

# Input

Spring 2021

# Input

- You can get input from the user using another built in Python function - input()
- Input is used much in the same vein as print
- In order to use the input, you must assign it to a variable
  - Example - name = input("What is your name? ")
    - This will store whatever you type and enter into the variable "name"
    - You can then use this value in your program

```
# Asks the user to input a number
# stores that number to a variable
number = input("Enter a whole number: ")
```

```
=== RESTART: /home/kor
Enter a whole number: |
```

```
=== RESTART: /home/kort/M
Enter a whole number: 6
```

# Input

- Input will default store items as strings
- If you want to have an item stored as a different data type you have to convert it
  - Conversion happens through more built it Python functions
    - `int()` - converts an item to an int
    - `float()` - convert an item to a floating point
    - `str()` - convert an item to a string
  - Conversion introduces a potential for errors
    - Strings (that do not contain just a number; such as “hello” instead “2”; decimals will cause errors unless converted to a float first) sent to `int()` will cause an error
    - Strings (that do not contain just a number and decimal; such as “hello” instead “2” or “2.0”) sent to `float()` will cause an error

# Conversion

- Conversion can happen two ways
  - Input can be converted directly and stored into a variable
    - Example. `number = int(input("Enter a number: "))`
  - Variables can also be converted
    - Example. `number = input("Enter a number: ")`
    - `number = int(number)`

```
# Asks the user to input a number
# stores that number to a variable
number = input("Enter a whole number: ")
print()

intNumber = int(number)

# shows output
print("The integer value is", intNumber)
```

# Syntax Warning

- Make *absolutely sure* your parentheses match up
  - `input()` requires its own set of parentheses
  - If you put your `input()` inside of a conversion (`int()` or `float()`) you need to make sure `input()` has a complete set of parentheses
  - `int()` and `float()` *also* require a set of parentheses
- Every opening parenthesis must have a closing parenthesis
- Everything you're passing to a built-in function must be contained *inside* the parentheses