

***C# BASICS***

**Training Assignments**

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| Document Code | 25e-BM/HR/HDCV/FSOFT |
| Version | 1.1 |
| Effective Date | 20/11/2012 |

**Hanoi, 06/2019**

RECORD OF CHANGES

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| No | Effective Date | Change Description | Reason | Reviewer | Approver |
|  | 01/Oct/2018 | Create new | Draft |  |  |
|  | 01/Jun/2019 | Update template | Fsoft template | DieuNT1 |  |
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|  | **CODE: Net.M.A015**  **TYPE: MEDIUM**  **LOC: 190**  **DURATION: 90 MINUTES** |

# Day 5: Assignment 15: Calculate datetime values

**Objectives:**

* Understand and practice with xlm file in C#.
* Practice code in Visual Studio.

**Business needs:**

* TBD

**Prerequisites:**

* Working environment: Visual Studio 2013 or higher.Practice code in Visual Studio

**Technologies:**

The product implements one or more technology:

* C# Basic
* IO
* OOP

1. Exercise 1: calculate datetime values

Customer is an English training center, has a system of exam and TOIEC certification. Students' test results are stored in xml file with the following format:

<ToiecTest>

<Name>Crist Evan</Name>

<Batch>T20180004</Batch>

<TakenDate>20/04/2018</TakenDate>

<Listening>250</Listening>

<Reading>355</Reading>

</ToiecTest>



Customers need the system to be able to redeem points from TOIEC to ielts as follows:

Score conversion table:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| TOIEC | 0 | 0 - 250 | 255 - 400 | 405 - 600 | 605 - 780 | 785 - 990 | 990 |
| IELTS | 0 | 2.0 | 4.0 | 6.0 | 8.0 | 9.0 | 9.0 |

TOIECT score = listening score + reading score

If the test is more than 6 months old, it is no longer valid.

**Software requirement:**

Students write the console application to make the request as follows:

Input: user enters the file path toiec.xml.

Output: sort results according to ielts gradually decreasing, export ielts.xml file containing xml content as converted point as follows

<IeltsTest>

<Name>Crist Evan</Name>

<Batch>T20180004</Batch>

<TakenDate>20/04/2018</TakenDate>

<Ielts >6.0</ Ielts >

</IeltsTest>

**Technical requirements:**

* Write on console application, comply with Fsoft coding conventions
* Build the class corresponding to the ToiecTest, IeltsTest objects
* Use the ICompareable interface to implement the Sort method of List <IeltsTest>.
* It should be noted that data from files can be very large, leading to slow processing. Therefore, it is necessary to optimize the code.