Python

string+string	combine together
string+number	crash
number+number	math-addition
number-number	math-substarction
number*number	math-mutiplication
number/number	math-division
**	exponent
%	modulo
boolean	True/False
#	single line comment
"""	multi-line comment

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 ("Revears:", reverse)
```

Letter

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

For loop and list

```
shoppinglist = ['salmon', 'bacon', 'water', 'jelly',
'ham']
print (shoppinglist)
list_num = 0
while list_num < len(shoppinglist):
print ("List:",shoppinglist[list_num])
list_num = list_num + 1
for item in shoppinglist:
print (item)
numbers = range(120)
for num in numbers:
print (num)
```

covert to int

```
user_word = input ("Please enter a number")
number = int (user_word)
print (number * 10)
```

random

```
import random
mylist = ['mild', 'stamp', 'nae', 'mint']
print(mylist[0])
counter = 0
while counter < 10:
random_item = random.choice(mylist)
print (random_item)
counter = counter + 1
```

random game

```
import random
mylist = ['mild','lily','stamp','nae', 'mint']
chance=3
score=0
random_item = random.choice (mylist)
while chance > 0 :
print (mylist)
```

random game (cont)

```
guess = input ("Guess a word: ")
if (guess in mylist):
if (guess == random_item):
print ("That's correct!")
score= score+100
print ("score",score)
random_item = random.choice (mylist)
else:
print ("Sorry, wrong choice!")
chance = chance-1
print ("chance remaining:",chance)
else:
print ("No,not in the list")
chance= chance-1
print ("chance remaining",chance)
if (chance<1):
print ("Game over!the word was",
random_item)
print ("final score", score)
```

vocabulary

str	string
int	integer
float	decimal number
len	lengh
syntax	a structure of the program
print	An instruction that causes the Python interpreter to display a value on the screen.
Variable	The name of something that the code has given a value to
Single Equal (=)	assigns the value on the right to a variable on the left
Double Equal (==)	Tests if two things have the same value
input	to convert things you enter as if they were Python code

Convert to binary

user_number = " "

user_number != "0" :

user_number = input ("enter a number to convert to binary")

number = int (user_number)

binary_string = " "

list

import random
intlist = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12]
random_int = random.choice (intlist)
print(intlist,random_int)
fplist = [0.1, 0.2, 0.3, 0.4, 0.5, 0.6]
random_fp = random.choice (fplist)
print (fplist,random_fp)
strlist = ["1","2","3","4","5","6","7","8","9"]
random_str = random.choice (strlist)
print (strlist,random_str)
mylist =
["adam","mild","loveadam","levine","3","4.6",424,6
74,5.733]
random_item = random.choice (mylist)
print (mylist,random_item)
myvar1 = 1
myvar2 = 2
myvar3 = 3
varlist = (myvar1,myvar2,myvar3)
random_var = random.choice (varlist)
print (varlist,random_var)

Math-circle

while True:
pi = 3.1415
user_radius = input(" Insert radius here... ")
radius = float(user_radius)
area = pi radius*2

Math-circle (cont)

print (" the area of the circle is",area)
print (" Allahu Akbar")

triangle

def areaoftriangle (base,height) :
return base*height*0.5
base = float (input('Enter the base of the triangle'))
height = float (input ('Enter the height of the triangle'))
print("The area of the triangle is",areaoftriangle(base,height))
def volumeofprism (area,height):
return areaoftriangle*height
print ("The volume of the prism is",volumeofprism(area,height))

if/ elif/ else

def printdefinition (word):
if word == "function":
print("""
function lets you use code
""")
elif word== "string":
print("""
string is list of character
""")
else:
print ("unknown word")
user_word = input ("Enter a word to define: ")
printdefinition(user_word)

text+decoration

def myprint (text):
print ("*" + str(text) + "*")
return
myprint (1)
myprint ("hello")
def myprint2 (text, decoration):
print (decoration + str(text)+ decoration)
return
myprint2(123,"+++++++")
myprint2 ("hello","----")
myvar = "hello"
def myvarprint (myvar):
print (myvar)
return
myvarprint ("hi")
print (myvar)

symbol

if/else	conditional
while	loop
for	list all the things
==	test if two values are the same
<	less than
>	more than
<=	if the value of left operand is less than or equal to the value of right operand,then condition becomes true
>=	if the value of left operand is greater than or equal to the value of right operand,then condition becomes true

guess word game

```
import random
guesslist = ['grape', 'orange', 'apple']
chance = 3
score = 0
print (guesslist)
while chance = 0
random_item = random.choice (guesslist)
user_input = input ('please guess a word: ')
if user_input ==random_item:
print ('That's correct')
score = score+100
print ('Score: ', score)
else:
if user_input not in guesslist :
print ('Sorry, that isn't even in the list')
```

mild

```
word=""
wordlist = [ ]
letterofword = [ ]
while True :
while (word!="quit"):
word=input ("Please enter a word")
print (len(word))
def palindrom(word):
index =0
check = True
while index < len(word)
if word
```

circle

```
def doubleIt(number):
return number*2
print (doubleIt (3))
print (doubleIt (2.5))
print (doubleIt("hi"))
```

circle (cont)

```
myvar = doubleIt (doubleIt (3))
print (myvar)
def areaOfCircle (radius):
if (radius<=0):
return "Error: radius <=0"
pi = 3.1415
area = pi(radius*2)
return area
user_radius = input("Enter the radius: ")
radius = float(user_radius)
print ("The area of the circle is",
areaOfCircle(radius))
```

for loop

```
"""
list = [2,3,4,5,6,7]
list_num = 0
while (list_num < len(list)):
print (list[list_num])
list_num = list_num+1
"""
forlist = [1,2,3,4]
for item in forlist:
print (item)
```

test

```
theList = ["mild","mint","stamp"]
for item in theList:
print (item)
whilelist = ["1","2","3"]
list_num = 0
while list_num<len(whilelist):
print (whilelist[list_num])
list_num = list_num+1
"""
```

test (cont)

```
repeatedly accepts user input, print out the
lenght. stop when user enter "exit"
"""
while True:
user_input = input ("Please enter a word")
if user_input == "exit":
break
print (len(user_input))
"""
function+no parameter repeatedly accepts user
input until user enter "stop"
"""
def theFunction():
while True:
user_input = input ("Please enter a number")
if user_input =="stop":
return
theFunction()
"""
takes two parameter a1,b2, function return the
product of two parameter
"""
def computeThis (a1,b2):
return a1*b2
a1 = int(input("Please enter a number"))
b2 = int(input("Please enter a number"))
print (computeThis (a1,b2))
"""
has 1 argrument called string.
string+decoration
"""
def finalFunction (string):
print (""+str(string)+ "**")
string = input ("Please enter a word")
print (finalFunction(string))
```