Bangladesh Army University of Engineering & Technology (BAUET)
Department of Computer Science and Engineering (CSE)
2nd Year 1st Semester Sessional Class, Summer-2024
Course Code: CSE-2104
Course Title: Object Oriented Programming Sessional
Full Marks: 25   Time: 1 Hours
Lab Test No: 01

SL	Assigned Tasks	MARK

Q1.   You are tasked with creating a program to manage student records using C++. Your program should utilize an array of objects, constructors, and a friend function. Design a solution that meets the following requirements: **12.5**

    a.   Define a **Student** class to represent individual student records. Each student should have the following attributes: (i) Student ID   (ii) Name   (iii) Grade

    b.   Implement a constructor for the Student class to initialize these attributes.

    c.   Create a friend function named **displayStudentInfo** that displays the information of a student object.

Develop a main program that:

    d.   Creates an array of **Student** objects to store student records. Initializes the array with data provided by the user or hardcoded values.

    e.   Calls the **displayStudentInfo** function to display the information of each student.

Q2.   Assume that the test results of a batch of students are stored in three different classes. Class *student* stores the roll number, class **test** stores the marks obtained in two subjects and class **result** contains the **total** marks obtained in the test. The class **result** can inherit the details of the marks obtained in the test and the roll number of students. *student* class has one protected attribute named *roll_number*, a parameterized method *get_number* for storing the roll number and another method named *put_number* for displaying that roll number. *test* class have two protected attributes named *sub1* and *sub2*, a parameterized method named *get_marks* for storing the marks of both the subjects and another method named *put_marks* for displaying the marks of both the subjects. Marks can be decimal numbers. *result* class has one attribute named *total* which will add the marks of two subjects and one method named *display* that will display individual subject marks as well as total marks through function calling from student class and test class.   **12.5**