**COMP6421031 – ALGORITHM & PROGRAMMING**

**FINAL PROJECT DESCRIPTION**

This project is meant to be done in group. You have been assigned to a group randomly. You can check your group in this project description. Each group must choose a topic and create a program using C language according to that topic. Each group must submit required document before the due date. The due date for this assignment is 31 January 2022.

1. **PROJECT TOPICS AND REQUIREMENTS**

Each submitted project must comply to the topics and requirement described in this document. Any non-compliant project can be rejected and not marked without any confirmation to the group. Each group are responsible to their own project compliance to the requirement.

The general requirement of the project is as follow:

1. Each project must be built by using C language. You can use any IDE to build your project.
2. The usage of third-party library, beside the common C library, is prohibited. You cannot use any C library obtained from the internet in your code.
3. The code must be written in proper structure. Any code that has not written is proper structure, for example without any proper indentation, will be penalized.
4. Each project must be built by combining several functions. You cannot write your code by using only the main function.
5. The code submitted for this project must have a proper documentation by using comment in C. Each function must be commented to explain its function, input-output (if any), and who write the code (name of the member who write the function).
6. The project must be built as command line program. You don’t need to have a graphical user interface for this project. Any group that uses GUI WILL NOT be given extra mark for this.
7. The code submitted for this assignment must be written by the group. Any plagiarism or blatant duplication of code are forbidden. Any group that has been caught violating this rule will be penalized with 0 (zero) mark.
8. The program, regardless of the topic, must be running continuously until a user trigger a stopping condition (for example, by typing “exit” as command-line input). The program need to have a main menu that will running repeatedly as long as the user want.

For the topic, each group must choose one topic from the list given in this document. A topic can be chosen by more than one group. Refer to this list to choose a topic.

1. **BANK MANAGEMENT SYSTEM**. A program to manage several saving accounts. The program must have a feature to create new account and save its data. The new account will have data about account’s owner name, contacts, its creation date, and its initial saving sum (in IDR). The program also needs to have a feature to deposit and withdraw some value from an account. There is a limit for deposit and withdraw that must be enforced by the program. The minimum amount of deposit is Rp. 100.000. Any value below that limit should be responded by proper error message. The maximum value of withdrawal is Rp. 5.000.000. Any value exceeds that limit should be responded by proper error message. The program also needs to have a feature to close an account. If this feature is chosen, the account data should be deleted from the program.
2. **PERSONAL ELECTRONIC DIARY**. A program to manage a person diary. To start this program, the user needs to enter the correct password. Once the password is accepted, the user can choose several features. The first feature is to write a diary entry. A user can write long passage and save it on the program (method to mark the end of passage is handed to each group). The second feature is to read a diary entry. When choosing this feature, the user can select which entry he/she want to read. If an entry is selected, show the complete passage on the screen. The third feature is to delete an entry. If this is chosen, delete the entry from the record.
3. **CLASS MANAGEMENT PROGRAM.** A program to manage a class rooster and evaluation result of its students. The program needs to implement several features. The first feature is to add a student. This feature needs a student’s NIM and name as its input and save it. The second feature is entry of evaluation result. The user can choose a student and enter the type of evaluation and its value (mark). For example, the user can choose student A and enter “MID” and value “90” as its input. The evaluation type must be one of the following: “ASG”, “MID”, “FIN”. Any entry beside those three must be rejected. The third feature is to show data. When this feature is selected, the program should ask the user how to sort the data. The user can select NIM, ASG, MID, or FIN as the sorting criteria. After the selection, show all the data (NIM, name, ASG, MID, and FIN) in ascending order based on the selected criteria. This data must be shown as a proper table.
4. **SUBMISSION DOCUMENTS AND SUBMISSION PROCEDURE**

To finish this assignment, each group need to submit several documents. The required documents are described as follow:

1. A link to a video (you can use Youtube, OneDrive, or Google Drive as file repository). The video must contain each group explanation on what the chosen topic is, how it works, and the demonstration of the program. Don’t forget to make the link accessible by public. Any link that cannot be accessed will not be marked for evaluation. Put this link in a text file.
2. The source code of the program. Only submit the C file that you created (and any file used by the program and created as the program support). Don’t include any other file that created automatically by the IDE you use.

Put both document as an archive file (ZIP, RAR, or 7z) and submit the archived file into BINUSMAYA.

1. **GROUP ASSIGNMENT**

Refer to this list for your group assignment.

| **No** | **Group** | **Name** | **NIM** |
| --- | --- | --- | --- |
| 1 | 1 | GHASSAN ARSAFA | 2502035285 |
| 2 | PUTRI ADISTIA RAMADHANI | 2502066555 |
| 3 | BALYA MALKAN MAHYUZAR | 2502082432 |
| 4 | 2 | NASYWA TSURAYA | 2502044200 |
| 5 | SAMUEL KUSUMA | 2540130112 |
| 6 | SULTAN ASSALAM PUTRA BADUI | 2502055305 |
| 7 | 3 | NATANAEL STEVEN SETIAWAN | 2540102784 |
| 8 | FLORENCIA IRENA | 2540130781 |
| 9 | JAMES WIJAYA | 2540133322 |
| 10 | 4 | CALVIN NELSON | 2540117565 |
| 11 | CALVIN HARTONO SOEMARDI | 2540133064 |
| 12 | ALVIN NATHANIEL DARMAWAN | 2540133335 |
| 13 | 5 | STEVEN THE | 2540117584 |
| 14 | TIGOR ABRAHAM NUARTHA | 2540131790 |
| 15 | FINLEY RUSTAM | 2540125081 |
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| 28 | 10 | BENEDICK WIJAYAPUTRA | 2540130024 |
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| 30 | NEAL SEBASTIAN CHANDRA | 2540133253 |
| 31 | 11 | RICKY WIJAYA | 2540130094 |
| 32 | JONATHAN FERNANDO SAUJANA | 2540134060 |
| 33 | FELICIA JOCELIN ANGGAWIJAYA | 2540131784 |
| 34 | 12 | AMBROSIUS CALVIN | 2540130131 |
| 35 | CHRISTINA BLESKADIT | 2502064064 |
| 36 | WILSON CLAY | 2540135170 |
| 37 | 13 | VINCENT ANTONIUS PANDORA | 2540132225 |
| 38 | MARCELL SAMUEL | 2540120080 |
| 39 | NICHOLAS | 2540133291 |
| 40 | 14 | JACQUELINE ABYASA | 2540133234 |
| 41 | JASON SEBASTIAN KURNIAWAN | 2540134514 |
| 42 | ELENA GHINI RACHMAN | 2502055204 |
| 43 | 15 | THEODORE ADITYA OEI | 2540102790 |
| 44 | NATHANAEL SEPTHIAN ADI NUGRAHA | 2540117590 |
| 45 | JESSLYN AUDREY | 2540130106 |
| 46 | 16 | JEREMIA SANDY | 2540133644 |
| 47 | VINCENT ALEXANDER HARIS | 2540130081 |
| 48 | DANDY RADITYA ADILAKSANA | 2502037580 |
| 49 | 17 | MUHAMMAD KEVIN SAFAAT | 2540133663 |
| 50 | WILLARD TIOCUARDY | 2502064070 |
| 51 | QUESYNOVICH DENIS AL HAFIZH | 2502038463 |
| 52 | 18 | VALENTIO BRYANT YULIUS | 2540135196 |
| 53 | GABRIEL MARTUA SIPANA SIMANJUNTAK | 2502044226 |
| 54 | THEOFILUS JONATHAN HIDAYAT | 2540117533 |