

Math

+	plus
-	minus
*	multiply
/	divide give decimal
==	equal to
!=	not equal to
<	less than
>	more than
<=	less than or equal to
>=	more than or equal to
%	to find remainder
**	power
//	divide give integer

Binary

```
user_number = input( " Enter
number to convert to binary : ")
number = int(us er_ number)
binary _string = ''
while (number > 0):
    rem ainder = number % 2
    bin ary _string =
str(re mai nder) + str(bi nar -
y_ s tring)
    number = number // 2
print ("Binary string is", bin -
ary _st ring)
```

Radius pi

```
while True:
    use r_r adius =
input( " Please enter the radius
of the circle ")
    radius = float( use -
r_r adius)
    pi = 3.1415
```

Radius pi (cont)

```
> area = piradius*2
print ("The area of the circle is", area)
```

==

```
myboolean = 2 == 3
if myboolean:
    print ("tr uth ")
else:
    print ("li es")
```

0,01,012,0123,01234

```
mystring = ''
count = 0
while count <= 4:
    mys tring = mystring +
str(count)
    print (mystring)
    count = count + 1
mystring = " "
for num in range(5):
    mys tring = mystring +
str(num)
    print (mystring)
```

1 * 1 = 1

```
def multiplicationTable(num):

    multi = 0
    while multi < 10:
        multi = multi +
1

        use r_o utput =
num*multi

        print (
num,"*", mul ti, " =",u ser -
_ou tput)
    user_num = int(in put ("Enter
the number: "))
    multip lic ati onT abl e(u ser -
_num)
```

Fibonacci

```
num1 = 0
num2 = 1
fibonacci = num1 + num2
output = " 0,1 "
while fibonacci < 50:
    output = output +", "+
str(fi bon acci)
    num1 = num2
    num2 = fibonacci
    fib onacci = num1 + num2
print (output)
```

Boolean

False or True	True
False and True	False
True and False	False
True and True	True
False or False	False

Multiplication and Exponent

string * number	Repeat that string by number
string * string	CRASH!
number * number	Multiply (Math)
string ** string	CRASH!
number ** number	Exponent (Math)

Multiplication and Exponent (cont)

string ** number CRASH!

String * Number

num = 1

stri = str(num)

print (stri * 3)

#After running program

111

Hex

```
user_number = input("Enter
number to convert to hex : ")
number = int(us er_ number)
hex_string = ''
while (number > 0):
    rem ainder = number % 16
    if remainder == 10:
        rem ainder = 'A'
    elif remainder == 11:
        rem ainder = 'B'
    elif remainder == 12:
        rem ainder = 'C'
    elif remainder == 13:
        rem ainder = 'D'
    elif remainder == 14:
        rem ainder = 'E'
    elif remainder == 15:
        rem ainder = 'F'
    hex _string = str(re -
mai nder) + str(he x_s tring)
    number = number // 16

print ("Hex string is 0x", hex -
_st ring)
```

Math

```
print(2)#interger
print( 2.5 )#f loa tiong point
print( "this is a string " )#s -
tring
myStr = " hel lo"
print (myStr)
print ("he llo " , 1, 2)
print (""")
hello
yeah
.
.
.
.
" " ")
" " "
This multi line comment #lol
" " "
#variable name
#can have interger, lowerc -
ase /up percase letters,
unders cores
#Mate operators
# + - / *
#exponents
#2 to the power of 3
print (2 2 2 )
print (2 ** 3)
#Modul o/R ema inder
print (4%2) #remainder = 0
print (33%2) #remainder = 1
#convert to floating point
print (float(2))
```

Math (cont)

> #covert to a string

myint = 1

mystring = str(myint)

print (mystring * 3)

#true/false - Boolean

print (2 < 3)

Addition

string + string Combination of string

string + number CRASH!

number + number Add (Math)

Reverse

```
word = input("Please put a word
:")
reverse = " "
letternum = 0
while letternum < len(word):
    reverse = (word[ let -
ter num]) + reverse
    let ternum = letternum +
1
print ("Re verse: " ,re verse)
for num in word:
    reverse = num + reverse
print ("Re verse: " ,re verse)
```

Guess

```
import random
chance = 3
score = 0
mylist = ['Hack', 'ToeyD.',
'Patte r', 'Ti m', 'Lily']
random _item = random.ch oic -
e(m ylist)
while chance > 0:
    print (mylist)

    print ("Ch ances
Remaining =",c hance)
```

Guess (cont)

```
> guess = input("Guess a word from the
above :")

if guess == random_item:
    score = score + 100
    print ("That's correct!", "The score is
:",score)
    random_item = random.choice(mylist)
else:
    print ("Sorry, wrong choice!")
    chance = chance - 1
if guess in mylist:
    print ("")
else:
    print ("Sorry,that is not even in the
list!")
if chance == 0:
    print ("Game Over! The word was",ra-
ndom_item)
    print ("Final score: ",score)
```

Even,Odd number

```
even = 0
odd = 0
while True:
    use r_num = int(input("Enter the number :"))
    if user_num >= 0:
        if user_num % 2
== 0:
            even =
even + 1
        else:
            odd = odd
+ 1
    else:
        print ("Even
number :", even)
        print ("Odd
number :", odd)
        break
```

Definition

```
def printDefinition(word):
    if word == " var iab le":
        print ("""
        A variable is the
the thing that can be changed.
        " " ")
    elif word == " par ame -
ter ":
        print ("""
        A parameter is
the limiting factor
        " " ")
    elif word == " arg ume -
nt":
        print ("""
        An argument is
the identifier that you give to
function
        " " ")
    elif word == " str -
ing ":
        print ("""
        A string is
something that can be repeated
by the number.
        " " ")
    elif word == " fun ction
call":
        print ("""
        A function call
is the word you use to reuse the
function.
        " " ")
    else:
        print ("un known
word")
while True:
    use r_input = input( " -
Please type the word :")
    pri ntD efi nit ion -
(us er_ input)
```