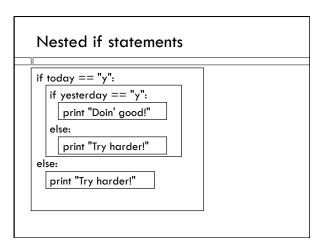
ECS 10

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.



```
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.

Fiona is a dog.

'5' is a string.

'Fiona' is a string.

Converting between data types

$$x = int("2")$$

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

<,>,<=,>=

- $\hfill\square$ 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).
- $\hfill\Box$ But the user can type anything as input.
- $\hfill\Box$ Can they always crash our program?

Checking if we can convert

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

- $\hfill\Box$ can BeInt() 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.
- $\hfill\Box$ 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).

