

EXAM #3 MON 4/29

## Arrays

```
int T [100] [40]
```

← ROWS      ← COLS

// zero all locations of T with code

// BAD WAY

```
T[0][0] = 0;
```

```
T[0][1] = 0;
```

```
T[0][2] = 0;
```

```
for (r=0; r<100; r++)
```

```
    for (c=0; c<40; c++)
```

```
        T[r][c] = 0;
```

	0	1	2	3		39
0	100	90	95	90		
1	80	80	90	90		
2	75	85	80	80		
	⋮					
99						

numstu  
3

numtst  
4

Ex 1	Ex 2	Ex 3	Ex 4	Avg
100	90	95	90	97.25
<del>80</del>	80	90	90	85.00
75	85	80	80	80.00
92.33	85.00	88.25	xxx	xxx

Tstavg

0	1	2	3		39
---	---	---	---	--	----

stavg

0	
1	
2	
3	
99	

// find avg for each student

```
for (r=0; r < numstu; r++)  
{
```

```
    sum = 0;
```

```
    for (c=0; c < numtst; c++)  
    {
```

```
        {
```

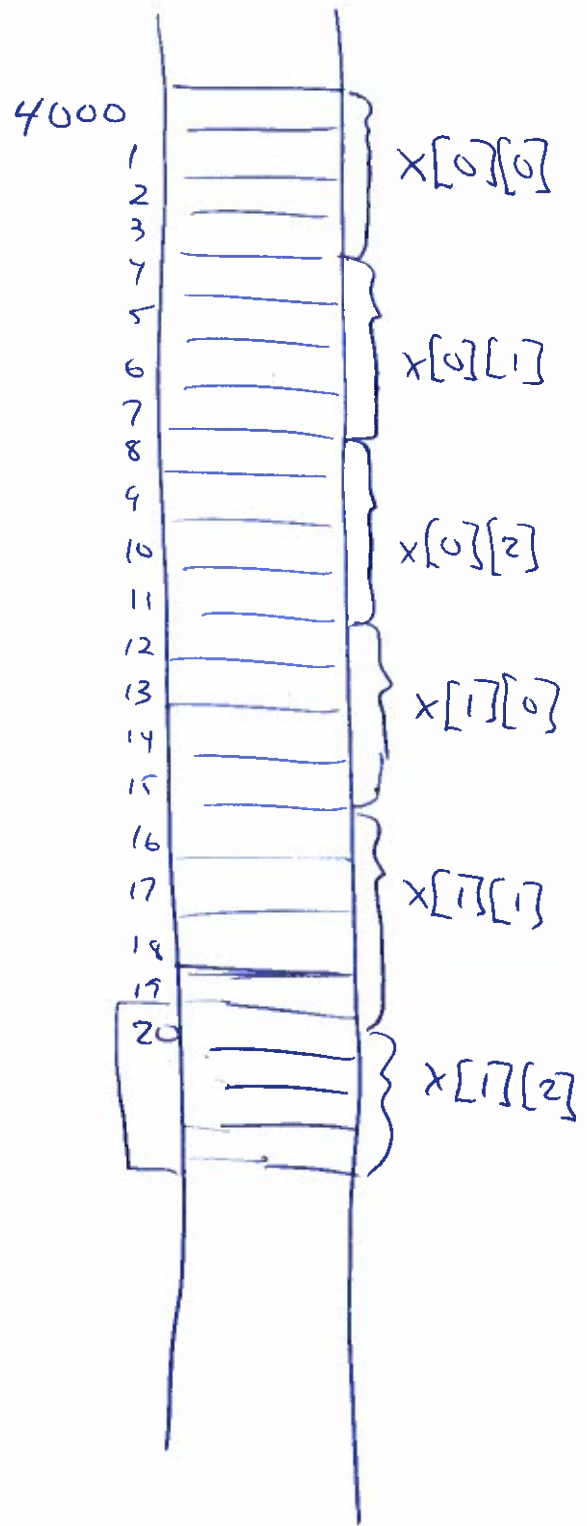
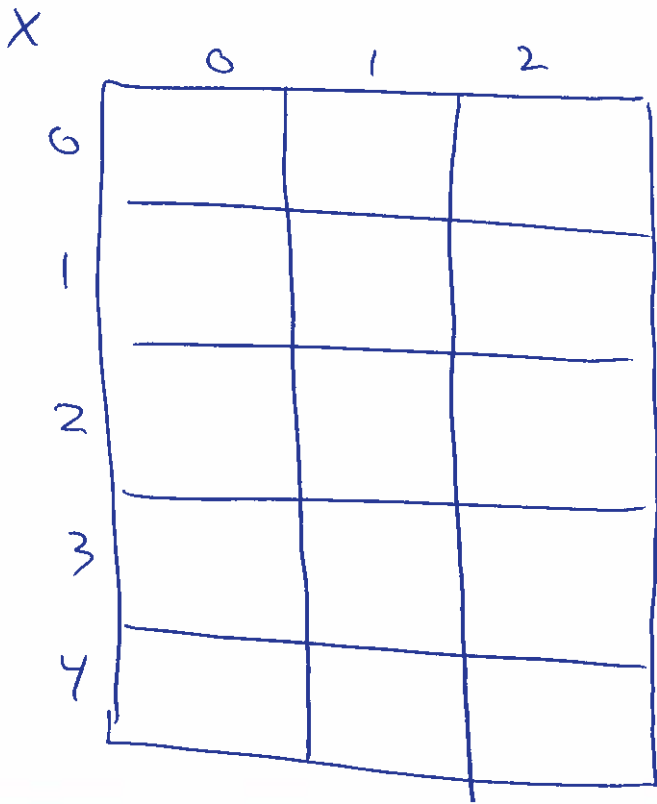
```
            sum = sum + T[r][c];  
        }
```

```
    }  
    sum = sum / numtst;
```

```
    stuavg[r] = ((double) sum) / ((double) numtst);  
}
```

```
// find avg for each test
for (c=0; c < numTst; c++)
{
    sum=0;
    for (r=0; r < numstu; r++)
    {
        sum = sum + T[r][c];
    }
    tstavg[c] = ((double)sum)/((double)numstu);
}
```

int x[5][3];



$x[1][2] = 16;$

start of x  
MEM[  $4000 + (1 * 3 + 2) * 4$  ]  
# of col      size of int

4020

# Character data

```
char a, b, c;
```

```
// a, b, & c may hold exactly 1 character
```

```
a = 'C';  
b = 'A';  
c = 'T';
```

← single quotes  
for single char

```
printf("%c%c%c", a, b, c);
```

character data

```
// print CAT
```

```
b = 'O';
```

```
printf("%c%c%c", a, b, c);
```

```
// print COT
```

```
a = 'B';
```

```
printf("%c%c%c", a, b, c);
```

```
// print BOT
```

A-2

a-y

O-9

punc

/

/

/

/

5