Chapter 4 Homework
CPTR 280

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Exercise 3.10. Assume that x is an array of integers, and i and j are integers. Convert the following C statements into ARM assembly language.

```
//(a)
x[i]=j;
//(b)
x[j]=x[i];
//(c)
x[i]=x[j*2];
```

Solution (a)

```
ldr     r0, =x
mul     r1, #i, #4
str     #j, [r0, r1]
```

Solution (b)

```
ldr     r0, =x
mul     r1, #i, #4
ldr     r2, [r0, r1]
mul     r1, #j, #4
str     r2, [r0, r1]
```

Solution (c)

```
ldr     r0, =x
mul     r1, #j, #8
ldr     r2, [r0, r1]
mul     r1, #i, #4
str     r2, [r0, r1]
```