



Course number : 420-CT2-AS

**ORIENTED OBJECT PROGRAMMING**

Teacher : Maftai Mihai

Weighting **Section1**: 10% out of 30%  
 Points number: 100

Group : 07222

Submit

before : 2023-11-10

Weighting **Section2**: 10% out of 30%  
 Points number: 100

Group : 07222

Submit

before : 2023-11-24

Weighting **Section3**: 10% out of 30%  
 Points number: 100

Group : 07222

Submit

before : 2023-12-08

Presentation : 2023-12-11 or before

Session : Fall 2023

**STATEMENT OF THE COMPETENCY**

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

**REQUIRED COMPETENCIES FOR THE PROJECT**

- To create an object model
- Refine the object model.
- To program a class
- To ensure that the class functions correctly

**DIRECTIVES**

- Open book and notes.

**INSTRUCTIONS**

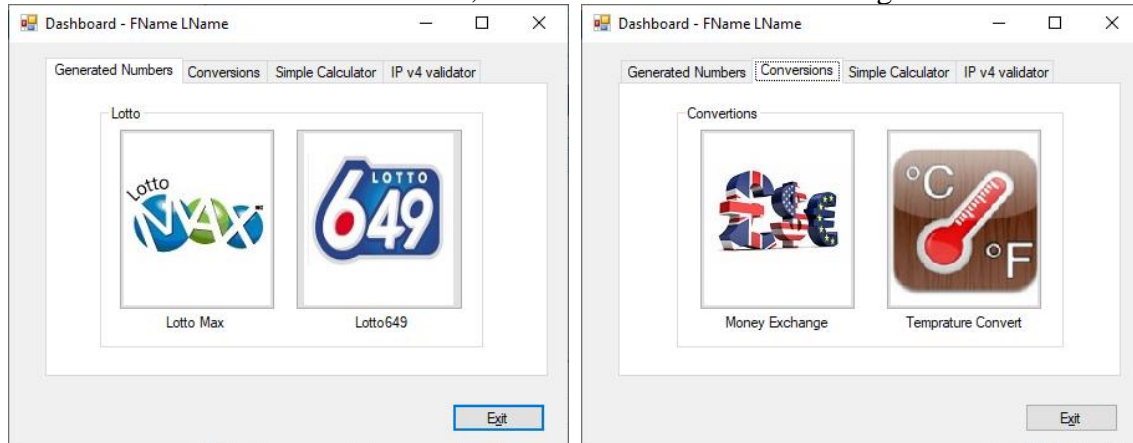
This project has 7 sections.

The application has 7 Forms, and 1 document evaluated like this:

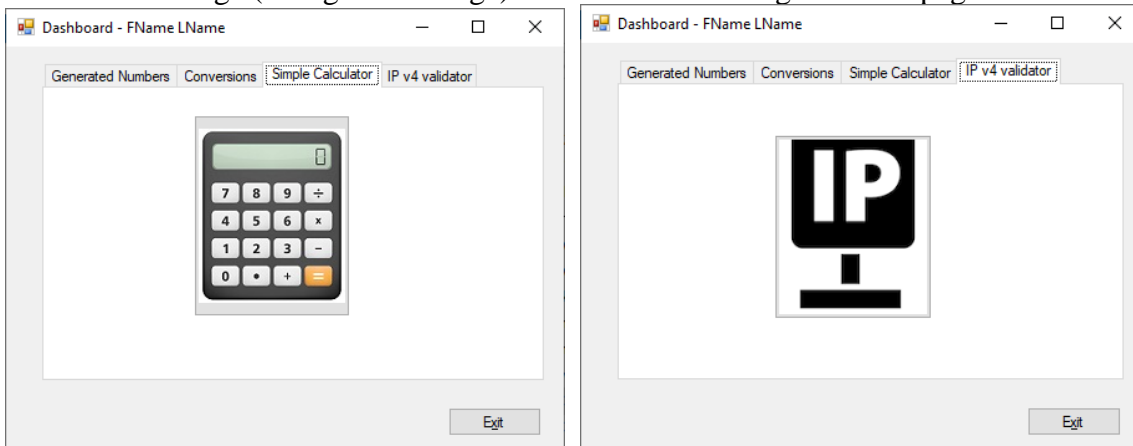
Form 1	Form 2 & 3	Form 4 & 5	Form 6	Form 7	Docs	Presentation	Total
Dash Board	Lotto Max + Lotto 649	Money Conversion + Temperature Conversion	IPv4 & IPv6 Validator	Simple Calculator	Technical and user document	2023-12-08/11 (10/15 min.)	
5 points	20 points	10+10points	10points	15points	15 points	15 points	100 p

**Section 1 - Form 1 - The Dashboard** (5 points)

Create a C# Form **frm23Dashboard**, similar with the one in the images below:



Each tab give access to diferent form applications. Use the provide images and create buttons with image (background image) similar with the images on this page.



The Exit button will confirm before exiting the application.

Identify yourself, enter the current date and have a short description for the application as a comment. By clicking on one of those buttons the application will open one of the following form applications:

## Section 1 - Form 2&3 - The Lotto Max and Lotto 649 applications

(10 + 10 points)

The form application that allows the user to generate 7 + 1 (frmMax) or 6 + 1 (frm649) random unique numbers for the **Lotto Max (1-50)** or for the **Lotto 649 (1-49)**.

This is the code that generate random number from 1 to 49:

```
Random random = new Random();
int randomNumber = random.Next(1, 49); //random.Next(1, 50); for MAX
```

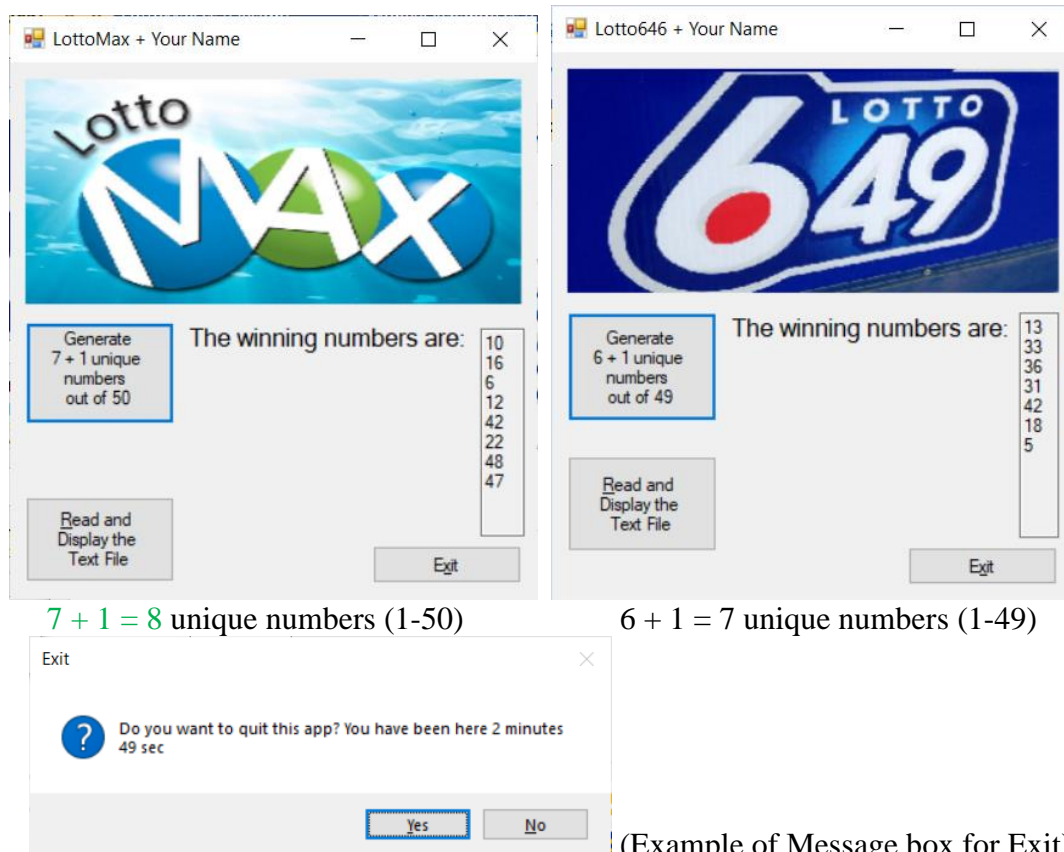
When **Generate** button is click, the 8 or 7 **unique** numbers should be generated and presented to the user into a multiline read only TextBox and save those numbers into a text file **LottoNbrs.txt** (one series of numbers per line, using comma to separate the numbers – similar like in the example below). Identify the name of the lottery, add the current date and time.

Example:

Max, 2023/7/20 2:17:36 PM, 31,36,3,39,24,42,4 Extra 30

649, 2023/7/20 2:17:42 PM, 29,45,42,22,41,18 Extra 11

Read and show the text file content using a message box when the button **Read File** is click. Add similar data information into the message box, add the appropriate title + your name as title. Use classes: FileStream, StreamReader, StreamWriter and objects



Test the applications to be sure are displayed only unique numbers.

- Upload (zip) before 10-Nov – Section1 + the document Technical - User manual

The schedule for submitting your project:

- before 10-Nov – Section1
- before 24 Nov – Section2
- before 8 Dec – Section3

Thank you.