

## COMP 141

break and continue



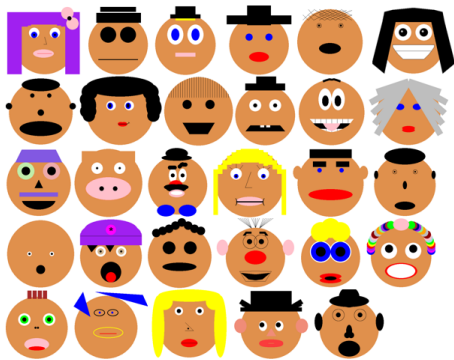
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## Announcements

- Reminders
  - Program 4 due tomorrow by 11:55pm
  - Midterm 1 is on Friday
    - No office hours on Thursday
      - Email me with questions

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## Fun with Functions!



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## break and continue Keywords

**break** – immediately terminate a loop (breaks out of loop)

**continue** – ends the current iteration and goes to the end of the loop body (breaks out of iteration)

**Note:** Typically used with while loops, but can be used in a for loop as well.

### Do not overuse!

Can make code difficult to read and debug!

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## Using break

#This program will add integers from  
#1 to 20 in this order to total, until  
#total is greater than or equal to 100.

```
total = 0
number = 0

while number < 20:
    number += 1
    total += number
    if total >= 100:
        break

print("The number is", number)
print("The total is", total)
```

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## Using continue

#This program will add integers from  
#1 to 20 in this order to total,  
#except for 10 and 11

```
total = 0
number = 0

while number < 20:
    number += 1
    if number == 10 or number == 11:
        continue
    total += number

print("The total is", total)
```



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## Using Boolean Variables in Loops

Given a positive integer **n**, assign True to **prime** if **n** has no factors other than 1 and itself.

If at any time during the loop, you find a factor of **n** other than 1 or **n**, set value of prime to False and break out of the loop

(Remember, **m** is a factor of **n** if **m** divides **n** evenly.)

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## Equivalent Code

```
total_scores = 0
score = int(input("Score? "))
while score != 0:
    total_scores = total_scores + score
    score = int(input("Score? "))
print("the total is", total_scores)
```

```
total_scores = 0
while True:
    score = int(input("Score? "))
    if score == 0:
        break
    total_scores = total_scores + score
print("the total is", total_scores)
```

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## In-Class Lab

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