Python Programming

**Built in functions:**

dir(\_\_builtins\_\_)

To get information about a function:

help(functionName)

**Getting a Input:**

variable = input()

The input above will be in String

variable = (int(input))

The input above will be a integer

**Math Function:**

To use math functions the math function must be imported

Importation done by:

import math

Math functions then can be done by:

math.functionName

**Strings:**

String can be written 3 ways:

‘Hi’

“Hi”

“““Hi”””

To write a letter in a string that uses an apostrophe, you use an escape character which is backslash:

‘hi don\’t’

To print the escape character, do double backslash:

‘hi\\’

To find the length of a string type:

len(stringName)

**String Formatting with %, Part 2**

Remember, we used the % operator to replace the %s placeholders with the variables in parentheses.

You need the same number of %s terms in a string as the number of variables in parentheses:

This method substitutes the % values in order after the print statement.

Advanced Concatenation

Example:

g = "Golf"

h = "Hotel"

print "%s, %s" % (g, h)

Output:

Golf Hotel

**Getting the Current Date and Time**

We can use a function called datetime.now() to retrieve the current date and time.

from datetime import datetime

print datetime.now()

The first line imports the datetimelibrary so that we can use it.

The second line will print out the current date and time.

**Extracting Information**

Notice how the output looks like 2013-11-25 23:45:14.317454. What if you don't want the entire date and time?

from datetime import datetime

now = datetime.now()

current\_year = now.year

current\_month = now.month

current\_day = now.day

You already have the first two lines.

In the third line, we take the year (and only the year) from the variable now and store it in current\_year.

In the fourth and fifth lines, we store the month and day from now.

**Hot Date**

What if we want to print today's date in the following format? mm/dd/yyyy. Let's use string substitution again!

from datetime import datetime

now = datetime.now()

print '%s-%s-%s' % (now.year, now.month, now.day)

*# will print: 2014-02-19*

Remember that the % operator will fill the %s placeholders in the string on the left with the strings in the parentheses on the right.

In the above example, we print 2014-02-19 (if today is February 19th, 2014), but you are going to print out 02/19/2014.

**Pretty Time**

Nice work! Let's do the same for the hour, minute, and second.

from datetime import datetime

now = datetime.now()

print now.hour

print now.minute

print now.second

In the above example, we just printed the current hour, then the current minute, then the current second.

We can again use the variable now to print the time.

**Compare Closely!**

Let's start with the simplest aspect of control flow: **comparators**. There are six:

1. Equal to (==)
2. Not equal to (!=)
3. Less than (<)
4. Less than or equal to (<=)
5. Greater than (>)
6. Greater than or equal to (>=)

Comparators check if a value is (or is not) equal to, greater than (or equal to), or less than (or equal to) another value.

Note that == compares whether two things are equal, and = assigns a value to a variable.