**Python**

* **Displays text -** Print(“Text”)
* **Defining a string –** “Text here” or ‘Text here’ or for multi-line string “”” Text here “””
* **Converting variables to a string** = str(*variable\_name\_here)*
* **Converting strings to an interger =** int()
* **To add and workout 2 variables:** +=
* **To write a comment not read by the program -** #
* **Integer =** Whole Number, **Float =** Number with Decimal
* **‘ in stings can be fixed by placing this before - \**
* **The % operator is used to combine a string with variables.**
* **%s relates to specific variables. (** g = "Golf", h = "Hotel", print "%s, %s" % (g, h) **)**
* **Datetime – used to display date and time, now = datetime.now(), print now.year,print now.month, print now.day.**
* **.isalpha can be used to check if a string doesn’t contain any non-letter characters**

**Strings**

There are 4 main types of sting:

* Len() – Gets the number of characters of a string stored in a variable
* Upper() – changes the letters of the string to upper case. (Variable.upper() )
* Lower() – changes the letters of the sting to lower case. (Variable.lower() )
* Str() – Used to change non-strings into strings and to convert variables to strings.

**Turtle**

**Import** turtle

**Define turtle -** my\_turtle = turtle.Turtle()

**Move turtle forward -** my\_turtle.forward(100) (Turtle, Move Direction, Distance)

Turn turtle left/right - my\_turtle.left(90) (Turtle, Face Direction, Angle)

***Example: To create a square.***

my\_turtle = turtle.Turtle()

my\_turtle.forward(100)

my\_turtle.left(90)

my\_turtle.forward(100)

my\_turtle.left(90)

my\_turtle.forward(100)

my\_turtle.left(90)

my\_turtle.forward(100)

**Variables** – **Used to define something.**

**Example: To define information about a person and defining numbers.**

*Bob* ***=*** *“50 years old, is 5ft 10, wears a brown hat”* - Typing **bob** will then display the above information; Bob is the variable holding this information.

*X = 200000* – Typing X will now become this number so sums like X \*20 will display the result of 4000000

**Comparators**

**There are 6 types:**

* **Equals to ==**
* **Not Equal to !=**
* **Less Than <**
* **Less Than or Equal to <=**
* **More Than >**
* **More Than or Equal to >=**

**Boolean**

**Boolean Values are True and False**

**Boolean Operators: and, or & not (Not first, And next, Or last)**

**Conditional Statement Syntax – must have : on the end**

**If Statements**

**Else statement**

**Elif is short for else if**

**If 3 > 5**

**Return False**

**Elif 3 < 5**

**Return True**

**Input**

**Raw\_input() -** accepts a string, prints it, and then waits for the user to type something and press Enter

*original = raw\_input("Enter a word:")*

*if len(original) > 0:*

*print original*

*else:*

*print "empty"*

original = raw\_input("Enter a word:")

if len(original) > 0 and original.isalpha():

print original

else:

print "empty"

**Datetime example & %02d example:**

from datetime import datetime

now = datetime.now()

print '%02d/%02d/%02d %02d:%02d:%04d' % (now.month, now.day, now.year, now.hour, now.minute, now.second)