COURSE	:	**FUNDAMENTALS OF ALGORITHMS & COMPUTER PROBLEM SOLVING**
COURSE CODE	:	**CSC126**
ASSESSMENT	:	**GROUP PROJECT (Proposal Report, Project Report and Presentation)**
COURSE LEARNING OUTCOME	:	**Demonstrate communication skills in tasks related to computer program solutions (PLO5, A3)**
TOTAL MARKS	:	**35%**

OBJECTIVE:
The objective of this group project is to enhance students' communication skills through collaboration in analyzing real-world problems, developing algorithmic solutions, and presenting the developed computer programs.

OUTCOMES:
Students should be able to construct basic programs to solve daily problems using designated programming control structures (selection, repetition, function, and array).

SUGGESTED GUIDELINES

Project Title:
Students are required to identify a real-life problem that arises in their daily lives, design appropriate solutions, and solve the problem in a computerized way. Each group is to come up with an appropriate title that reflects the proposed project.

Group Members
Students are required to establish a group with 4 – 5 members.

REPORT (25%)

1) **Proposal Report**
   Each group needs to submit a proposal report, which should include a suggested title and a detailed description.

   Your proposal report must consist of the following information:
   a) Proposal Cover Report
   b) Proposed Project Title
   c) Proposed Project Description
   d) Objective of the Proposed Project
   e) Analysis – Input/Process/Output

   Format:
   a) Font Face: Arial
   b) Font size: 11-point
   c) Line spacing: 1.5
   d) Page Number: Bottom and centre of each page

   Proposal submission dateline: **Week 10 [13 June 2025 before 5 pm]**

   Submission Method: Save your proposal in **.pdf** format.

   After the proposal is submitted, you may start designing and coding the project.

2) Program Development

   Construct a complete C++ program to solve the problem identified in the proposal. The following criteria **MUST** be implemented in your program:

   a) Input and output operations
   b) The three control structures - sequential, selection and repetition
   c) Function – including passing parameters
   d) Array - implementing summation, average, highest/lowest, counter
   e) Processes - Calculation/Formula related to the project title (e.g., discount, tax, summation/total etc).
   f) Include comments at the beginning of your program that include students' name, students' ID, date, program title, and any part of your program that is necessary for indicating the purposes of the C++ statements.

3) **Final Report**

Prepare a complete report which consists of:

a) Final Cover Report
b) Project Summary
c) Objective of the Project
d) Algorithm Design – Flowchart **and** Pseudocode
e) Source code
f) Samples of input and output
g) Discussion/Conclusion

Format:
Font Face: Arial
Font size: 11-point
Page Number: Bottom and centre of each page

Report submission dateline: **Week 15 [23 July 2025 before 5 pm]**

Submission Method: Save your report in **.pdf** format.

PRESENTATION (10%)

Your presentation shall consist of the following:

a) Proposed Project Summary
b) Objective of the Project
c) Analysis – Input/Process/Output
d) Design Algorithm – Flowchart **and** Pseudocode
e) Demo of the C++ program – sample input and output

Presentation period: **Week 15 [23 July 2025 before 5 pm]**

Academic Integrity Notice:
Use of AI tools (e.g., ChatGPT, Copilot) or uncredited copying from the internet is strictly prohibited. Any form of plagiarism will result in zero (0) marks for the entire group. All work must reflect students' original effort and understanding.