



كلية تكنولوجيا الصناعة والطاقة

**Information Technology
Department
2nd Year**



جامعة برج العرب التكنولوجية
BORG AL ARAB TECHNOLOGICAL UNIVERSITY

جامعة برج العرب
التكنولوجية

Course: Programming Essentials in C++
Semester: 1st term 2025/2026.

Lecturers: Dr. Nehal Elazaly, Dr. Ghada Fathy

Assignment 1: C++ programming

Problem Description

1. Write a complete C++ program to manage student grades.
2. Ask the user to enter the number of students in the class.
3. For each student, use a loop to input:
 - Student's name
 - Three exam marks
4. Calculate the average for each student.
5. Use if-else to print the student's grade based on the average:
 - 90–100 → "Excellent"
 - 75–89 → "Very Good"
 - 60–74 → "Good"
 - 50–59 → "Pass"
 - Below 50 → "Fail"
6. Use increment operators to count how many students passed and failed.
7. After the loop ends, print:
 - Total number of students who passed
 - Total number of students who failed
 - The class average (sum of all students' averages ÷ number of students)



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Expected Example Output

Enter Total number of students: 3

Enter name of student 1: student1

Enter 3 marks: 80 90 70

Average = 80 → Very Good

Enter name of student 2: Student2

Enter 3 marks: 50 40 60

Average = 50 → Pass

Enter name of student 3: student3

Enter 3 marks: 30 20 40

Average = 30 → Fail

Total Passed = 2

Total Failed = 1

Class Average = 53.33

Submission Requirements

- **File name:** Assignment2_your_name.pdf file contains snapshot from your IDE (code and Output)
- The program should compile and run without errors.
- Submit your file before the deadline. (31/10/2025)