

The assignment will be graded out of 100 points.

**Due: 11:59pm Monday, July 30, 2018**

**Submission Guidelines:**

Assignment will be submitted via Blackboard. If there are multiple files that you are submitting then you should zip your files into a single file and submit it. The name of this file should be in following format: **lastname\_firstname\_UTANetID**. If you are submitting a single file, make sure it is in the following format: word, txt or pdf and it should be named as mentioned above.

Make sure your name and your student ID are listed in your assignments.

**If your assignment is not completed by the deadline**, send it anyway and review it with the TA for partial credit. Do not take a zero or excessive late penalties just because it isn't working yet. We will make an effort to grade you on the work you have done.

**Note: Please do not forget to zip all the files in ONE folder**

**Example:**

Task1.txt  
Task2.txt  
Task3.c  
Task4.c  
Task5.c  
Task6.c  
Task7.c

After that, copy all the C files into one folder and compress(zip) the folder. Then, submit the compressed (zipped) folder on Blackboard.

## Assignment Specification:

For ALL the Tasks please get the values from user as input.

### Task 1 (10 pts.)

In a file called task1.txt, describe Global and Static variables in C and the differences between them.

### Task 2 (15 pts.)

In a file called task2.txt, write the output of the following program.

```
#include <stdio.h>
#include <stdlib.h>
void foo()
{
    int a = 10;
    static int sa = 10;
    a += 5;
    sa += 5;
    printf("a = %d, sa = %d\n", a, sa);
}
int main()
{
    int i;
    for (i = 0; i < 10; ++i)
        foo();
    return 0;
}
```

### Task 3 (15 pts.)

In a file called task3.c, write a program in C to create and store information in a **text file**.

Example:

Input:

Enter a sentence to insert into a file: **This is the content of the file**

Output:

The file FileName.txt created successfully...!

## Task 4 (15 pts.)

In a file called task4.c, write a C program to merge two files and write it in a new file.  
Hint: You need to read those two files. Then, merge the contents of the two files and insert (write) into a new file.

Example:

Enter the 1st file name: file1.txt

Enter the 2nd file name: file2.txt

Enter the new file name where to merge the above two files: merged\_file.txt

The two files merged into merged\_file.txt file successfully.

## Task 5 (15 pts.)

In a file called task5.c, write a C program to append multiple lines at the end of a text file.

Example:

Assume that the content of the file append.txt is:

line 1

line 2

line 3

line 4

line 5

Enter the file name to be opened: append.txt

Enter the number of lines to be written: 3

Enter 3 lines:

line 6

line 7

line 8

### Expected Output:

The content of the file append.txt is:

line 1

line 2

line 3

line 4

line 5

line 6

line 7

line 8

## Task 6 (15 pts.)

In a file called task6.c, write a C program to read name and marks of n number of students from user (**use Dynamic memory allocation**) and store them in a file. If the file previously exists, add(append) the information of n students.

Example:

Enter the name of text file: students.txt

Enter number of students (n): 5

Enter 5 records (NAME SCORE):

NAME\_1 100

NAME\_2 98

NAME\_3 80

NAME\_4 80

NAME\_5 75

Expected output of students.txt

NAME SCORE

=====

NAME\_1 100

NAME\_2 98

NAME\_3 80

NAME\_4 80

NAME\_5 75

## Task 7 (15 pts.)

In a file called task7.c, write a C program to read from the file that you have created in task 6 (students.txt) and print on the screen the name of students, the number of students, Mean, median, Mode of the scores of students.

Expected output (EXAMPLE):

NAME SCORE

=====

NAME\_1 100

NAME\_2 98

NAME\_3 80

NAME\_4 80

NAME\_5 75

Number of students: 5

Mean: 86.6

Mode: 80

Median: 80

## **Assignment Guidelines:**

There will be several programming assignments in this course, typically assigned on a weekly basis. All assignments will have equal weight. No assignment scores will be dropped. The following class policies regarding assignments will be followed:

- All assignments must be submitted via [Blackboard](#).
- No extra credit will be provided.
- If you make multiple submissions to Blackboard for the same assignment, only the latest submission will be graded.

## **Late submission policy:**

- All assignments are graded out of 100 points. Assignments submitted late will be penalized, at a rate of 4 penalty points per hour. The submission time will be the time shown on Blackboard. Any assignment submitted more than 25 hours late will receive no credit.
- Exceptions to late submission penalties will only be made for emergencies documented in writing, in strict adherence to UTA policy. For all such exception requests, the student must demonstrate that he or she made all efforts to notify the instructor as early as possible.
- Computer crashes, network crashes, and software or hardware failure will NOT be accepted as justification for late submissions. If you want to minimize chances of a late submission, aim to submit early. You can always revise your submission till the deadline.
- Sometimes students submit the wrong files on Blackboard. Unfortunately, no credit or waiver of late penalties can be provided in such cases.
- If you find yourself in an emergency situation and cannot deliver homework on time, immediately inform the instructor and teaching assistant. Even if you have a valid reason for delivering late an assignment, you must make a convincing case that you have notified the instructor and teaching assistant as early as possible.

If you want to minimize chances of a late submission, aim to submit early. You can always revise your submission till the deadline (maximum 3 attempts).