#include <stdio.h>

#include <stdlib.h>

// Number of subjects

const int NUM\_SUBJECTS = 7;

// Function to calculate grade based on marks

const char\* calculateGrade(int marks) {

if (marks >= 70) return "A";

else if (marks >= 60) return "B";

else if (marks >= 50) return "C";

else if (marks >= 40) return "D";

else return "Fail";

}

// Function to calculate the grade point for the average

const char\* calculateAverageGrade(float average) {

if (average >= 70) return "A";

else if (average >= 60) return "B";

else if (average >= 50) return "C";

else if (average >= 40) return "D";

else return "Fail";

}

int main() {

const char \*subjects[] = {

"Programming Languages",

"Data Structures and Algorithms",

"Digital Logic",

"Database Systems",

"System Analysis and Design",

"Probability and Statistics II",

"Operating Systems"

};

int marks[NUM\_SUBJECTS];

const char \*grades[NUM\_SUBJECTS];

int totalMarks = 0;

float averageMarks;

printf("Enter the marks for the following subjects:\n");

// Input marks

for (int i = 0; i < NUM\_SUBJECTS; i++) {

printf("%s: ", subjects[i]);

scanf("%d", &marks[i]);

grades[i] = calculateGrade(marks[i]);

totalMarks += marks[i];

}

averageMarks = (float)totalMarks / NUM\_SUBJECTS;

const char \*averageGrade = calculateAverageGrade(averageMarks);

// Print transcript in CSV format

printf("\nTranscript:\n");

printf("Subject,Marks,Grade\n");

for (int i = 0; i < NUM\_SUBJECTS; i++) {

printf("%s,%d,%s\n", subjects[i], marks[i], grades[i]);

}

printf("Average Marks: %.2f\n", averageMarks);

printf("Average Grade: %s\n", averageGrade);

return 0;

}