COMP 141

Loops that count

Rhodes College

Announcements

- Reminders
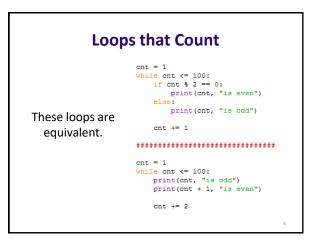 - Program 4 due Sunday, Feb. 23rd by 11:55pm

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Practice from Last Time

```
number = generate a random number between 1 and 100
guess = ask user to guess a number between 1 and 100
if number does not equal guess, then keep going
if guess is greater than number, tell user this
else if guess is less than number, tell user this
guess = ask user to guess a number between 0 and 100
if number does not equal guess, then keep going
if guess is greater than number, tell user this
else if guess is less than number, tell user this
guess = ask user to guess a number between 0 and 100
if number does not equal guess, then keep going
if guess is greater than number, tell user this
else if guess is less than number, tell user this
. . .
When user guesses correct number, tell them so
```

Sample Output
```
Guess a number between 1 and 100: 50
Your guess was too high.
Please try again: 40
Your guess was too high.
Please try again: 30
Your guess was too low.
Please try again: 35
You guessed right! Great work!
```

Loops that Count

These loops are equivalent.

```
cnt = 1
while cnt <= 100:
    if cnt % 2 == 0:
        print(cnt, "is even")
    else:
        print(cnt, "is odd")

    cnt += 1

################################

cnt = 1
while cnt <= 100:
    print(cnt, "is odd")
    print(cnt + 1, "is even")

    cnt += 2
```

Examples of loops that count

- See count1.py in Box.com folder

Practice

1. Write a while loop that prints all divisors of 30.
   - Your code should print out the following:
   1, 2, 3, 5, 6, 10, 15, 30

2. Modify this loop to print out all common divisors of 30 AND 50

3. Now let the user select any 2 integers and print out the common divisors of these 2 integers

4. Challenge: Print out only the largest of the common divisors of these 2 numbers