Important!

This is an individual assignment. Students are NOT allowed to work together or seek help from anyone else including current and former S308 students. Any questions about the assignment should be sent to the instructor or the TA. Anyone found to have received help from another person will receive a zero (0) for the assignment and will be reported for academic misconduct.

Each year, IUK Corp. provide students loan for those in need. However, the maximum loan amount each student can get is different. In this assignment, your job is to create a WPF application that allows students to enter the following information: birthday, email, tuition fees, types of students (u= undergraduate, g = graduate), and residential status (in-state, out-of-state, or foreign).

The program should show two results after a user clicks the apply button: Maximum Loan Amount, and Yearly Interest Rate. All output should be rounded to **2 decimal** places and formatted appropriately as ***currency* for Loan Amount and *percentage* for Interest Rate**. A clear button that clears all values should also be included (both outputs and inputs).

More Requirements:

1. You must check that the tuition entered by the user is a ***double*** number. If the user enters something other than a double number, your program should communicate that to the user using a MessageBox. Also, if the user enters a number that is less than 0, the application should request the user to enter a non-negative number using a MessageBox.

2. For Birthday Textbox, assume a user would only use the following format: “xx/xx/xxxx” (e.g., 06/15/1998). (This means you do not have to validate Birthday.)

3. For student types, you should check whether users enter "U" or "G". If not, you should use MessageBox to ask the users to reenter the corrected information. In addition, the program is case insensitive and white space insensitive, which means "U", "   U   ", "u" are the same for the program.

4. Residential status should be a Combobox, and have only three values: in-state, out-of-state, or foreign. A user must choose one of the three values. If a user does not choose a value, the program should communicate that to the user using a MessageBox.

5. Email should contain @. If an email doesn’t contain any, the program should communicate that to the user using a MessageBox.

In all cases where the input isn’t valid, you should prevent the program from executing any more code until the user corrects the problem and submits the form again.

Rules to calculate loan:

1. For an undergraduate student, the default loan amount is $30,000.
2. For a graduate student, the default loan amount is $50,000.
3. The following table provides a rule for adjustment.

Resident Status	Rule
in-state	Get Extra 20% (i.e., multiply by 1.2)
out-of-state	Get 80% of the default value (i.e., multiply by 0.8)
foreign	Get 50% of the default value (i.e., multiply by 0.5)

4. In addition, IUK Corp. would like to provide an extra $3,000 loan amount for undergraduate students and an extra $5,000 loan amount for graduate students if applicants are IU students.
    - If a student’s email domain equals to "iu.edu", then the student is an IU student.

Rules to calculate Yearly Interest Rate:

1. The following table provides a rule to decide interest rate.

Tuition Fees	Loan Amount <= 30,000	Loan Amount > 30,000
$0 to $20,000	4.52%	4.21%
Over $20,000 to $50,000	3.83%	3.765%
Over $50,000	3.59%	3.15%

2. Lucky draw

    (a) Summing up the value of an individual’s Day, Month, and Year of Birthday. (e.g. 06/15/1999 => 6 + 15 + 1999 = 2020)

    (b) If the value can be divisible by 4, the student gets an extra reduction of Interest Rate by 0.2%.

Tips:

1) Consider using the function TryParse() to test whether the string entered by the user is a number.
2) Consider using one of the Round functions to round the number in your output.
3) Consider using the String methods to handle specific rule.
4) Use string function such as Splits and Convert functions to complete the lucky draw.

Grading Notes:

- Name you file ******_A2.zip** where **** is your IU Network ID
- All applicable grading criteria **from previous assignments** will be applied to this assignment. Including but not limited to:
    - Assignment opens and runs without error.
    - Well-designed user interface with appropriate controls, proper naming, labels, title/instructions.
    - The controls should be centered aligned horizontally and vertically (i.e. neatly ordered).
    - Proper coding practices including organized easy-to-read code and appropriate data type choices
- Include proper comments in your code.

Sample data to test your program:

This sample data is just for your reference. You should test your program with other data to make sure it calculates correctly.

Input		Output	
Email	temp@iu.edu	Loan Amount	$65,000.00
Student Type	G	Yearly Interest Rate	2.95%
Resident Status	in-state		
Tuition Fee	55000		
Birthday	09/04/1999		