CSCI 2330 – Array Exercises
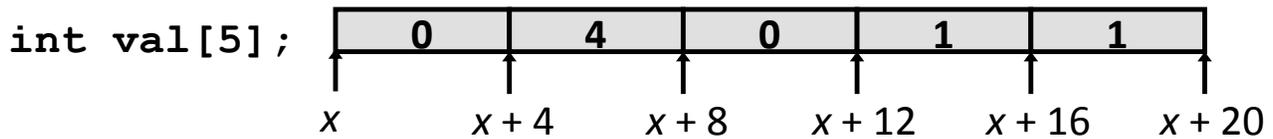
Consider the array shown below with the specified **int** contents, which starts at memory address x. For each expression given below, give the **type** of the expression (for example, **int** or **int***) and the **value** of the expression (which may be in terms of x). Assume that the machine is little-endian with 1-byte chars, 4-byte ints, and 8-byte longs.

```
int val[5];
```

0	4	0	1	1

x   x + 4   x + 8   x + 12   x + 16   x + 20

Example Expression: (5 + 3)
> **Type: int**
> **Value: 8**

1.   `val[4]`

2.   `val`

3.   `val + 1`

4.   `&val[2]`

5.   `*(val + 2)`

6.   `val + i`   (for some integer **i**)

7.   `val[5]`

8.   `*((char*) val)`   (casting val to char* before dereferencing it)

9.   `*((long*) val)`   (hint: remember endianness)