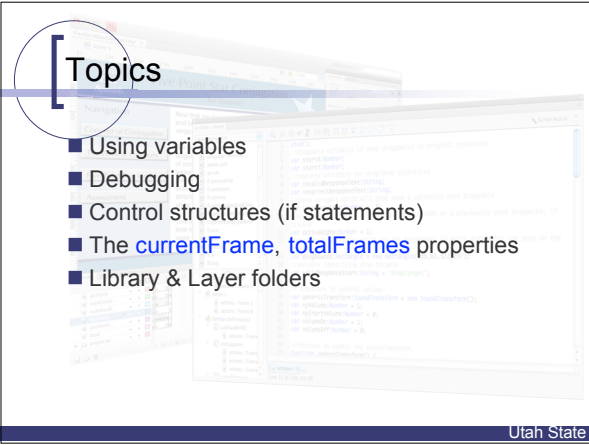


Variables, Debugging, Control Structures

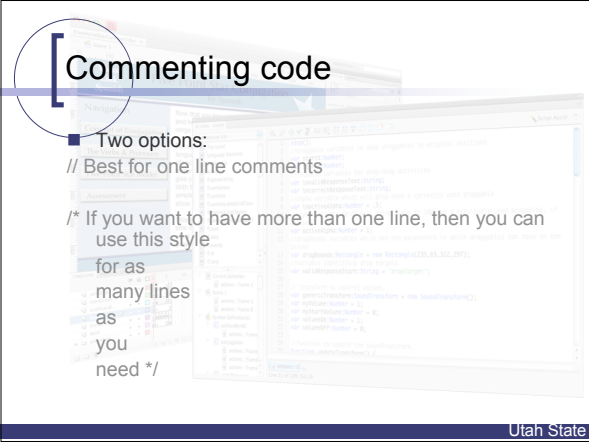
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Topics

- Using variables
- Debugging
- Control structures (if statements)
- The `currentFrame`, `totalFrames` properties
- Library & Layer folders

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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 */

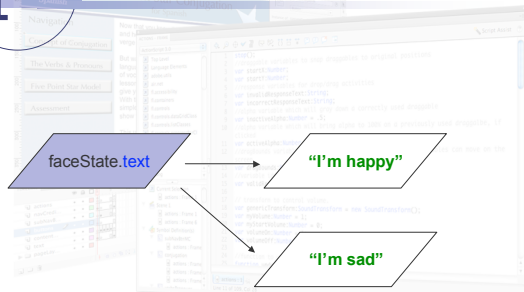
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Variables/Properties

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

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Flash Card Analogy



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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 CS4 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 (like a custom constant).
 - MLK project (example)

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If statements

- A kind of control structure (conditions/loops)*
- 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. */
```

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Can be extended (nesting)

```
var willAndyBikeToWork = false;  
if (andyMood == "energetic") {  
    if (weather != "crappy") {  
        if (bikeTires != "flat") {  
            willAndyBikeToWork = true;  
        }  
    }  
}
```

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Logical operators

```
var willAndyBikeToWork = true;  
if (andyMood == "energetic" && weather != "crappy"  
&& bikeTires != "flat") {  
    willAndyBikeToWork = true;  
}  
  
Avoid  
if (bikePressure == "too low" || "too high") {  
}
```

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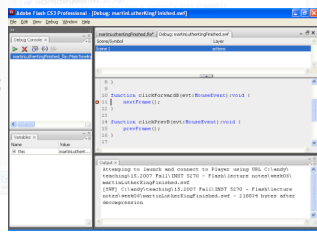
Using else if and else

```
if(face.currentFrame < 4) {  
    faceState.text = "I'm sad.";  
} else if (face.currentFrame > 8) {  
    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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Debugging

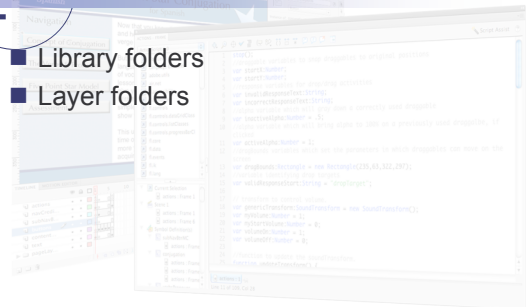
- Debug->Debug Movie
- Lets you watch variable values (and properties)
- Two kinds of errors:
 - Logic
 - Syntax
- Other option: `trace()`;



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Keeping Organized

- Library folders
- Layer folders



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