NAME: ODU HANSON

DEPARTMENT: ELECTRICAL ENGINEERING

COURSE: EMBEDDED SYSTEMS

COURSE CODE EEE423

MAT NO : DE:2020/0914

LECTURER : ENGR. F.S MBAH

ASSIGNMENT

A PROGRAM THAT COMPUTES THE SCORES OF THREE STUDENTS FOR FOUR COURSES AND OUTPUTS THEIR CURRENT CGPA

#include <stdio.h>

// Function to calculate grade point for a given score

char calculateLetterGrade(int score) {

if (score >= 70) {

return 'A';

} else if (score >= 60) {

return 'B';

} else if (score >= 50) {

return 'C';

} else if (score >= 45) {

return 'D';

} else if (score >= 40) {

return 'E';

} else {

return 'F';

}

}

// Function to calculate CGPA

float CGPAanalysis(int score1, int score2, int score3, int score4) {

// Calculate grade points for each course

int grade\_point1 = calculateLetterGrade(score1) - 'A';

int grade\_point2 = calculateLetterGrade(score2) - 'A';

int grade\_point3 = calculateLetterGrade(score3) - 'A';

int grade\_point4 = calculateLetterGrade(score4) - 'A';

// Calculate cumulative grade points and course units

int cumulative\_grade\_point = (grade\_point1 + grade\_point2 + grade\_point3 + grade\_point4) \* 12;

printf("cummulative garde point for the four courses %d\n", cumulative\_grade\_point);

int gpa = cumulative\_grade\_point /12;

printf("Current gpa is %d\n", gpa);

int cumulative\_course\_units = 120 + 12;

// Calculate CGPA

printf ("previous cummulative grade point is taken as 500");

float cgpa = (float)(cumulative\_grade\_point + 500) / cumulative\_course\_units;

//returns the calculated

return cgpa;

}

//Main program execution

int main() {

char name[100];

char matriculation\_number[20];

int score\_eee401, score\_eee402, score\_eee403, score\_eee404;

int i;

for (i = 0; i < 3; i++) {

// Input student information

printf("\nStudent %d\n", i + 1);

printf("Enter your name: ");

scanf("%s", name);

printf("pls Enter your matriculation number: ");

scanf("%s", matriculation\_number);

// Input scores for each course

printf("pls Enter your score for EEE 401: ");

scanf("%d", &score\_eee401);

printf("Grade: %c\n", calculateLetterGrade(score\_eee401));

printf("pls Enter your score for EEE 402: ");

scanf("%d", &score\_eee402);

printf("Grade: %c\n", calculateLetterGrade(score\_eee402));

printf("pls Enter your score for EEE 403: ");

scanf("%d", &score\_eee403);

printf("Grade: %c\n", calculateLetterGrade(score\_eee403));

printf("pls Enter your score for EEE 404: ");

scanf("%d", &score\_eee404);

printf("Grade: %c\n", calculateLetterGrade(score\_eee404));

// Calculate and display CGPA

float cgpa = CGPAanalysis(score\_eee401, score\_eee402, score\_eee403, score\_eee404);

printf("\nCGPA for %s (Matriculation Number: %s): %.2f\n", name, matriculation\_number, cgpa);

}

printf("thank you for using this c program ");

return 0;

}