

Art 486: Introduction to Interactive Media

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Lecture 3, Sept 10

Schedule

- Take Roll
- loops, arrays, strings
- lots of practice!
 - hey! there's a test on tuesday!
- comments

use a table to understand loops

```
a=0; while (a<10) { a = a+1; trace(a); }
```

a	0	1	2	3	4	5	6	7	8	9	10
a<10?	T	T	T	T	T	T	T	T	T	T	F!
a=a+1	1	2	3	4	5	6	7	8	9	10	-
trace a	1	2	3	4	5	6	7	8	9	10	-

practice

- `a=0; for (i=0; i<10; i=i+1) { a=i; trace(a); }`
- `a=0; for (i=10; i>5; i=i-1) { a=a+i; trace(a); }`
- `a=0; for (i=1; i<=10; i=i+1) { a=a-i; trace(a); }`
- `a=0; i=0; while (a<50) { a=a+i; i=i+1; }`

Arrays

- lists of variables, referred to by name and "index"
- must be declared: `"var ar:Array;"`
- must be "initialized": `"ar= new Array(size);"`
- used via bracket notation: `"name[i] = x;"`
- work great with for loops!
- `for (i=0; i<6; ++i) { ar[i]=i*2 }`
 - sets `ar[0]=0, ar[1]=2, ar[2]=4, ar[3]=6, ar[4]=8,ar[5]=10`

arrays in use

- `var a: Array;`
- `a = new Array(10);`
- `var i: int;`

- `for (i=0; i<10; i=i+1) { a[i] = i; }`
- `for (i=0; i<10; i=i+1) { trace(a[i]); }`

- first loop works without output
- second loop prints “0,1,2,3,4,5,6,7,8,9”

arrays

- arrays are lists– they can store many things at once
- you can pass arrays as parameters, but mostly, you work with individual elements
- arrays have to be declared, then filled
- when you see “[]”, that’s an array

again with the tables

- arrays actually are tables!

i	0	1	2
a[i]	23	24	6
a[i] * 2;	46	48	12

practice with Arrays

- given an Array a, what gets printed?
- `a[0] = 0; trace(a[0]);`
- `i=1; a[i] = i; trace(a[1]);`
- `x=1; y=2; a[x]=10; a[y]=20; trace(a[1]);`

practice more, please