HW8 – Pointers

Due on Nov. 15th, 6:00pm

1. Write a program that receives 10 integers, sort the integers in an ascending order by using the function 'swap', and compute the median value as the average of the two integers values in the middle (5th and 6th).

void swap(int *A, int *B);

Enter 10 numbers:	3 19 1 4 11 20 15 8 23 21
Ascending order:	1 3 4 8 11 15 19 20 21 23
Median:	13

2. The following table shows the daily flights from city A to city B. Some are direct flights and some others stopover in other cities:

Departure time	*Arrival time*
8:00 am	10:16 am
9:43 am	13:32 pm
11:19 am	1:35 pm
12:47 pm	3:00 pm
2:00 pm	6:08 pm
3:45 pm	5:55 pm
7:00 pm	11:20 pm
8:45 pm	10:38 pm

Write a program that asks user to enter a desired departure time and an arrival time (expressed in hours and minutes, using the 24-hour clock). The program then displays the departure and arrival times for the flight which works for the user's schedule (Departure on or after the desired departure time and arrive on or before the desired arrival time). If multiple flights are available, display the flight with the shortest flight time. Use the function below:

int check_flight(int desired_dept_time, int desired_arr_time, int *departure_time, int *arrival_time);

Enter a departure time (24-hour): 12:15
Enter an arrival time (24-hour): 18:00
Flight times:

Departure time	Arrival time
3:45pm	5:55pm

3. Write a program that searches an occurrence of all possible combination of consecutive characters of a word given a message. The word is 4-character long. Use the function 'count_occurrence' to count the number of times that a given character combination appears in a given message. Print out any character combination and its occurrence as it appears at least once.

Message: "time and tide wait for no man"

void count_occurrence(const char *message, char *chs);

Enter characters: time	Enter characters: want
t: 3	w: 1
ti: 2	wa: 1
tim: 1	a: 3
time: 1	an: 2
i: 3	n: 3
im: 1	t: 3
ime: 1	
m: 2	
me: 1	
e: 2	

Note. a word ‘time' has 10 consecutive character combinations: ‘t’, ‘ti’, ‘tim’, ‘time’, ‘i', ‘im’, ‘ime’, ‘m’, ‘me’, ‘e’.