Tutorial No. 8 : Pointers

Exercise 1 :

Let A, B, and C be three integers, and P1 and P2 two pointers to integers, which are stored in main memory as illustrated in the following table:

Variable	A	B	C	P1	P2
Address	0xf0	0xf4	0xf8	0xfA	0xfC

Fill in the table below by determining the value of the different given variables for each operation.

	A	B	C	&A	&B	&C	P1	P2	P1^	P2^
A←1, B←2, C←3 P1←&A, P2←&B										
P2←&C										
P1^← P2^										
P2^ ← P2^ + 1										
P1← P2										
P2← &B										
P2^ ← P1^ - 2 * P2^										
P2^ ← P2^ - 1										
C ← P2^										
P2^ ← P1^ + A										

Exercise 2 :

Let a, b, and c be three integers, and p and q two pointers to integers, which are stored in main memory as illustrated in the following table:

Variable	a	b	c	p	q
Address	0xA00	0xA04	0xA08	0xB00	0xB04
Content	5	8	3	0xA00	0xA04

Fill in the table below by determining the value of the different given variables for each operation.

	a	b	c	&a	&b	&c	p	q	p^	q^
p^ ← p^ + q^ * 2;										
q^ ← q^ − a;										
p ← &c;										
p^ ← p^ + b / 2;										
q ← &a;										
q^ ← q^ + p^;										

printf("It is by trying again and again that one finally succeeds. ");