Project (Milestone 1 and 2)

Introduction: Loan Application System

Milestone 1   **[40 marks]**

Unique Building Services Loan Company gives out loans of up to **R100 000** for construction projects. There are two categories of loans:
- Business loans and
- Individual loans.

Write a **C# Console application** that tracks all new construction loans. The application must calculate the total amount owed at the due date (original loan amount + loan fee). The application should include the following classes:

•• **Loan:** A public abstract class that implements the *LoanConstants* interface. A Loan includes a loan number, customer lastname, customer firstname, loan amount, interest rate, and term. The constructor requires data for each of the fields except the interest rate. Do not allow loan amounts greater than R100 000. Force any loan term that is not one of the three defined in the LoanConstants class to a short-term, 1-year loan. Create a **ToString()** method that displays all the loan data.

•• **LoanConstants:** A public interface class. LoanConstants include constant values for short term (1 year), medium-term (3 years), and long-term (5 years) loans. The class also contains constants for the company name and the maximum loan amount.

•• **BusinessLoan**: A public class that extends Loan. The BusinessLoan constructor sets the interest rate to 1% more than the current prime interest rate.

•• **PersonalLoan:** A public class that extends Loan. The PersonalLoan constructor sets the interest rate to 2% more than the current prime interest rate.

•• **CreateLoans:** An application that creates an array of five Loans. Prompt the user for the current prime interest rate. Then, in a loop, prompt the user for a loan type and all relevant information for that loan. Store the created Loan objects in the array. When data entry is complete, display all the loans.

Save the file as *Name_Surname_Project*

NB
Use Visual Studio 2019/2022 to create this program and submit a zipped file.

A few important notes:

- Your lecturer can add additional instructions to this assignment/project during class time and will notify you via Microsoft Teams.
- You are highly encouraged to ask questions if anything is unclear.
- This project should be done in groups of 4 or 5 students.
- You will be asked to present this project in class on the date of submission.

Milestone 2   [10 marks]

Create a user manual for your system with appropriate screenshots of your code running so that users can start using the system. Your user manual must not be more than 6 pages. The table of contents should be dynamic. This user manual must be put inside your project before you zip it. Please submit a single zipped file which includes your code and the user manual. If these instructions are not followed your work will not be marked.

Additional Information

- All work must be done on your own.
- Belgium Campus possesses software that can **scan for plagiarism** and a student caught doing this will get 0 marks for this assignment.
- Late assignments will not be accepted; missing the deadline is an automatic 0.
- All work copied from AI tools like ChatGPT will not be marked.