

Using Variables in Python



awesomeness = 9999

Unit 2, Lesson 3



Today's Goals

Review

B1.2 describe the types of data that computers can process and store

B2.2 use variables, expressions, and assignment statements to store and manipulate numbers and text in a program

Learn

B2.3 write keyboard **input** and screen **output** statements that conform to program specifications;



REVIEW:

What are the 3 characteristics of variables?

1. **Name:** A unique identifier for the variable.
2. **Value:** The data being stored in the variable.
3. **Data Type:** What kind of data is it? (String, Int, Float, Bool)



GUESS that VARIABLE!

`gameCount = 194`

Variable Name?

`gameCount`

Value?

`194`

Data Type?

`integer`



GUESS that VARIABLE!

`location = "home"`

Variable Name?

`location`

Value?

`"home"`

Data Type?

`string`



GUESS that VARIABLE!

hungry = True

Variable Name?

hungry

Value?

True

Data Type?

Boolean



Variables in English

Ever played Mad Libs?

Once upon a time there was a young NOUN. One day they decided to go to the NOUN because they were feeling very ADJECTIVE (feeling).

Each _____ (blank) is a ***variable***. In Mad Libs, the TYPE of variable is either Noun, Adjective, or Verb but you get to decide the VALUE.



Let's look at an example...

A Python Example Program was shown in class.

Mad Libs Game



Group up

1. Each person is given a random Mad Libs page
2. Find the other people who have the same CODE as you. (eg. A1)
3. Find the OTHER GROUP who has the same NUMBER as your group and sit across from them. (eg. A1 & J1)

Play your MadLib

4. In your group, ask the other group for **Nouns, Adjectives, Verbs, Adverbs**, etc. and fill in your sheet with their suggestions.
5. Read out the finished story to them!
6. Switch and give let the other group do the same thing.

Mad Libs Reference

Noun:

The subject (dog, park, ball)
Person, Place, or Thing

Adjective:

A describing word for a noun
(small, blue) or a feeling

Verb:

Action words (to sing, to drive)

Adverb:

A describing word for a verb
Often ends in "ly"
(quickly, rarely)

Start making your
Mad Lib in Python!



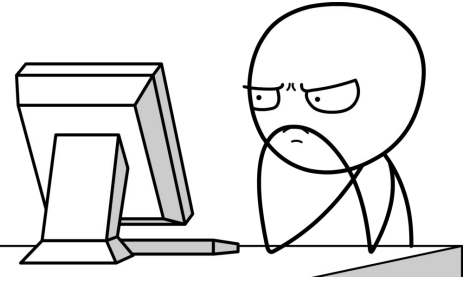
Can we build a Mad Lib in Python?

```
adjective_1 = "tiny"
animal_1 = "zebra"
properNoun_1 = "Bilbo"
feeling_1 = "hungry"

print("=====")
print("== The Adventures of", properNoun_1, "the", adjective_1, animal_1)
print("=====")
print("Once upon a time there was a", adjective_1, animal_1 + ".")
print("His name was", properNoun_1)
print("One day", properNoun_1, "the", animal_1, "was feeling very", feeling_1 + ".")
print()
```



Right now there is something missing.



**How could we make it more like a
real Mad Libs Game?**

How could we make it more like a real Mad Libs Game?

INTERACTION



If we want it to be like a real Mad Libs game, we would need to ask the player some questions and record their answers.

This is called “Input”

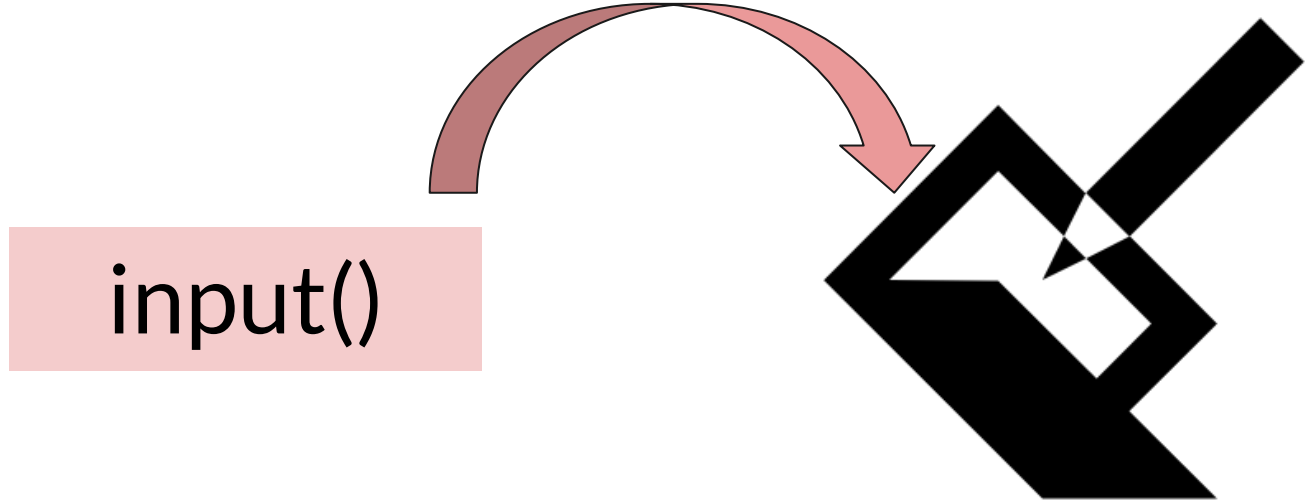
How could we get **INPUT** from the user?

Input in Python : the `input()` function

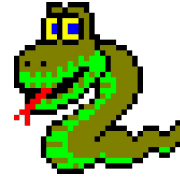
1. Take in user input from the keyboard.
2. Store it in a variable.
3. Use it like any other variable.

```
name = input("What is your name? ")  
  
print("Hello, " + name + ".")
```

Let's add this to our notes...



Let's Try It!



Let's add `input()` to our mad lib

```
adjective_1 = input("Give me an adjective: ")
animal_1 = input("Give me a animal: ")
properNoun_1 = input("Give me a name: ")
feeling_1 = input("Give me a feeling: ")

print("=====")
print("== The Adventures of", properNoun_1, "the", adjective_1, animal_1)
print("=====")
print("Once upon a time there was a", adjective_1, animal_1 + ".")
print("His name was", properNoun_1)
print("One day", properNoun_1, "the", animal_1, "was feeling very", feeling_1 + ".")
print()
```



Introducing Others to Computer Science

After you and your team finish creating your mad lib, each of you needs to find **someone who isn't in this class** and have them test out your code.

Post a screenshot of the story that they make to Google Classroom (a screenshot of the Python Shell Output window). OR you can do a video recording of them playing your game!

What Now? Finish Activity 2! (My Weekly Record)

Due at the start of next class

If you finish the main part, you can try the
BONUS and **DOUBLE BONUS**.

