COLLÈGE LASALLE

Course number: 420-CT2-AS

OBJECT ORIENTED PROGRAMMING

Teacher: Maftei Mihai

Weighting:	**10% out of 30%**	Group:	**07194**
Points number:	**30/100**	Date:	**2023-03-02**
Duration:	**65 min**	Session:	**Winter 2023**

STATEMENT OF THE COMPETENCY

- To use object-oriented development approach (016T)

REQUIRED COMPETENCIES FOR THE EXAMS

1. To create an object model
2. Refine the object model.
3. To program a class
4. To ensure that the class functions correctly

DIRECTIVES

- **Open book and notes.**
- **Please don't cheat – it is in your own interest.**

INSTRUCTIONS

Create a C# console application (.NET Framework), test the application, compress the folder of the solution and submit it on LEA of Omnivox before time limit (65 minutes).

The section 2 of the exam is containing:
(Codding console app. with C#), evaluated like this:

Business level (main())	Class coding	Total
20 points	10 points	30 points

Section 2 – console app in C# 30 points

Create a C# console application where you will declare the class **ConvertLength** (private fields, public constructors and methods, and public properties); instantiate the class (create objects) in Main() and use the Proprieties and Methods of those objects you create in order to convert areas from Metric to US system.

Save all the entered values into appropriate data type private fields (variables of the class) by using their public properties and/or the public overloaded constructors of a **ConvertLength** class, and then, use method(s) to calculate (convert) and present the information in the proper format on one line, using placeholders.

Use property **set** (for writing) and **get** (for reading) the 2 entered values, then use the appropriate methods for the presentation of the results on one line, using placeholders.

Use following table is for testing your 2 conversion types.

Metric			US or Imperial
1 metre [m]	100 cm	→	1.0936 yd
1 kilometre [km]	1000 m	→	0.6214 mile

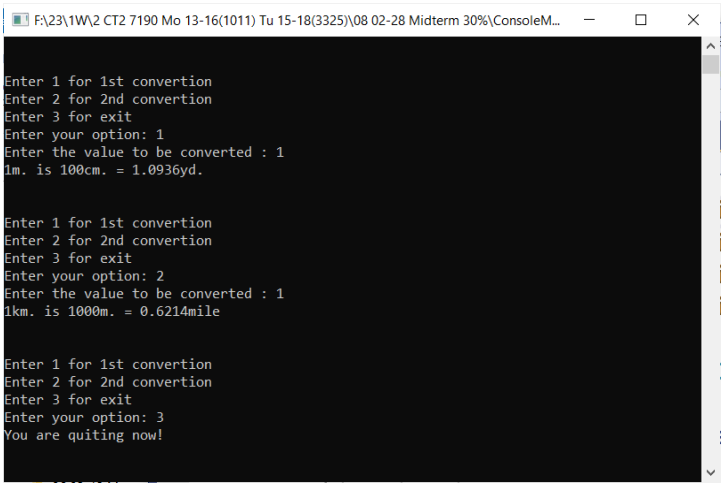
Create a menu (use do – while with the switch) to present **2** different conversions options plus the option to quit.
Use **try** and **catch** for each conversion, (for each case).

Example:
If the user enter **option 1** for converting **m** to **cm** and to **yd** conversion, should enter a numerical value representing **m** and the application will display the result in **cm** and **yd**.
If the user enter **option 2** for converting **km** to **m** and to **mile** conversion, should enter a numerical value representing **km** value as an entry, for displaying the result in **m** and in **miles**.

Add the results you obtain by testing the table values as a comment into the .cs file containing the main().

Identify yourself, enter the current date and have a short description of your work as a comment on the top section of your C# file. (if not -2p)

Test your application, theirs functionalities, save the C# solution, compress the folder and send it by LEA of Omnivox before time limit (a penalities of 1p. / 2min. will be applied for the late submissions).



Thank you.