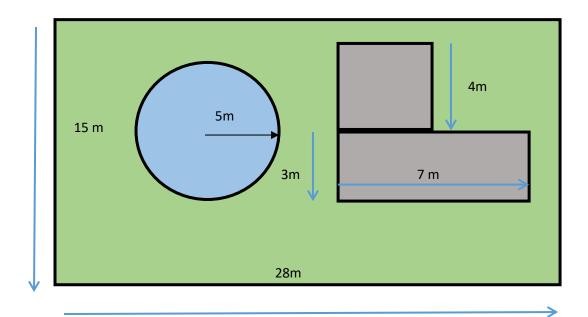


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6. Now write the main program (in Lab-05.cpp file) to use the above three functions to calculate the area of the green colour shape in the diagram below.



Note that you have to add the following header files to your main program

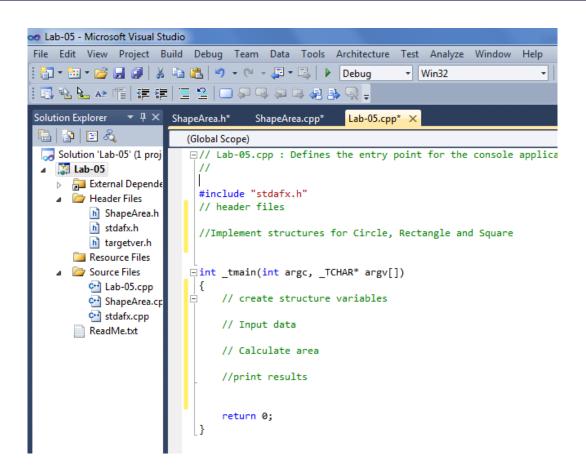
#include <iostream> #include "ShapeArea.h"



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Home work

You can add the function you have developed to find the perimeter of the rectangle in to the program and calculate the cost for fixing a fence around the Yard.