The Python Bible

Ben Lloyd

2021

Table of Contents

[What is IDLE 2](#_Toc60695966)

[Saving Python Files 2](#_Toc60695967)

[What is a Variable? 2](#_Toc60695968)

[Variable Quiz 3](#_Toc60695969)

[Arithmetic, Floats and Modulo 3](#_Toc60695970)

[Ordering Operations using Brackets 3](#_Toc60695971)

[Random Module 3](#_Toc60695972)

[Force a float to become an integer 3](#_Toc60695973)

[How to round numbers 3](#_Toc60695974)

[Python Number Quiz 3](#_Toc60695975)

[Storing Strings 4](#_Toc60695976)

[Python Comments 4](#_Toc60695977)

[Python Input Function 4](#_Toc60695978)

[How to stick strings together 4](#_Toc60695979)

[How to turn an integer into a string 4](#_Toc60695980)

# **What is IDLE**

* IDE – allows use to program in Python language
* Run commands and write scripts

# **Saving Python Files**

* Make sure when saving a file, it has the .py file extension

# **What is a Variable?**

* Variables can store values
* Numbers, words
* Can use a name to capture the data inside of the variable
* Number = 1
* Typing number in the shell will print out what is stored in the box
* Type(number) will print out what kind of data is stored in the variable

# **Variable Quiz**

* Python is dynamically types language what does this mean?
  + The variable type can change throughout your program
* Which of the following are some of the data types in Python?
  + Integers, Strings and Floats
* Why do we use variables?
  + To keep useful or important data for later
  + To make our code more organised
  + To make our code easier to change
* What does this python code mean? X = 2
  + Create a variable with the name x, and assign it the value of 2
* Which of these functions is used to see a variables type?
  + Type ()

# **Arithmetic, Floats and Modulo**

* Operators
  + + - \* /
* Float – decimal points – take more space than integers
* Modulo – % symbol – prints out the remainder of a sum

# **Ordering Operations using Brackets**

* BODMAS – Brackets, Order, Division, Multiplication, Addition, Subtraction
* 2 \* (5 – 1 ) = 8

# **Random Module**

* Usual done at the top of the script
* Import random
* Random.randint(1,50)

# **Force a float to become an integer**

* Potion\_health = int(random.randint(25, 50) / difficulty)

# **How to round numbers**

* Import math
* Round(1.5) – will round to 2
* To force the round down
* Math.floor(1.5) – Will round down to 1
* Math.ceil(2.1) – Will round up to 3

# **Python Number Quiz**

* What is an integer?
  + A whole number
* 2.5 is an example of…
  + A float
* What does modulo operator do?
  + Finds the remainder of a division
* How would I find the remainder of 3 divided by 2
  + 3 % 2
* What is the result of 5 % 2
  + 1
* Why do we use brackets when working with numbers?
  + Control the order in which mathematical operations are performed
* Which is the correct way to gain access to python random module?
  + Import random

# **Storing Strings**

* Name = “Ben”
* Broken string is when a string has been closed
* ‘John said to me “I will see you later”’
* When it’s a large paragraph and it keeps breaking use “””

# **Python Comments**

* Use the hash key #

# **Python Input Function**

* Python standard library
* S = Input(‘What is your name?”

# **How to stick strings together**

* Use the + operator

# **How to turn an integer into a string**

* A = “part”
* B = 1
* A + str(B)
* Python format function
  + “{} – {}”.format(A,B)
  + “{1} – {0}”.format(A,B)