

ECS 10

10/1

Announcements

- First assignment due tonight, 10pm
- Next assignment on Web page tomorrow AM

Last Time

- Data types
 - Integers, eg. 87
 - Floating point numbers, eg 6.78
 - Stings, eg. "Call me a taxi!"
- Python commands
 - print
- Program

Integers vs strings

5



5 is an integer.

Fiona is a dog.

'5' is a string.

'Fiona' is a string.

Today - variables

```
x = 5
```

- Assigns the integer 5 to the variable x
- The variable is on the left
- The value assigned to the variable is on the right.

Expressions and values

- 34+57 is an **expression**.
 - Its value is 91
- 6.2 is an expression
 - Its value is 6.2
- "Coca-cola" is also an expression
 - Its value is "Coca-cola"
- Either kind of expression can be **assigned** to variables.
- We say Python **evaluates** an expression when it computes its value.

Why variables?

- One reason – You can assign a value in one place and use it lots of places. So its easy to change the value later.

Concatenation

- An **operator** on strings
- “My “+”cat” is a string expression that has the value “My cat”
- “Gillian”+”,” has the value “Gillian,”

Different ways to skin a...

- Here are three ways to do the same thing
 - print “My cat“,catName
 - print “My cat “+catName
 - print “My cat“,
print catName (this one works only in programs, not in the IDLE window. The comma prevents going to a new line).

The user



The person running the program.

Getting data from the user

```
x = raw_input('Enter a name: ')
```

- The user enters a string
- The string is assigned to the variable x
- The only kind of data you can get is strings!

raw_input() makes a string

```
>>> x = raw_input("Enter a number: ")
enter a number: 5
>>> x
'5'
```

- x is assigned the string '5'

Why variables?

- One reason – You can assign a value in one place and use it lots of places. So its easy to change the value later.
- Reason 2 – you can get a data from the user and refer to it in your program.

Enter to exit

- Many examples in the book end with:

```
raw_input("Press enter to exit")
```

- Python waits for the user to enter something. As soon as the user hits the enter key, the program is done and it exits.
- Nice in Windows!