

Python for Beginners – Class 3 Notes

Input for Strings and Integers

- Receives input from the user – you can **type in your own text** into the shell
- **STRING:** `name = input ("What is your name?")`
- **INTEGER:** `age = int(input("What is your age?"))`
 - o **If you are dealing with numbers (integers), you MUST use int(input("..."))**

WHILE Loops

- **Infinite loops**
 - o Loops that repeat forever
 - o Usually, this is NOT what you want

```
while True:
    # blah blah
```
- **Conditional loop** (finite loop)
 - o Repeat as long as the Boolean expression is true

```
while (boolean expression):
    # blah blah
```

For example:

```
count = 3
while (count < 8):
    print (count)
# output: 3, 4, 5, 6, 7
```

FOR Loops

- Used when number of times to repeat is known
- Has a **counter** variable with a **given range**.

```
for count in range (start, end, increment):
    # blah blah
```
- If no **increment** is given, the default increment is **1**
- If no **start** is given, the default start is **0**
- The **start** will be included, but the loop will end **one increment before the end**
 - o For example, **for count in range (2, 9)** will loop when **count = 2, 3, ..., 8** – it does NOT loop when **count = 9**.

```
for count in range (10):  
    print (count)  
    # output: 0, 1, 2, ..., 9  
  
for count in range (1, 6):  
    print (count)  
    # output: 1, 2, 3, 4, 5  
  
for count in range (10, 1):  
    print (count)  
    # no output, doesn't loop at all (no going backwards)  
  
for count in range (-5, 2):  
    print (count)  
    # output: -5, -4, -3, -2, -1, 0, 1  
  
for count in range (1, 6, 2):  
    print (count)  
    # output: 1, 3, 5
```