

Function

print	Show information that you want on the screen
int	Change number to be number integer
float	Change number to be decimal number
input	Gain information from user
str	A list of number, letter and symbols
len	The length of the string
#	Comment, no effect

Addition

string + string	Combine together
string + number	CRASH!
number + number	Addition(Math)

Example

Print (2) – integer
Print (2.5) – floating point
Print ("Hello") – string
Print (mystr) – variable
Print (mystr, "Hi", 2, 1.0) -- commas

mystr = "Hi"
mystr ← name
"Hi" ← value can change

print (int(1.5)) → 1
print (int("2")) → 2
print (float(1)) → 1.0 anything to a float

Modulo/Remainder %
print (4%2) → 0
print (30%7) → 2

Area of Circle

```
"""
Python Intro Assignment #2
name
student number
"""

#Ask the user for a radius of a circle
user_radius = input("What is a radius of a circle?")

#Convert the given radius to a floating point
radius = float(user_radius)

#Make a variable called pi
pi = float(3.1415)

#Calculate the area of the circle using
exponents
area = pi(radius*2)

#Display the area of the circle to the user
print ("The area of the circle is", area)
```

Multiplication and exponents

string*number	Combine that string
string*string	CRASH!
number*number	Multiply(math)
string**string	CRASH!
number**number	Exponent(math)
string**number	CRASH!

Vocabulary

Variable	Hold a value and can be change
String	A list of character such as nubmer, letter and symbols
Interger number	Whole nubmer/ counting number
Float number	The numer in decimal
Syntax	Grammar/Structure of language
Modulo	Find the remainder
Boolean	True/False

Countdown machine

```
user_number = input("What number do you want to count down? ")
number = int(user_number)
countdown_string = ' '

while number > 0:
    countdown_number = countdown_string + str(number) + " "
    number = number - 1
    #print(number)

print (countdown_string)
```



By **nam_tanapat**

cheatography.com/nam-tanapat/

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Sort word per line

```
mystr = "Hello"

letter_num = 0

while letter_num < len(mystr):
    print (mystr[letter_num])
    letter_num = letter_num + 1
H
e
l
l
o
```

Sort fruit list

```
fruits = [] #an empty list

for number in range(5):
    user_fruit = input("Please enter a fruit")
    fruits.append(user_fruit)

print ("Size of fruit list is", len(fruits))

fruits.sort()

for fruit in fruits:
    print ("Fruit: ", fruit)
```

Convert to binary

```
user_number = ''

while user_number != '0':
    user_number = input ("Enter a number to
    convert to binary")
    number = int(user_number)
    binary_string = ''

    while (number > 0):
        remainder = number%2
        binary_string = str(remainder)+ binary_string
        number = number//2

print ("Binary string is", binary_string)
```

Naming Convention

Rule for giving name

- letter
- numbers
- underscore _

Valid name

- _myStr
- my3
- Hello_there

Invalid name

- 3my="hi" -- cannot start with number
- first name="hi"
- first-name
- first+name

Print Name

```
name = "tim GIRARD"

print (name.upper()) → TIM GIRARD
print (name.lower()) → tim girard
print (name.capitalize()) → Tim girard
print (name.title()) → Tim Girard
```

Math

==	equal to
!=	no equal to
<	less than
>	more than
<=	less than or equal to
>=	more than or equal to
%	Modulo, find the remainder

Reverse Word

```
while True:
    word = input("Please enter a
    word")
    index = 0
    reverse = ''
    while int(index) < len(word):
        reverse = word[index] + (reverse)
        index = int(index) + 1
    print ("Reverse:", reverse)
```

