

### تمرین ۳

تینا صداقت ۹۳۳۱۰۴۴

2.

Big-endian is an order in which the "big end" (most significant value in the sequence) is stored first (at the lowest storage address).

Little-endian is an order in which the "little end" (least significant value in the sequence) is stored first.

0xdec0ded1: Bytes are: de, c0, de, d1 and each byte requires 2 hex digits.

address	Little-endian	Big-endian
n+1	d1	de
n+2	de	c0
n+3	c0	de
n+4	de	d1

3.

After executing the instruction PUSH, the address will decrease by 4.  
So the address will be 0x2218.

4.

*By using r3 as a temporary register:*

CPY R3, R6 ;

SUB R3, #00001000 ; R3 := R3 – 00001000 and set condition codes

*Without using a temporary register:*

SUB R6, #00001000 ; R6 := R6 - 1000 and set condition codes

5.

```
LDR R1, 0x1234_5678
```

```
LDR R2, [R1] ;the first number is in R2
```

```
LDR R3, 0x7894_5612
```

```
LDR R4, [R3] ;the second number is in R4
```

```
MUL R2, R4
```

```
LDR R5, 0x2000_0010
```

```
STR R2, [R5]
```

6.

BL instruction points to THUMB instructions but BLX instructions points to ARM instructions. The advantage of using Thumb instructions over ARM is that Thumb instructions are 16bits instructions that is more useful for us.