


Variables, Debugging, Control Structures



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Topics

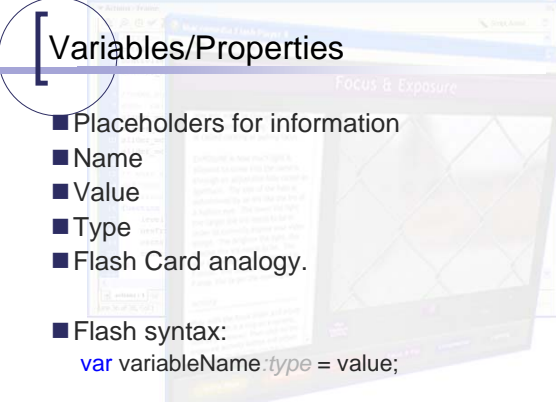
- Using variables
- Debugging
- Control structures (if statements)
- The `currentFrame` property
- The `alpha` property
- Library/timeline folders



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Variables/Properties

- Placeholders for information
- Name
- Value
- Type
- Flash Card analogy.
- Flash syntax:
`var variableName: type = value;`



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Flash Card Analogy

A diagram illustrating a variable's state. A blue parallelogram labeled 'faceState.text' has two arrows pointing to two white parallelograms. The top white parallelogram contains the text '"Test"' and the bottom one contains '"I'm sad"'. The background shows a blurred image of a tablet displaying a 'Focus & Exposure' interface.

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Variable Types

Data type	Default value
Boolean	false
int	0
Number	NaN
Object	null
String	null
uint	0
Not declared (equivalent to type annotation -)	undefined
All other classes, including user-defined classes.	null

Adapted from CS3 help file

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Using Variables

- When to use:
 - Awaiting user input/tracking information
 - You are using values for the same thing in multiple places.
 - MLK project (example)
 - alpha & currentFrame

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If statements

- A kind of control structure (for loops, while loops, switch/case)*
- Something we use every day

- Flash syntax:

```
if(condition) {  
    // this will run if condition is true.  
}
```

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Comparison	
<	Less than
>	Greater than
<=	Less than or equal
>=	Greater than or equal
Logical	
&&	Logical AND
	Logical OR
!	Logical NOT
Equality	
==	Equality
===	Strict equality
!=	Inequality
!==	Strict inequality

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Examples

```
if(face.currentFrame <= 3) {  
    faceState.text = "I'm sad."  
}
```

/* borrowed with permission from Alan Wayman, 2007—based on an .fla file he adapted and sent via email. */

revisit the happy/sad face

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Can be extended (nesting)

```
var rachelSwimLessons:Boolean = false;  
if (rachelMood == "brave") {  
    if (weather != "thunder and lightning") {  
        if (pool == "open") {  
            rachelSwimLessons = true;  
        }  
    }  
}
```

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Using Logical operators

```
if (rachelMood == "brave" && weather !=  
    "thunder and lightning" && pool ==  
    "open") {  
    rachelSwimLessons = true;  
}
```

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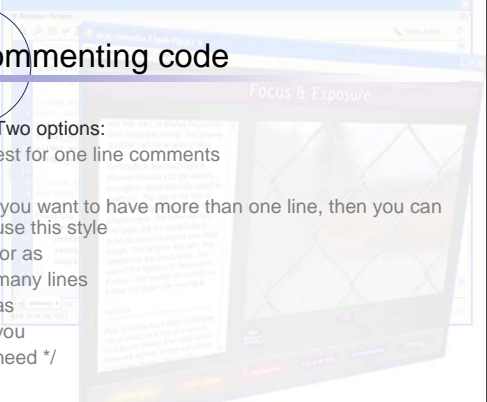
Using else if and else

```
if(face.currentFrame > 17) {  
    faceState.text = "I'm sad.";  
} else if (face.currentFrame < 4) {  
    faceState.text = "I'm happy.";  
} else {  
    faceState.text = "I'm ok.";  
}  
/* borrowed with permission from Alan  
Wayman, 2007—based on an .fla file he  
adapted and sent via email. */
```

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Commenting code

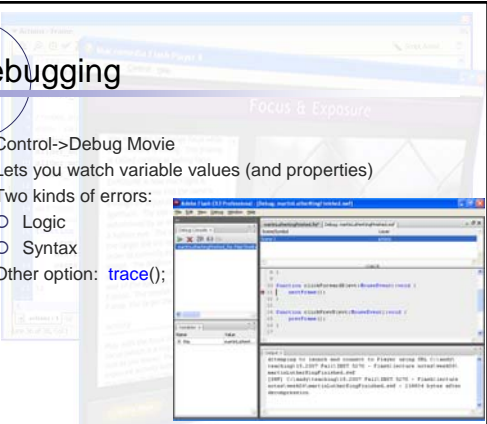
- Two options:
 - // Best for one line comments
- /* If you want to have more than one line, then you can use this style for as many lines as you need */



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Debugging

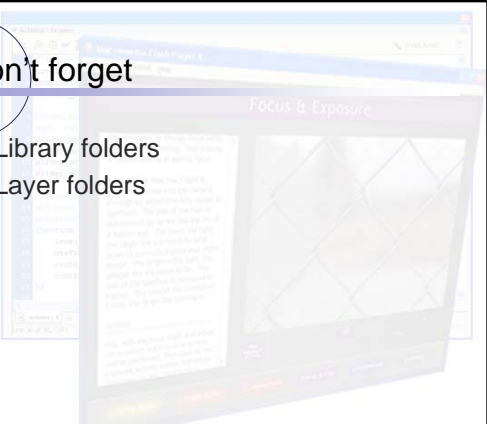
- Control->Debug Movie
- Lets you watch variable values (and properties)
- Two kinds of errors:
 - Logic
 - Syntax
- Other option: `trace();`



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Don't forget

- Library folders
- Layer folders



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