ECS10

10/9

Upcoming Events

- Assignment due Tues night
- Midterm Friday
- Review in class on Wednesday
- BRING A SCANTRON 2000 FORM
- You can buy them at the Bookstore
- Multiple choice and writing a program
- Sample midterm on Web this weekend.

Example multiple choice

def main():
    print("a")
    print("b")
    main()
    print("c")

This program prints....

Example multiple choice

mon = 1
while mon < 3:
    print("ha")

This program prints....

Looping for input

- We can keep asking for a reasonable input until we get it.

ok = False
while not ok:
    reply = input("Enter rate:")
    ok = canBeFloat(reply)

Looping for multiple choice

- We could have used this in the last program...
Complicated Boolean expressions

- It's easy to mess these up.
- Possible to make expressions that are never True.

Example multiple choice

```python
answ = "h"
B = not ( (answ == "h") or (answ == "t") )
```
- After these lines, B will contain….

Flipping a coin

- First we need to import the random module

```python
from random import randrange
coin = randrange(0,2)
```
- coin is either 0 or 1
- Interpret 0 as heads and 1 as tails

This version is easier to get right

```python
gotInput = False
while not gotInput:
    answ = input("Enter h or t:")
    gotInput = (answ == "h") or (answ == "t")
    if not gotInput:
        print ("Not a valid choice.")
```

Another way - while-break loop

```python
while True:
    reply = input("Enter h or t:")
    if (reply == "h") or (reply == "t"):
        break
    else:
        print ("not valid")
```
- # now reply is either h or t

while-break loop

```python
while True:
    .......
    if......:
        break
    .......
```
- Loop continues until break statement, then jumps out
- return – ends a function
- break – ends a loop
Many uses of while loops

- Count a specific number of times
  ```python
  while month <= 12:
  ```

- Wait for valid input
  ```python
  while not ok:
  ```

- Wait for balance to get to zero
  ```python
  (your program here)
  ```