Announcements

□ Assignment due Thursday night.

ECS 10

1/14

Nested if statements

if today == "y":
    if yesterday == "y":
        print "Doin' good!"
    else:
        print "Try harder!"
else:
    print "Try harder!"

Getting random numbers

from random import randrange
choice = randrange(0,20)

□ randrange(0,20) produces a random integer value >= 0 and < 20.
□ We import it from the random module, which was installed with Python.

Modules

□ A module is a collection of additions to the language that handle specialized data or problems.
□ There are many modules that come with the Python installation, and many, many others that are available over the Web.
□ To use a module, you need to import it, at the top of your program.
□ Imports should be the first lines of the program.
Converting between data types

\[ x = \text{int}("2") \]

- \text{int()} converts the string "2" to the integer 2
- \text{int()} is a function.
- can take a string or float expression as input.
- The data value it produces is an integer.

Integers vs strings

5

5 is an integer. Fiona is a dog.

'5' is a string. 'Fiona' is a string.

<, >, <=, >=

- More Boolean operators.
- \(1 < 3\) - True
- "oadvark" < "beet" - True
- "10"<"3" – True
- \(10 < 3\) - False

Three possible outcomes

```python
guess = \text{int}(\text{inStr})
if guess < \text{choice}:
    \text{print}("No, too small.")
elif guess > \text{choice}:
    \text{print}("No, too big.")
else:
    \text{print}("You got it!")
```

Some strings cannot be converted

- \text{int(cow)} causes a crash (Python cannot interpret it, stops and prints red error messages).
- But the user can type anything as input.
- Can they always crash our program?

Checking if we can convert

```python
from \text{inputCheck import canBeInt}
if canBeInt(\text{inStr}):
    \text{celsius} = \text{int}(\text{inStr})
```

- canBeInt() is a function. It's value is a Boolean (True or False).
- If \text{inStr} can safely be converted to an integer, then canBeInt(\text{inStr}) produces the value True.
- Otherwise, DON'T try to convert \text{inStr} to a number; it will crash the program!
canBeInt()

- canBeInt() function comes from the inputCheck module
- inputCheck is not a built-in Python module; you can find it on the course Web page with these slides.
- You need to put the file inputCheck.py in the same folder as your program (or on the Desktop if your program is on the Desktop).