In [2]:
```
print("Hello World")
```

```
Hello World
```

HEADING

HEADING 1

HEADING 2

HEADING 3

HEADING 4

HEADING 5

HI I AM VIPUL CAN I HELP YOU?

BULLETS

- MANGO
- BANANA
- APPLE
    - VIPUL

HIGHLIGHT

`VIPUL PANDEY`

FORMATING

ITALIC **BOLD** ***BOLD+ITALIC***

In [1]:
```
# int a=10
a=10
type(a)
```

Out[1]:
```
int
```

Topics

- variale

- data types
- operators
- except sequence
- print statement

variable

Variables are used to store values.They act as place holders for various types of data such as list,numbers,strings or objects.

rules for assigning a variables :

- Variable names must start with a letter or underscore(_),folloewd by letters,numbers,or underscores.
- Variables names are case senstive
- No special characters (except underscore) are allowed in variables names
- keyword cannot be used for assigning a variables like if-else , elis,while,def etc.

In [2]:
```
10+10
10*20
```

Out[2]:
```
200
```

In [3]:
```
a=254556545655465
```

In [4]:
```
a
```

Out[4]:
```
254556545655465
```

In [5]:
```
# 1st rule
a9 = 10
a9
```

Out[5]:
```
10
```

In [6]:
```
9a=10
```

```
  Cell In[6], line 1
    9a=10
    ^
SyntaxError: invalid decimal literal
```

In [7]:
```
# exception

_a=10
```

In [10]:
```
# 2nd rule
vipul=1
vipul
```

Out[10]: 1

In [11]:
```
# 3RD RULE
vipul_pandey=1
vipul_pandey
```

Out[11]: 1

In [12]:
```
vipul pandey
```

```
  Cell In[12], line 1
    vipul pandey
          ^
SyntaxError: invalid syntax
```

In [ ]:
```

```

Data types

- int
- float
- str
- bool

In [13]:
```
# int--> whole numbers
# discrete variables
a=10
type(a)
```

Out[13]: int

In [14]:
```
age=21
type(age)
```

Out[14]: int

In [15]:
```
# float --> decimal
# continous
a=1.2
a=1.0
type(a)
```

Out[15]:
```
float
```

In [16]:
```
height=175.5
type(height)
```

Out[16]:
```
float
```

In [17]:
```
# str : sequence of characters
# 'sentance'
#"sentance"
# '''Paragraph'''
name = 'vipul'
```

In [18]:
```
name='vipul'
name
```

Out[18]:
```
'vipul'
```

In [19]:
```
sent1='Hi this side gaurav.I am a youtuber.'
sent1
```

Out[19]:
```
'Hi this side gaurav.I am a youtuber.'
```

In [20]:
```
sent2="Gaurav doesn't like to study"
```

In [24]:
```
para='''1. Python is a popular programming language. It was created by Guido v

It is used for:

web development (server-side),
software development,
mathematics,
system scripting.
What can Python do?
Python can be used on a server to create web applications.
Python can be used alongside software to create workflows.
Python can connect to database systems. It can also read and modify files.
Python can be used to handle big data and perform complex mathematics.
Python can be used for rapid prototyping, or for production-ready software dev
print(para)
```

1. Python is a popular programming language. It was created by Guido van Rossu
m, and released in 1991.

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lopment.

In [25]:
```
# bool
a = True
b = False
type(a)
```

Out[25]: bool

In [ ]:
```
# operators

# arthematics operations
+
-
*
/
// : floor
% : modulus
** : power
```

In [26]:
```
a = 10
b = 20
a+b
```

Out[26]: 30

In [27]:
```
# modulus --> remainder

5%2
45%7
```

Out[27]: 3

In [28]:
```
# floor division
5//2
```

Out[28]: 2

In [29]:
```
# power
2*2*2
2**10
```

Out[29]: 1024

In [30]:
```
# round
# built in function
round(2.9)
```

Out[30]: 3

In [ ]:
```
# assignment operators
= : assign
+= : addition and assign
-=: minus and assign
*=: multiply and assign
/= : divide and assign
```

In [31]:
```
a=10
a
```

Out[31]: 10

In [32]:
```
a+10 # operations
```

Out[32]: 20

In [33]:
```
a
```

Out[33]: 10

In [38]:
```
a=a+10 # overwrite
a
```

Out[38]: 60

In [39]:
```
# a=a+10
a+=10 # addition and assign
a
```

Out[39]: 70

In [ ]:
```
# comparision operators
> : greater than
< : less than
>= : greater than equals to
<= : less than equals to
== : equals to
|= : not equals to
```

In [40]:
```
10>5
10<5
```

Out[40]: False

In [53]:
```
10>10
```

Out[53]: False

In [41]:
```
10>=10
```

Out[41]: True

In [42]:
```
10==10
```

Out[42]: True

In [51]:
```
a = 10 # assign
a== 10 # compare
```

Out[51]: True

In [52]:
```
a==20
```

Out[52]: False

In [45]:
```
a!=10
```

Out[45]: False

In [46]:
```
# in operators
'g' in 'gaurav'
```

Out[46]: True

In [47]:
```
'z' in 'gaurav'
```

Out[47]: False

In [49]:
```
'Khushboo' in 'Khushboo likes to study math'
```

Out[49]: True

In [50]:
```
'varsha' in 'Khushboo likes to study math'
```

Out[50]: False

In [ ]:
```
# logical; operatiors
and ( dot product (.))
or ( addition(+))
```

```
not
```

In [54]:
```
True and False
```

Out[54]: False

In [55]:
```
True or False
```

Out[55]: True

In [56]:
```
True and True
```

Out[56]: True

In [57]:
```
not True
```

Out[57]: False

In [8]:
```
height=168.5
type(height)
```

Out[8]: float

In [ ]:
```
# escape sequence

\n : new line                (\=Back slash,/=Forward slash)
\t : tab space
\' : backslash single quotes
\" : backslash double quotes
\\  : double backslash
```

In [10]:
```
# \n
# new line

str1 = 'hi this side vipul'
str2="I am vipul"
```

In [11]:
```
print(str1)
```

```
hi this side vipul
```

In [12]:
```
print('hello\nworld\nvipul')
```

```
hello
world
vipul
```

In [15]:
```
print('hello \n world \n vipul')
```

```
hello
 world
 vipul
```

In [16]:
```
print('''hello
world''')
a= '''hello
world'''
a
```

```
hello
world
```

Out[16]:
```
'hello\nworld'
```

In [17]:
```
a='hi my name is vipul \n I am from delhi.'
```

In [18]:
```
a
```

Out[18]:
```
'hi my name is vipul \n I am from delhi.'
```

In [19]:
```
print(a)
```

```
hi my name is vipul
 I am from delhi.
```

In [21]:
```
# print statements
# print--> build in functions python
# 1. advised to use print statements--> debugging , new applications,xyz
#2. forcefully print content
print(a)
```

```
hi my name is vipul
 I am from delhi.
```

In [22]:
```
x=10
y=20
x
y
```

Out[22]:
```
20
```

In [23]:
```
x=10
y=20
print(x)
print(y)
```

```
10
20
```

In [24]:
```
# tabspace

print('vipul\tpandey')
```

```
vipul	pandey
```

In [26]:
```
print('name\tvipul')
print('class\t3rd year')
print('subject\tmetric spaces')
```

```
print('rollno\t23/1569')
```

```
name        vipul
class        3rd year
subject        metric spaces
rollno        23/1569
```

In [27]:
```
# \'
# \"

'shariq does\'t likes to study'
```

Out[27]: "shariq does't likes to study"

In [28]:
```
"Gaurav said, \"Anshum sir is the best teacher is skill circle\"."
```

Out[28]: 'Gaurav said, "Anshum sir is the best teacher is skill circle".'

In [29]:
```
print('Gaurav said,"Anshum sir is the best teacher of skillcircle".Gaurav does
```

```
Gaurav said,"Anshum sir is the best teacher of skillcircle".Gaurav does't like
Trump.
```

In [30]:
```
# \\

print('this is backslash \\')
```

```
this is backslash \
```

In [ ]:
```

```