

ICS Homework 10

December 6, 2021

1 Array and Pointer

Please answer the following questions and explain why. Assume we use x86-64 machines.

1. Is the value of `&a[1]` equals to value of `(b+1)`?

```
1 int a[2]; char *b = a;
```

X *a是整数类型int的指针, 而b是字符串类型的指针.*

2. Is the value of `&a[1]` equals to value of `(b+1)`?

```
1 int a[2]; char **b = a;
```

X *b是a的地址*

3. Is the value of `&a[1]` equals to value of `(b+1)`?

```
1 int *a[2]; char **b = a;
```

✓

4. Is the value of `&a[1]` equals to value of `(b+1)`?

```
1 int a[2]; char (*b)[2][2] = a;
```

char b[2][2]*

✓

a[0]

<i>(*b)[0][0]</i>	<i>(*b)[0][1]</i>
<i>(*b)[1][0]</i>	<i>(*b)[1][1]</i>

5. Is the value of `&a[1]` equals to value of `(b+1)`?

```
1 int a[2]; char (**b)[2][2] = a;
```

X

6. What is `a`?

```
1 int *(*a[3])(int *, int);
```

**a[3]是一个返回值类型为int*的函数*

a[3]是函数的指针, a应该是一个8B的指针的指针

注 `int(*a)(int);`

一条变量声明或定义, a是一个指针, 这个指针指向一个有一个int参数、返回值也是int的函数。