

# Day1

Target:

Operators(+,\*,-,,//,%)

Datatypes(int,float,string,list,set,dict,tuple)

Variables(how to write)

builtin function(max(),min(),abs(),diff(),sort())

Type casting(int(),float(),str())

how to take simple input()

In [1]:

```
a=10  
print(a)
```

10

In [16]:

```
b=21//2  
  
print(b)
```

10

In [34]:

```
#power  
10**2
```

Out[34]:

100

In [ ]:

```
floor division //  
11.5,12.34,10.88
```

In [15]:

```
10.88*2
```

Out[15]:

21.76

In [18]:

```
#floor, ceil  
x=10.5  
#10<x<11  
y=10.5//1  
print(y)
```

10.0

In [26]:

```
10%3
```

Out[26]:

1

In [ ]:

```
mod
```

In [23]:

```
10/2
```

Out[23]:

5.0

In [30]:

```
x=24  
if x%2==0:  
    print("even")  
else:  
    print("odd")
```

even

In [1]:

Exercise:

2

## Variables:

**A variable name must start with a letter or the underscore character**

**A variable name cannot start with a number**

**A variable name can only contain alpha-numeric characters and underscores (A-z, 0-9, and \_)**

**Variable names are case-sensitive (firstname, Firstname, FirstName and FIRSTNAME are different variables)**

**Examples:****Valid:**

firstname

lastname

age

country

city

first\_name

last\_name

capital\_city

**\_if # if we want to use reserved word as a variable**

year\_2019

year2019

current\_year\_2019

num1

num2

In [62]:

```
a1=10
print(A1)
```

```
-----
NameError                                Traceback (most recent call last)
<ipython-input-62-d32695cd9492> in <module>
      1 a1=10
----> 2 print(A1)
```

**NameError:** name 'A1' is not defined

In [45]:

```
help("keywords")
```

Here is a list of the Python keywords. Enter any keyword to get more help.

False	def	if	raise
None	del	import	return
True	elif	in	try
and	else	is	while
as	except	lambda	with
assert	finally	nonlocal	yield
break	for	not	
class	from	or	
continue	global	pass	

```
1=10
```

In [58]:

```
1=10
```

File "&lt;ipython-input-58-44de70f1a1b6&gt;", line 1

```
1=10
```

^

**SyntaxError:** can't assign to literal

In [8]:

```
#print('Hello',',',', 'World','!')
```

In [9]:

```
#first_name = input('What is your name: ')
```

In [10]:

```
#a=10
#type(a)
#print(type(3.14))
```

Inside 30DaysOfPython create a folder called day\_2. Inside this folder create a file named variables.py

Write a python comment saying 'Day 2: 30 Days of python programming'

Declare a first name variable and assign a value to it

Declare a last name variable and assign a value to it

Declare a full name variable and assign a value to it

Declare a country variable and assign a value to it

Declare a city variable and assign a value to it

Declare an age variable and assign a value to it

Declare a year variable and assign a value to it

Declare a variable is\_married and assign a value to it

Declare a variable is\_true and assign a value to it

Declare a variable is\_light\_on and assign a value to it

Declare multiple variable on one line

Check the data type of all your variables using type() built-in function

Using the len() built-in function find the length of your first name

Compare the length of your first name and your last name

Declare 5 as num\_one and 4 as num\_two

Add num\_one and num\_two and assign the value to a variable \_total

Subtract num\_two from num\_one and assign the value to a variable \_diff

Multiply num\_two and num\_one and assign the value to a variable \_product

Divide num\_one by num\_two and assign the value to a variable \_division

Use modulus division to find num\_two divided by num\_one and assign the value to a variable \_remainder

Calculate num\_one to the power of num\_two and assign the value to a variable \_exp

Find floor division of num\_one by num\_two and assign the value to a variable \_floor\_division

The radius of a circle is 30 meters.

Calculate the area of a circle and assign the value to a variable area\_of\_circle

Calculate the circumference of a circle and assign the value to a variable circum\_of\_circle

Take radius as user input and calculate the area.

Use the built-in input function to get first name, last name, country and age from a user and store the value to their corresponding variable names  
Run `help('keywords')` in python shell or in your file to check for the reserved words

In [35]:

```
x=25  
type(x)
```

Out[35]:

int

In [ ]:

```
#int integer  
#str string  
#float float  
#list list  
#double
```

In [44]:

```
a=float(25)  
print(type(a))  
a
```

<class 'float'>

Out[44]:

25.0

In [47]:

```
_def =10
```

In [48]:

```
print(_def)
```

10

In [50]:

```
l=["abc",1,10.0]
```

In [57]:

```
-----  
TypeError                                Traceback (most recent call last)  
<ipython-input-57-da8c4231e238> in <module>  
      1 x=10  
      2  
----> 3 a=list(x)  
  
TypeError: 'list' object is not callable
```

In [68]:

```
help([].reverse)
```

Help on built-in function reverse:

```
reverse(...) method of builtins.list instance  
  L.reverse() -- reverse *IN PLACE*
```

In [64]:

```
a="abcd"  
a.capitalize()
```

Out[64]:

```
'Abcd'
```

In [89]:

```
l=[]  
s=""  
t=(),  
s=set()  
d={}  
type(t)
```

Out[89]:

```
tuple
```

In [82]:

```
a=10
k=[]
for i in range(a):
    k.append(i)
print(k)
k.pop()
print(k)
```

```
[0, 1, 2, 3, 4, 5, 6, 7, 8, 9]
[0, 1, 2, 3, 4, 5, 6, 7, 8]
```

In [83]:

```
t=tuple(k)
```

In [84]:

```
print(t)
```

```
(0, 1, 2, 3, 4, 5, 6, 7, 8)
```

In [86]:

```
k=t[0:3]
```

In [87]:

Out[87]:

```
(0, 1, 2)
```

In [90]:

```
l=[1,2,3,4,5]
```

In [92]:

```
max(l)
```

Out[92]:

```
5
```

In [93]:

```
min(l)
```

Out[93]:

```
1
```

In [98]:

```
l.reverse()
```

In [99]:

```
print(l)
```

```
[5, 4, 3, 2, 1]
```

In [96]:

```
l.sort()
```

In [97]:

```
print(l)
```

```
[1, 2, 3, 4, 5]
```

In [100]:

```
a=sorted(l)
```

In [101]:

```
print(a)
```

```
[1, 2, 3, 4, 5]
```

In [102]:

```
print(l)
```

```
[5, 4, 3, 2, 1]
```

In [105]:

```
a="A"  
print(ord(a))
```

```
65
```

In [107]:

```
ord("Z")
```

Out[107]:

```
90
```



In [109]:

```
help("".isalpha)
```

Help on built-in function isalpha:

isalpha(...) method of builtins.str instance  
S.isalpha() -> bool

Return True if all characters in S are alphabetic  
and there is at least one character in S, False otherwise.

In [123]:

```
a=int(input("Enter the number"))  
print(a*a)  
print(type(a))
```

Enter the number100  
10000  
<class 'int'>

In [135]:

```
a=input().split("/")  
#10/20/30  
print(a)
```

10,20,30  
['10,20,30']

In [137]:

```
"""Hello i am student"""
```

Out[137]:

'Hello i am student'

In [138]:

```
country="india"
```

In [139]:

```
country
```

Out[139]:

'india'

In [140]:

```
a=10  
b=20  
c,d=30,40
```

In [143]:

```
a="abcde"  
print(len(a))
```

5

In [150]:

```
s="ram krishna"  
b="krishna"  
first=len(s)  
second=len(b)  
if first>second:  
    print(s)  
else:  
    print(b)
```

ram krishna

In [151]:

```
a,b=5,4  
c=a+b  
print(c)
```

9

In [152]:

```
s=a**b  
print(s)
```

625

In [153]:

```
r=30  
area=3.14*(r**2)  
print(area)
```

2826.0

In [160]:

```
import math  
r=30  
area=math.pi*r**2  
print(area)
```

2827.4333882308138

In [162]:

```
no=input("Enter the no ")  
letter=input("enter th letter: ")
```

```
Enter the no 10  
enter th letter: A
```

In [163]:

```
#pip install notebook-as-pdf
```

Collecting notebook-as-pdfNote: you may need to restart the kernel to use up dated packages.

WARNING: You are using pip version 20.1; however, version 20.1.1 is available.

You should consider upgrading via the 'C:\Users\DELL\Anaconda3\python.exe -m pip install --upgrade pip' command.

Downloading notebook\_as\_pdf-0.0.2-py3-none-any.whl (5.3 kB)

Collecting pikepdf

Downloading pikepdf-1.16.0-cp36-cp36m-win\_amd64.whl (1.4 MB)

Requirement already satisfied: pypeteer in c:\users\dell\anaconda3\lib\site-packages (from notebook-as-pdf) (0.0.25)

Requirement already satisfied: nbconvert in c:\users\dell\appdata\roaming\python\python36\site-packages (from notebook-as-pdf) (5.6.1)

Requirement already satisfied: lxml>=4.0 in c:\users\dell\anaconda3\lib\site-packages (from pikepdf->notebook-as-pdf) (4.1.1)

Requirement already satisfied: urllib3 in c:\users\dell\anaconda3\lib\site-packages (from pypeteer->notebook-as-pdf) (1.22)

Requirement already satisfied: appdirs in c:\users\dell\anaconda3\lib\site-packages (from pypeteer->notebook-as-pdf) (1.4.3)

Requirement already satisfied: websockets in c:\users\dell\anaconda3\lib\site-packages (from pypeteer->notebook-as-pdf) (8.1)

Requirement already satisfied: tqdm in c:\users\dell\anaconda3\lib\site-packages (from pypeteer->notebook-as-pdf) (4.46.0)

Requirement already satisfied: pyee in c:\users\dell\anaconda3\lib\site-packages (from pypeteer->notebook-as-pdf) (7.0.1)

Requirement already satisfied: defusedxml in c:\users\dell\appdata\roaming\python\python36\site-packages (from nbconvert->notebook-as-pdf) (0.6.0)

Requirement already satisfied: entrypoints>=0.2.2 in c:\users\dell\anaconda3\lib\site-packages (from nbconvert->notebook-as-pdf) (0.2.3)

Requirement already satisfied: bleach in c:\users\dell\anaconda3\lib\site-packages (from nbconvert->notebook-as-pdf) (2.1.2)

Requirement already satisfied: mistune<2,>=0.8.1 in c:\users\dell\anaconda3\lib\site-packages (from nbconvert->notebook-as-pdf) (0.8.3)

Requirement already satisfied: nbformat>=4.4 in c:\users\dell\anaconda3\lib\site-packages (from nbconvert->notebook-as-pdf) (4.4.0)

Requirement already satisfied: pygments in c:\users\dell\anaconda3\lib\site-packages (from nbconvert->notebook-as-pdf) (2.6.1)

Requirement already satisfied: jinja2>=2.4 in c:\users\dell\anaconda3\lib\site-packages (from nbconvert->notebook-as-pdf) (2.10)

Requirement already satisfied: pandocfilters>=1.4.1 in c:\users\dell\anaconda3\lib\site-packages (from nbconvert->notebook-as-pdf) (1.4.2)

Requirement already satisfied: jupyter-core in c:\users\dell\anaconda3\lib\site-packages (from nbconvert->notebook-as-pdf) (4.6.3)

Requirement already satisfied: testpath in c:\users\dell\anaconda3\lib\site-packages (from nbconvert->notebook-as-pdf) (0.3.1)

Requirement already satisfied: traitlets>=4.2 in c:\users\dell\anaconda3\lib\site-packages (from nbconvert->notebook-as-pdf) (4.3.2)

Requirement already satisfied: six in c:\users\dell\anaconda3\lib\site-packages (from bleach->nbconvert->notebook-as-pdf) (1.14.0)

Requirement already satisfied: html5lib!=1.0b1,!1.0b2,!1.0b3,!1.0b4,!1.0b5,!1.0b6,!1.0b7,!1.0b8,>=0.9999999pre in c:\users\dell\anaconda3\lib\site-packages (from bleach->nbconvert->notebook-as-pdf) (1.0.1)

Requirement already satisfied: ipython\_genutils in c:\users\dell\anaconda3\lib\site-packages (from nbformat>=4.4->nbconvert->notebook-as-pdf) (0.2.0)

```
Requirement already satisfied: jsonschema!=2.5.0,>=2.4 in c:\users\dell\anaconda3\lib\site-packages (from nbformat>=4.4->nbconvert->notebook-as-pdf) (2.6.0)
Requirement already satisfied: MarkupSafe>=0.23 in c:\users\dell\anaconda3\lib\site-packages (from jinja2>=2.4->nbconvert->notebook-as-pdf) (1.0)
Requirement already satisfied: pywin32>=1.0; sys_platform == "win32" in c:\users\dell\anaconda3\lib\site-packages (from jupyter-core->nbconvert->notebook-as-pdf) (222)
Requirement already satisfied: decorator in c:\users\dell\anaconda3\lib\site-packages (from traitlets>=4.2->nbconvert->notebook-as-pdf) (4.2.1)
Requirement already satisfied: webencodings in c:\users\dell\anaconda3\lib\site-packages (from html5lib!=1.0b1,!1.0b2,!1.0b3,!1.0b4,!1.0b5,!1.0b6,!1.0b7,!1.0b8,>=0.99999999pre->bleach->nbconvert->notebook-as-pdf) (0.5.1)
Installing collected packages: pikepdf, notebook-as-pdf
Successfully installed notebook-as-pdf-0.0.2 pikepdf-1.16.0
```

In [ ]: