UW

Department of Computer Science
Assignment # 01

Course Code: CS-111
Course Title: Programing Fundamental
Total Marks: 10
Date: 1ˢᵗ Nov, 2024

Name: _____
Registration No. _____
Discipline: BS(CS)-1ˢᵗ B
Submission Date: 8ᵗʰ Nov, 2024

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*Q1.   For the Given scenarios answer the questions: **(CLO1, GA2, C2) [10]**

Scenario 1: Library Late Fee Calculation
A library wants to implement a system to calculate late fees for returned books. The rules for calculating the fee are as follows:
- No fee is charged if the book is returned within 10 days of the due date.
- If the book is returned after 10 days, a late fee of $2 per day is charged for the next 10 days.
- If the book is returned more than 20 days after the due date, a flat fee of $30 is charged.

Task:
1. Write an algorithm to calculate the late fee based on the number of days late.
2. Create a flowchart illustrating the process.

Scenario 2: Grading System for Students
A school wants to automate the grading system based on students' scores. The grading criteria are:
- A score of 90 or above results in an "A" grade.
- A score between 80 and 89 gives a "B" grade.
- A score between 70 and 79 gives a "C" grade.
- A score below 70 results in a "Fail" grade.

Task:
1. Develop an algorithm to assign a grade based on a student's score.
2. Create a flowchart that shows the flow from inputting a score to displaying the grade.