# *Assignment 04*

1. **Basic Delegate Usage**
    - Description: Create a simple delegate that takes two integers as parameters and returns their sum. Use this delegate in your code to perform addition operations**.**
    - **Requirements:**
        - Declare and instantiate the delegate.
        - Invoke the delegate to add two integers and print the result.
2. **Anonymous Method and Lambda Expression**
    - Description: Use the delegate created in the previous question to perform addition using both an anonymous method and a lambda expression.
    - **Requirements:**
        - Implement the addition using an anonymous method.
        - Implement the addition using a lambda expression.
        - Compare both approaches in terms of code readability and usage.
3. **Multicast Delegates and Generic Delegates**
    - Description: Create a multicast delegate that chains multiple methods together, each performing a different mathematical operation (e.g., addition, subtraction). Also, create a generic delegate that can work with different data types.
    - **Requirements:**
        - Implement a multicast delegate that chains at least three methods.
        - Demonstrate the use of a generic delegate to handle different data types.

4. **Using Func, Predicate, and Action Delegates**

    - Description: Demonstrate the use of Func, Predicate, and Action delegates by creating a console application that uses each of these delegates to perform specific operations.
    - **Requirements:**
        - Use a Func delegate to perform an arithmetic operation and return the result.
        - Use a Predicate delegate to check if a number is even.
        - Use an Action delegate to print a message to the console.