Strings

Strings are sequences of characters and / or digits

“Alice”

“412-555-9999”

“I would like 3 peaches”

When a model says or thinks, it is using a string
duckPrince says...

I am king of the world!

String
Scenario

Have the Cheshire Cat greet the user by name

Open world CheshireQuiz.a2w, method greeting
Create String variable for the user name

Click to create new variable

Enter variable name, select type

```
world's details

properties  methods  functions
```

```
create new variable
```

```
Name: userName
Type: Circle
○ Other... String
Value: default string

OK Cancel
```

```
userName = default string
```

```
```
Ask user for a string

1. Drag variable tile (World’s details, Properties tab) into editor, select set value to option.

2. Drag “ask user for string” tile (World’s details, Functions tab) into editor, enter question.

- Ask user for a string
- Drag variable tile (World’s details, Properties tab)
- Drag “ask user for string” tile (World’s details, Functions tab)
Display user name in string

We start by having the cat say “Hello, ” (note the space)
Build the new string

From World’s details, functions, drop “a joined with b” tab after say

From World’s details, properties, drop userName variable
Run the World

Hello, Harvey!

How was the exclamation point added to what the cat said?
Getting User Input

Events allow users to interact with the project by
- Manipulating the mouse
- Making choices using the keyboard

We may also want to get information from the user that is not event based.
- Personalize a story by asking the user for her name
- Ask the user for a number
- Ask the user to make a decision
Conditional Execution (review)

**Conditional execution** is where some condition is checked and a decision is made about whether a block of the program will be executed.

Conditional execution is extremely useful in:
- games
- simulations
- real-time controls, e.g. robot systems
Ask User for yes or no

The cat is going to ask the user a question that can be answered with a yes or no

- Yes => true, no => false
- If the cat likes the answer, the cat will celebrate
- If the cat does not like the answer, the cat will disappear

World: cheshireQuiz.a2w

Method: yesNoQuestion
Ask user for yes or no

Declare variable to get user response

Use of Ask user for yes or no function

What user sees
Ask user for a number

The cat is going to ask the user an arithmetic question

- If the user types in the correct answer, the cat will celebrate
- If the user types in the wrong answer, the cat will disappear

World: cheshireQuiz.a2w
Method: numberQuestion
Ask user for a number

Declare variable to get user response

Use of Ask user for a number function

What user sees
Ask user for a String

The cat is going to ask the user the last name of the author of “Alice in Wonderland”

- Remember, strings are case sensitive; implications for checking the user response
- If the user types in the correct name, the cat will celebrate
- If the user types in the wrong name, the cat will disappear

World: cheshireQuiz.a2w

Method: stringQuestion
Ask user for a String

Declare variable to get user response

Use of Ask user for a String function

What user sees