113-1 Mid Term

Name: Student ID:

In this exam, you can use computers and books without AI like chatGPT to answer questions. Please upload programs of your answer. Each answering program corresponds to a question below. They are named 1.c, 2.c, …, and 7.c.

Questions (total 100%):

(1) Please give a declaration for 4 variables (primitive data types respectively: integer, character, float and double), read them, and print their values in format. (10%)

(2) Please write a program to read a double float number, read an arithmetic operator (+, -, *, /, =), then print user inputs. It should ask which variable to read on screen. (10%)

(3) Please write a for loop to copy a sentence "You are welcome." into an array, print the copied string. (10%)

(4) Please write a for loop to add two integer matrices with size 2*2, and print the resulted matrix. (10%)

(5) Please write a for loop to multiply two integer matrices with size 2*2, and print the resulted matrix. (20%)

(6) Please write a C function to execute arithmetic operations on two double float numbers. Your function should carry three parameters (two double float numbers and one character of arithmetic operator), execute, display operational result. (20%)

(7) Please write a C function to read double float numbers and arithmetic operators respectively guided by user interactions. This arithmetic expression might take input items more than four. Your design should display this arithmetic expression when user input '='. (20%)