SET 213 – Data Structures & Algorithms

Experiment # 2

Experiment Title

Algorithm Development and Implementation

Assessment of CLO(s): III

Performed on 27-09-2024

Student Name			
Roll No.		**Group**	
Semester		**Session**	

Total (Max)	Criteria 1 (2.5)	Criteria 2 (2.5)	Criteria 3 (2.5)	Criteria 4 (2.5)	Total (10)
Marks Obtained					
Remarks (if any)					

Experiment evaluated by

Instructor's Name	**Engr. Muhammad Asad Husain**		
Date		**Signature**	

Department of Engineering Technology
(UIT University)

Course Code: SET213 Course Title: Data Structures & Algorithms Course Credits: 2+1 Session: Fall 2024

Rubric for assessment criteria to perform experiment number 2.

Level / Criteria	UNSATISFACTORY 1	COMPETENT 2	PROFICIENT 3	DISTINGUISHED 4
Capability of writing algorithm/ Procedure	None of the steps are implemented of an algorithm.	Few steps are implemented correctly of an algorithm.	Most of the steps are implemented correctly of an algorithm.	All the steps are implemented correctly of an algorithm.
Capability of writing Program	Programs not completed.	Completeness of code, consistent variable naming and unformatted.	Completeness of code, inconsistent variable naming and well formatted.	Completeness of code, consistent variable naming and well formatted.
Completion of target in Lab	25% target has been completed	50% target has been completed	75% target has been completed	100% target has been completed
Output	None of the outputs are correct.	Few outputs have been found correctly.	Some of the outputs are correct and well formatted.	Most of the outputs are correct and well formatted.

Practical Objective(s):

1. Practicing the process of writing an algorithm to solve a problem
2. Practicing the process of converting an algorithm into program
3. Being able to write an algorithm and the corresponding program on your own

Do It Yourself:

1. Implement algorithm 1(b) in C++
2. Complete the code for algorithm 2
3. Write an algorithm to divide a given array of integers into two sub- arrays. Sub-array1 should consist of the even numbers existing in the array and sub-array2 should consist of the odd numbers existing in the array.
4. Implement the above algorithm in C++.

Question(s):

1. Which of the two algorithms present a better programming practice? Algorithm 1(a) or Algorithm 1(b)?
2. Write the reason for your answer in question 1.