

Basiccode

print()	Show information that you want on the screen
input()	Gain information from user
len()	The length of the string
int()	Change number to be number integer
float()	Change number to be decimal number
str()	A list of number, letter and symbols
#	Comment

Vocab

Variable	Hold a value and can be change
String	A list of character such as number, letter and symbols
Integer number	whole number/ counting number
Float point	The number in decimal
syntax	Grammar/Structure of laugage
Modulo	Find the remainder
Boolean	True/False

Example

```
Print (2) - integer
Print (2.5) - floating point
Print ("Hello") - string
Print (mystr) - variable
Print (mystr , " H i ", 2,1.0)
-- commas
```

Example (cont)

```
> 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
```

Sort per line

```
mystr = " Hel lo"
letter_num = 0
while letter_num < len(my str):
print (mystr [l e t t e r _ num])
letter_num = letter_num + 1
H
e
l
l
o
```

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
>=	more than or equal to
%	modulo, find the remainder

Addition

string + string	Combine together
string + number	crash
number + number	addition

Multiplication

string *	combine that string
number	multiple times
string * string	crash
number *	multiply
number	
string ** string	crash
number **	exponents
number	
string **	crash
number	



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

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( us er _r -
adius)
#Make a variable called pi
pi = float( 3.1 415)
#Calculate the area of the
circle using exponents
area = pi(ra diu s*2)
#Display the area of the circle
to the user
print ("The area of the circle
is", area)
```

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)
```

Convert to binary

```
user_number = ' '
while user_number != ' 0 ' :
user_number = input( "Enter a
number to convert to binary ")
number = int(us er _n umber)
binary _s tring = ' '
while (number > 0):
remainder = number%2
binary _s tring = str(re ma -
i n der)+ binary _s tring
number = number//2
print ("Binary string is",
binary _s t ring)
```

countdown Machine

```
user_number = input( "What
number do you want to count
down? ")
number = int(us er _n umber)
countd ow n _ string = ' '
while number > 0:
countd ow n _ number =
countd ow n _ string +
str(nu mber) + " "
number = number - 1
#print (n u mber)
print (count do w n _s tring)
```

Sort fruit list

```
fruits = [] #an empty list
for number in range(5):
user_fruit = input( " P lease
enter a fruit")
fruits.ap p e n d (u se -
r _f fruit)
print ("Size of fruit list is",
len(fr u its))
fruits.sort()
for fruit in fruits:
print ("Fruit: ", fruit)
```

random.choice

```
import random
intlist = [9,8,7 ,6,5,4]
random_int = random.ch oic e(i -
ntlist)
print (intlist, random _int)
fplist = [0.2,0.3,0.3]
random_fp = random.ch oic e(f -
plist)
print (fplist, random _fp)
strlist = ["AB C", " BCA ", " -
CAB "]
random_str = random.ch oic e(s -
trlist)
print (strlist, random _str)
mylist =[1,3, 6,1 2,"A BC", " -
DEF ", " HIJ "]
random_item=rando m.c hoi -
ce( mylist)
print (mylist, random _item)
myvar1 = 1
myvar2 = 2
myvay3 = 3
varlist =[myvar1, myvar2,
myvar3]
random_var = random.ch oic e(v -
arlist)
print (varlist, random _var)
```