```
In [ ]:  #################### welcome to my python class ###############################
```

```
In [ ]:  print("hello world")
```

```
In [ ]:  type("hellow world")
```

```
In [ ]:  print('hello world')
```

```
In [ ]:  print(hello world)
```

```
In [ ]:  type('a')
```

```
In [ ]:  a = 5
```

```
In [ ]:  type(a)
```

```
In [ ]:  range(10)
```

```
In [ ]:  type(a==5)
```

```
In [ ]:  range(10)
```

```
In [ ]:  list(range(10))
```

```
In [ ]:  list(range(3,10)) ## list number from 3-9
```

```
In [ ]:  list(range(3,10,2)) ## list  numbers from 3-9 by skipping 1 numbers  in between
```

```
In [ ]:  list(range(10,3)) ## it gives an empty list
```

```
In [ ]:  list(range(3,10,-1))
```

```
In [ ]:  list(range(3,10.5))
```

```
In [ ]:  list(range(3.5,10.5))
```

```
In [ ]:  list(range(-10,-3))
```

```
In [ ]:  type(3.567894)
```

```
In [ ]:  list(range(10,3,-2))
```

```
In [ ]:  list(range(10,3,-1))
```

```
In [ ]:  list(range(10,3))
```

```
In [ ]:  "anand"+"rajesh"
```

```
In [ ]:  a = input("enter a number")
```

```
In [ ]:  a
```

In [ ]:
```python
type(a)
```

In [1]:
```python
num1 = input("enter 1st number ")
num2 = input("enter 2nd number ")

sum = num1 + num2
print(sum)
```

```
enter 1st number 23
enter 2nd number 34
2334
```

In [3]:
```python
num1 = float(input("enter 1st number "))
num2 = float(input("enter 2nd number "))

sum = num1 + num2
print(sum)
```

```
enter 1st number 23.678
enter 2nd number 47.892
71.57000000000001
```

In [8]:
```python
type(sum)
```

Out[8]:
```
float
```

In [4]:
```python
print("sum")
```

```
sum
```

In [5]:
```python
print(sum)
```

```
71.57000000000001
```

In [6]:
```python
sum
```

Out[6]:
```
71.57000000000001
```

In [7]:
```python
## design a basic cvalculator by inputiing numbers from user
```

In [12]:
```python
num1 = float(input("enter 1st number "))
num2 = float(input("enter 2nd number "))

sum = num1 + num2
diff = num1 - num2
mult = num1 * num2
div = num1 / num2
mod = num1 % num2
flr = num1//num2
pwr = num1**num2

print(sum)
print(diff)
print(mult)
print(div)
print(mod)
print(flr)
print(pwr)
```

```
enter 1st number 45
enter 2nd number 36
81.0
9.0
1620.0
1.25
9.0
1.0
3.2783136040873322e+59
```

In [13]:
```python
a = 2
a ** 2
```

Out[13]: 4

In [14]:
```python
pow(3,5)
```

Out[14]: 243

In [15]:
```python
pow("anand",3)
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Input In [15], in <cell line: 1>()
----> 1 pow("anand",3)

TypeError: unsupported operand type(s) for ** or pow(): 'str' and 'int'
```

In [20]:
```python
"anand " *3
```

Out[20]: 'anand anand anand '

In [21]:
```python
list("anand")
```

Out[21]: ['a', 'n', 'a', 'n', 'd']

In [41]:
```python
a = list('INDEPENDENCE')
```

In [42]:
```python
a ## or print(a)
```

Out[42]: ['I', 'N', 'D', 'E', 'P', 'E', 'N', 'D', 'E', 'N', 'C', 'E']

In [26]:
```python
len(a)
```

Out[26]: 12

In [27]:
```python
a[5]
```

Out[27]: 'E'

In [28]:
```python
a[11]
```

Out[28]: 'E'

In [29]:
```python
a[-2]
```

Out[29]: 'C'

In [30]:
```python
a[::2]
```

```
Out[30]:  ['I', 'D', 'P', 'N', 'E', 'C']
```

```
In [31]:  a[1:12:1]
```

```
Out[31]:  ['N', 'D', 'E', 'P', 'E', 'N', 'D', 'E', 'N', 'C', 'E']
```

```
In [32]:  a[::2]
```

```
Out[32]:  ['I', 'D', 'P', 'N', 'E', 'C']
```

```
In [34]:  a[0:11:3]
```

```
Out[34]:  ['I', 'E', 'N', 'N']
```

```
In [36]:  a[-10:-1:2]
```

```
Out[36]:  ['D', 'P', 'N', 'E', 'C']
```

```
In [37]:  a[::-1]
```

```
Out[37]:  ['E', 'C', 'N', 'E', 'D', 'N', 'E', 'P', 'E', 'D', 'N', 'I']
```

```
In [38]:  a
```

```
Out[38]:  ['I', 'N', 'D', 'E', 'P', 'E', 'N', 'D', 'E', 'N', 'C', 'E']
```

```
In [39]:  a = a[::-1]
```

```
In [40]:  a
```

```
Out[40]:  ['E', 'C', 'N', 'E', 'D', 'N', 'E', 'P', 'E', 'D', 'N', 'I']
```

```
In [43]:  b = a[::-1]
```

```
In [44]:  b
```

```
Out[44]:  ['E', 'C', 'N', 'E', 'D', 'N', 'E', 'P', 'E', 'D', 'N', 'I']
```

```
In [45]:  a = "hello how are you Ramya"
          b = a[::-1]
```

```
In [46]:  b
```

```
Out[46]:  'aymaR uoy era woh olleh'
```

```
In [47]:  a = "Swastik"
```

```
In [49]:  a[3]
```

```
Out[49]:  's'
```

```
In [52]:  type(a)
```

```
Out[52]:  str
```

```
In [50]:  len(a)
```

Out[50]: 7

In [51]:
```python
a[3] = 'm'
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Input In [51], in <cell line: 1>()
----> 1 a[3] = 'm'

TypeError: 'str' object does not support item assignment
```

In [53]:
```python
str_to_list = list(a)
```

In [54]:
```python
str_to_list
```

Out[54]: ['S', 'w', 'a', 's', 't', 'i', 'k']

In [55]:
```python
str_to_list[3] = 'm'
```

In [56]:
```python
str_to_list
```

Out[56]: ['S', 'w', 'a', 'm', 't', 'i', 'k']

In [59]:
```python
empty_list = [] # create an empty list
```

In [60]:
```python
empty_list
```

Out[60]: []

In [61]:
```python
list_object = ["Seshadri",23.56,45,'m','Aakash',45,'Aakash']
```

In [62]:
```python
list_object
```

Out[62]: ['Seshadri', 23.56, 45, 'm', 'Aakash', 45, 'Aakash']

In [63]:
```python
list_object = ["Seshadri",23.56,45,'m','Aakash',45,'Aakash',['Gautam','Anand','Ani
```

In [64]:
```python
list_object
```

Out[64]:
```
['Seshadri',
 23.56,
 45,
 'm',
 'Aakash',
 45,
 'Aakash',
 ['Gautam', 'Anand', 'Anil']]
```

In [65]:
```python
list_object[-1]
```

Out[65]: ['Gautam', 'Anand', 'Anil']

In [66]:
```python
list_object[-1][1]
```

Out[66]: 'Anand'

In [67]:
```python
list_object[-1][-1]
```

Out[67]:
```
'Anil'
```

In [68]:
```python
list_object[-1][2]
```

Out[68]:
```
'Anil'
```

In [69]:
```python
list_object.append("Ramya")
```

In [70]:
```python
list_object
```

Out[70]:
```
['Seshadri',
 23.56,
 45,
 'm',
 'Aakash',
 45,
 'Aakash',
 ['Gautam', 'Anand', 'Anil'],
 'Ramya']
```

In [72]:
```python
list_object.insert(3,"MEENU")
```

In [73]:
```python
list_object
```

Out[73]:
```
['Seshadri',
 23.56,
 45,
 'MEENU',
 'm',
 'Aakash',
 45,
 'Aakash',
 ['Gautam', 'Anand', 'Anil'],
 'Ramya']
```

In [74]:
```python
### TASK FOR YOU ALL
## LIST = [2,3,4,5,6,7,8,9,123,13,14,15,16]
## I WANT ALL MY EVEN NUMBER IN ONE LIST AND ALL MY ODD NUMBER IN ANOTHER LIST
```

In [94]:
```python
num_list = [2,3,4,5,6,7,8,9,123,13,14,15,16]
```

In [95]:
```python
num_list
```

Out[95]:
```
[2, 3, 4, 5, 6, 7, 8, 9, 123, 13, 14, 15, 16]
```

In [96]:
```python
type(num_list)
```

Out[96]:
```
list
```

In [97]:
```python
a = []
b = []
```

In [98]:
```python
len(num_list)
```

Out[98]:
```
13
```

In [99]:
```python
for i in range(len(num_list)):
    if (num_list[i] % 2 == 0):
        a.append(num_list[i])
```

```python
        else:
            b.append(num_list[i])
```

In [100… `a,b`

Out[100]: `([2, 4, 6, 8, 14, 16], [3, 5, 7, 9, 123, 13, 15])`

In [101…
```python
c = []
d = []
```

In [102…
```python
for i in num_list:
    if (i % 2 == 0):
        c.append(i)
    else:
        d.append(i)
```

In [104… `c`

Out[104]: `[2, 4, 6, 8, 14, 16]`

In [105… `d`

Out[105]: `[3, 5, 7, 9, 123, 13, 15]`

In [106… `'a' in "anand"`

Out[106]: `True`

In [107… `list_object`

Out[107]:
```
['Seshadri',
 23.56,
 45,
 'MEENU',
 'm',
 'Aakash',
 45,
 'Aakash',
 ['Gautam', 'Anand', 'Anil'],
 'Ramya']
```

In [108… `'Aakash' in list_object`

Out[108]: `True`

In [109… `str_obj = "aesbhfwkqfhwjflKDFQWLjrpkil2wnnhlkiwfkqhrpi23ho"`

In [110… `str_obj.find('w') ## index of the first occurrence`

Out[110]: `6`

In [117… `str_obj.find('45') ## if it doesnt exist it returns -1`

Out[117]: `-1`

In [114… `e = str_obj.split('j')`

In [115… `e`

Out[115]:   ['aesbhfwkqfhw', 'flKDFQWL', 'rpkil2wnnhlkiwfkqhrpi23ho']

In [116…   `e[-1]`

Out[116]:   'rpkil2wnnhlkiwfkqhrpi23ho'

In [113…   `str_obj.partition('j')`

Out[113]:   ('aesbhfwkqfhw', 'j', 'flKDFQWLjrpkil2wnnhlkiwfkqhrpi23ho')

In [118…   `text = "INDIA IS MY COUNTRY"`

In [123…   `text.center(50,'*')`

Out[123]:   '***************INDIA IS MY COUNTRY***************'

In [124…   `text[::-1]`

Out[124]:   'YRTNUOC YM SI AIDNI'

In [125…   `text`

Out[125]:   'INDIA IS MY COUNTRY'

In [127…   `s = [1,3,4,5,5]`

In [128…   `s.append([3,4,5,6,7]) ## appending a list inside a list`

In [129…   `s`

Out[129]:   [1, 3, 4, 5, 5, [3, 4, 5, 6, 7]]

In [130…   `s.append(['Kumar',53,'Hello'])`

In [131…   `s`

Out[131]:   [1, 3, 4, 5, 5, [3, 4, 5, 6, 7], ['Kumar', 53, 'Hello']]

In [132…   `s.extend([6,7,8,9,'Ramya']) ##wraps up the data and then insert it`

In [133…   `s`

Out[133]:   [1, 3, 4, 5, 5, [3, 4, 5, 6, 7], ['Kumar', 53, 'Hello'], 6, 7, 8, 9, 'Ramya']

In [134…   `var = input('Please input your name')`

              Please input your nameAnand Jha

In [135…   `'My name is {}'.format(var)`

Out[135]:   'My name is Anand Jha'

In [138…   `print("My name is ", var)`

              My name is Anand Jha

In [139…   `list(34)`

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Input In [139], in <cell line: 1>()
----> 1 list(34)

TypeError: 'int' object is not iterable
```

In [140…
```python
a = [1,2,3,4,5,6,7,8]
b = ["Anand","Manisha","Ramya","Anil"]
c = [23.45,45,67,89,30]

d = [a,b,c]
```

In [141…
```python
d
```

Out[141]:
```
[[1, 2, 3, 4, 5, 6, 7, 8],
 ['Anand', 'Manisha', 'Ramya', 'Anil'],
 [23.45, 45, 67, 89, 30]]
```

In [142…
```python
d[1][-2]
```

Out[142]:
```
'Ramya'
```

In [143…
```python
d[2][1]
```

Out[143]:
```
45
```

In [144…
```python
list_num = [24,45,67,32,67,90]
```

In [147…
```python
[i * 2 for i in list_num]
```

Out[147]:
```
[48, 90, 134, 64, 134, 180]
```

In [ ]: