Data Structure and Algorithm

Laboratory Activity No. 3

Translating Algorithm to Program

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# Objectives

Introduction

Data structure is a systematic way of organizing and accessing data, and an algorithm is a step-by-step procedure for performing some tasks in a finite amount of time. These concepts are central to computing, but to be able to classify some data structures and algorithms as “good,” we must have precise ways of analyzing them.

This laboratory activity aims to implement the principles and techniques in:

* Writing a well-structured procedure in programming
* Writing algorithm that best suits to solve computing problems
* Writing an efficient Python program from translated algorithms

# Methods

• Design an algorithm and the corresponding flowchart (Note: You may use LucidChart or any application) for adding the test scores as given below if the number is even: 26,49,98,87,62,75

• Translate the algorithm to a Python program (using Google Colab)

• Save your source codes to GitHub

# Results

1. **Start**
2. Create a list of test scores: [26, 49, 98, 87, 62, 75]
3. Initialize a variable sum = 0
4. For each number in the list:
5. If the number is **even** (i.e., number % 2 == 0):
6. Add it to sum
7. After checking all numbers, print the value of sum
8. **End**

A diagram of a flowchart

AI-generated content may be incorrect.

Figure 1 Screenshot of flowchart

# Conclusion

The conclusion expresses the summary of the whole laboratory report as perceived by the authors of the report.

- I Think this is by far the most easy algorithm and code I made its kind of easy to translate what the problem wants me to do.

**References**

[1] Co Arthur O.. “University of Caloocan City Computer Engineering Department Honor Code,” UCC-CpE Departmental Policies, 2020.