

### User as float, print half of the that number

```
user_number = float(input('enter
the number:'))
print (user_number/2)
```

### list, print all element from the list using loop

```
# for loop solution
mylist = [1,2,3,4,5]
for number in mylist:
    print(number)
# while loop solution
mylist = [1,2,3,4,5]
num = 0
while number < len(mylist):
    print(mylist(number))
    number = number+1
```

### print Fibonacci series between 0 to 50 using loop

```
num1 = 0
num2 = 1
fibonacci = num1 + num2
myoutput = " 0,1"
while fibonacci <50:
    myoutput = myoutput + ", " +
str(fibonacci)
    num1 =num2
    num2 =fibonacci
    fibonacci = num1 + num2
print(myoutput)
```

### The areaOfEllipse using pir2r1 ( two parameter)

```
def areaOfEllipse(radius1,radius2):
    pi = 3.1415
    area = pi radius1radius2
    return area
area1= areaOfEllipse(2,3)
print(area1)
```

### User\_input

```
user_input = input("Enter a value: ")
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### Converting between different data types:

```
word = str(3) #converts 3 to a string "3"
num = int("3.5") #converts "3.5" to an integer 3
num = float("3") #converts "3" to a float 3.0
```

### Combining Strings (Concatenation)

```
"hi" + "there" == "hithere"
"hi" * 5 == "hihihihihi"
```

### Comparing Values:

When you compare two values, the result is a Boolean  
(True or False) E.g. 2 == 3 is False  
== is equal to  
!= is not equal to  
< less than  
<= less than or equal to  
> greater than  
>= greater than or equal to  
and  
or  
not  
True or anything is always True  
False and anything is always False

### The output of follwing code

```
Y = True
print (not y or 2 < 3) output =
False
```

### print alleven numbers from 1 100 using while loop

```
number = 0
while number < 100:
    number =number + 2
    print (number)
```

### use a for loop to print the following

```
0
01
012
0123
01234
mystring = ""
for number in range(5):0
    mystring = mystring +
str(number)
    print (mystring)
# range(2) = 01
```

### receive input from user, convert integer, print , 5

```
number = int(input("Enter a
number:"))
print (num*5)
```

### output of the program

```
mystring = ""
count = 0
while count < 5:
    mystring = mystring +
str(count)
    print(mystring)
```

### output of the program (cont)

```
count = count + 1
0
01
012
0123
01234
```

### Data types

String - a list of characters e.g. "abc123%^", or empty string ""

Integer - whole numbers, and negative numbers e.g. -5, 0, 2

Floating Point - decimal numbers e.g. 1.5, 2.0, -2.99

Boolean - True or False

### Printing values:

```
print("hello", "there") #displays hello there
print("hello" + "there") #displays hellothere
```

### Comments

# hashtag – everything after # is a comment not code

```
"""
Double quote - Multi-line comment, everything in between three double quotes is a comments
"""
" Single quote - Multi-line comment, everything in between three single quotes is a comments "
```

### the loop doesn't go forever

```
gameover = 0
while (gameover ==0):

    print("hello")
    gameover = 1
```

### Receive number from user, number is determine by 3

```
user_number = int(input("Enter the number:"))
remainder = user_number%3
if remainder == 0:
    print (user_number, "is divisible by 3")
else:
    print (user_number, "is not visible by 3")
```

### MultiplicationTable

```
def multiplicationTable():
    user_number = input("Enter the number:")
    number = int(user_number)
    count = 1
    While count <=10:
        print(number,
            " ", count, "=", numcount)
        count = count + 1
```

### Making number is negative, Zero or positive

```
user_number = int(input("Enter a number"))
if user_number > 0:
    print(user_number, "is positive")
elif user_number < 0:
    print(user_number, "is negative")
else:
    print(user_number, "is equal to zero")
```

### print all even number from -100 to -1 (while loop)

```
user_number= -100
while user_number< -1:
    print(user_number)
    user_number= user_number + 2
```

### positive integer,negative print HM odd, even

```
evencount = 0
oddcount = 0
while True:
    number = int(input("Enter a number"))
    if number < 0:
        print ("Even number",evencount)
        print ("odd number", oddcount)
        break
    else:
        if (number%2) == 0:
            evencount = evencount + 1
        else:
            oddcount = oddcount + 1
```

### Basic Math Operations:

+ addition, - subtraction

/ divide with answer as a float. E.g. 5/2 == 2.5

// divide with answer as an integer. E.g. 5//2 == 2

\* multiply

**exponent. E.g. 2 power 3 == 2 3**

% modulo. Gives the remainder when dividing e.g. 33 % 10 == 3

All math operations use the sa

### print out fifth character from the variable

```
myword = "hellothere"
print(hellothere[4])
```

### convert integer and multiply by 10 loop

```
while True:
    user_number =
int(input("enter a number"))
    number= int(user_number)*10
    print(number)
```