

Data Structures

Lab Task 01

Problem 01:

1. Write a program to swap two numbers using pointers. The pointers must be passed to the function.

Problem 02:

2. Write a menu driven program in which you should input a string without space from the user, and the program should perform the following operations using pointers:
 - Check if the string is palindrome.
 - Count the frequency of a certain character.

Problem 03 (CHALLENGING ONE):

3. Write a program in which using a 2D array store the weekly temperatures of a month. Each row represents a week. A visual representation is given below.

Week 1							
Week 2							
Week 3							
Week 4							

- Populate the array using a pointer variable with random numbers (make use of rand() function) between 10-30 degree Centigrade.
- Display the temperature of the whole month using a pointer.
- Find the hottest day of each week using a pointer, and also show the temperature on that day.

Sample Output:

```
Temperatures of each week:
12      18      5      11      30      5      19
19      23      15      6      6      2      28
2       12      26      3      28      7      22
25      3       4      23      23      22      27

Hottest day of week: 1 is:  Friday having a temperature: 30
Hottest day of week: 2 is:  Sunday having a temperature: 28
Hottest day of week: 3 is:  Friday having a temperature: 28
Hottest day of week: 4 is:  Sunday having a temperature: 27
```
