ECS 10

1/14

Announcements

- Assignment due Thursday night.

Enter to exit

- **Many programs end with:**

```
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.**
- **The value produced by input() is not put into a variable; it is just thrown away.**

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.

Integers vs strings

5

5 is an integer.

'5' is a string.

Fiona is a dog.

'Fiona' is a string.

Converting between data types

```
x = int("2")
```

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

<, >, <=, >=

- More Boolean operators.
- 1<3 - True
- "aadvark" < "beet" - True
- "10"<"3" – True
- 10 < 3 - False

Three possible outcomes

```
guess = int(inStr)

if guess < choice:
    print("No, too small.")
elif guess > choice:
    print("No, too big.")
else:
    print("You got it!")
```

Some strings cannot be converted

- 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

```
from inputCheck import canBeInt
...
if canBeInt(inStr):
    celsius = int(inStr)
```

- canBeInt() is a function. It's value is a Boolean (True or False).
- If inStr can safely be converted to an integer, then canBeInt(inStr) produces the value True.
- Otherwise, DON'T try to convert 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).

Flow Chart