Numbers

In [ ]:
```
10
```

In [ ]:
```
10+10 #addition
```

Out[ ]:
```
20
```

10*2

In [ ]:
```
10/2 #float division
```

Out[ ]:
```
5.0
```

In [ ]:
```
10//2 #floor division
```

Out[ ]:
```
5
```

In [ ]:
```
10**2 #square or power
```

Out[ ]:
```
100
```

In [ ]:
```
10**3
```

Out[ ]:
```
1000
```

In [1]:
```
width=20
height=5*9
width*height
```

Out[1]:
```
900
```

In [ ]:
```
_    #returns previous value
```

Out[ ]:
```
1000
```

In [ ]:
```
_+10
```

Out[ ]:
```
1010
```

In [ ]:
```
_*10
```

Out[ ]:
```
10100
```

In [ ]:
```
_/10
```

Out[ ]:
```
1010.0
```

In [ ]:
```
10*3+6-2
```

Out[ ]:
```
34
```

In [ ]:
```
10*(3+6)-2
```

Out[ ]:
```
88
```

usage of math library

In [ ]:
```
math.pi
```

```
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
/tmp/ipython-input-13-929699079.py in <cell line: 0>()
----> 1 math.pi

NameError: name 'math' is not defined
```

In [ ]:
```
import math
math.pi
```

Out[ ]:
```
3.141592653589793
```

In [ ]:
```
math.ceil
```

Out[ ]:
```
<function math.ceil(x, /)>
```

In [ ]:
```
math.ceil(9.7)
```

Out[ ]:
```
10
```

In [ ]:
```
math.floor(9.7)
```

Out[ ]:
```
9
```

strings concept

In [ ]:
```
welcome to hyd
```

```
  File "/tmp/ipython-input-18-4144783655.py", line 1
    welcome to hyd
            ^
SyntaxError: invalid syntax
```

In [ ]:
```
'welcome to hyd' # single line string or usage of single quotes
```

Out[ ]:
```
'welcome to hyd'
```

In [ ]:
```
"welcome to hyd" #double quotes for single line string
```

Out[ ]:
```
'welcome to hyd'
```

In [ ]:
```
'''welcome to hyd''' #multi line quotes
```

Out[ ]:
```
'welcome to hyd'
```

In [ ]:
```
'''Hi
I am Mercy
Glad to see you''' #multiline quotes for multiple line string
```

Out[ ]: 'hi\ni am Mercy\nGlad to see you'

In [2]:
```
'1975' # digits and numericals enclosed in quotes are also strings.
```

Out[2]: '1975'

In [3]:
```
'doesn\'t' #use \' to escape the single quote
```

Out[3]: "doesn't"

In [4]:
```
"doesn\'t" # or use double quotes instead
```

Out[4]: "doesn't"

In [5]:
```
'"Yes," they said'
```

Out[5]: '"Yes," they said'

In [6]:
```
"\"Yes,\"they said"
```

Out[6]: '"Yes,"they said'

In [ ]:

In [ ]:

slicing concept

In [ ]:
```
s='hello'
s
```

Out[ ]: 'hello'

In [ ]:
```
s[0]
```

Out[ ]: 'h'

In [ ]:
```
s[4]
```

Out[ ]: 'o'

In [ ]:
```
s[7]
```

```
---------------------------------------------------------------------------
IndexError                                Traceback (most recent call last)
/tmp/ipython-input-28-83291243.py in <cell line: 0>()
----> 1 s[7]

IndexError: string index out of range
```