FINAL TERM EXAMINATION

PF-101/CS-102: OBJECT-ORIENTED PROGRAMMING

Instructions:
This exam consists of two parts: Part I – Essay (50 pts), Part II – Hands-on (50 pts). Read each question carefully before answering. In the Hands-on Programming section, you are required to implement complete C# programs and show the expected output. Partial credit may be given for incomplete but logically correct solutions.

Please manage your time wisely and read each question carefully before answering. Good luck!

Total Score: 100 pts
Time: 2 hours

PART I – Essay (10pts each)

1. An old classmate of yours transferred to another university to continue his BSIT program. Both of you are currently enrolled in an Object-Oriented Programming (OOP) course. He mentioned that their instructor is not adequately explaining the lessons. How would you clearly and effectively explain the four fundamental concepts of OOP to him?

2. Select one concept from the following: Encapsulation, Inheritance, Polymorphism, or Abstraction. Explain the chosen concept and provide a concrete example. The example may be written in any programming language or presented as pseudocode. Afterwards, explain how your example demonstrates the concept.

3. What is data validation? Explain its purpose and benefits, and provide an example to illustrate how it is applied.

4. In C# Programming Standards, you need to write class and method names in PascalCase, local variable names in camelCase. Why is that?

5. You're creating a *winforms* project that requires storing information, you planned to use SQL as your database. Now, everything is planned, you just need to execute the development, what will be your development procedure?

PART II – Hands-on (50pts)

For the hands-on activity, a GitHub Classroom assignment link will be provided. Follow the steps below once you receive the link:

1. Open the assignment link and accept the GitHub Classroom assignment.
   A personal repository will be automatically created for you.
2. Copy the repository's .git URL from GitHub.
3. Clone the repository using *Visual Studio 2022/2026*.
   Ensure you use the copied Git link when cloning.
4. Verify that the project has successfully cloned into your Visual Studio environment.
5. Read and follow the instructions provided in the project's ***README*** file.