# assessment

May 28, 2023

[1]:
```
# 1) string
```

[2]:
```
a = 'chirag'
```

[3]:
```
print(a)
```

```
chirag
```

[ ]:
```
# 2) list
```

[4]:
```
l = [1,2,34,"the gamer",3+4j]
```

[5]:
```
print(l)
```

```
[1, 2, 34, 'the gamer', (3+4j)]
```

[6]:
```
type(l)
```

[6]:
```
list
```

[ ]:
```
# 3) float
```

[8]:
```
my_float = (3.14)
```

[9]:
```
print(my_float)
```

```
3.14
```

[ ]:
```
# 4) tupple
```

[10]:
```
tuple = (10,11,12,13,14,15,16,17.18,19,20)
```

[11]:
```
print(tuple)
```

```
(10, 11, 12, 13, 14, 15, 16, 17.18, 19, 20)
```

[ ]:
```
# Q2
```

[ ]:
```
# 1) var1="" (empty string)
```

[ ]:
```
# 2) var2= '[DS ,ML ,PYTHON]' (string)
```

[ ]:
```
# 3) var3= ['DS , ML ,PYHTON'] (string)
```

[ ]:
```
# 4) var4= 1 (int)
```

[ ]:
```
# Q3
```

[ ]:
```
# 1)
```

[12]:
```
a = 10
```

[13]:
```
b = 5
```

[14]:
```
result = a/b
```

[15]:
```
print(result)
```

```
2.0
```

[ ]:
```
# 2 )
```

[16]:
```
result = a%b
```

[17]:
```
print(result)
```

```
0
```

[ ]:
```
# 3 )
```

[19]:
```
result = a//b
```

[20]:
```
print(result)
```

```
2
```

[21]:
```
result = a**b
```

[95]:
```
print(result)
```

```
100000
```

[96]:
```
my_list = [10 , 20 , 30 ,40 , 50 , "developer", True␣
↪,[1,2,455],("apple","orange"),{"name":"chirag","age":20},None,5+3j]
```

[60]:
```
for xhura in my_list:
    print(xhura,type(xhura))
```

```
10 <class 'int'>
20 <class 'int'>
30 <class 'int'>
40 <class 'int'>
50 <class 'int'>
developer <class 'str'>
True <class 'bool'>
[1, 2, 455] <class 'list'>
('apple', 'orange') <class 'tuple'>
{'name': 'chirag', 'age': 20} <class 'dict'>
None <class 'NoneType'>
(5+3j) <class 'complex'>
```

[ ]:
```
# Q5
```

[69]:
```
a = 100
b = 50
count = 0
while a % b == 0:
    a = a // b
    count += 1
if count > 0:
        print(f"{a} is divisible by {b} and can be divided {count} times.")
else:
        print(f"{a} is not divisible by {b}.")
```

```
2 is divisible by 50 and can be divided 1 times.
```

[ ]:
```
# 06
```

[93]:
```
my_list =␣
 ↪[1,5,7,9,10,11,13,2,4,6,8,9,12,14,16,18,19,20,22,24,26,28,30,32,34,36,35]

for element in my_list:
    if element%3==0:
        print(f"{element} is divisible by 3.")
    else:
        print(f"{element} is not divisible by 3.")
```

```
1 is not divisible by 3.
5 is not divisible by 3.
7 is not divisible by 3.
9 is divisible by 3.
10 is not divisible by 3.
11 is not divisible by 3.
```

```
13 is not divisible by 3.
2 is not divisible by 3.
4 is not divisible by 3.
6 is divisible by 3.
8 is not divisible by 3.
9 is divisible by 3.
12 is divisible by 3.
14 is not divisible by 3.
16 is not divisible by 3.
18 is divisible by 3.
19 is not divisible by 3.
20 is not divisible by 3.
22 is not divisible by 3.
24 is divisible by 3.
26 is not divisible by 3.
28 is not divisible by 3.
30 is divisible by 3.
32 is not divisible by 3.
34 is not divisible by 3.
36 is divisible by 3.
35 is not divisible by 3.
```

[ ]:
```
# Q7
```

[ ]:
```
mutable data  type : in  mutable data type  the given  list input can be␣
 ↪modified
ex :
```

[98]:
```
l = [2,3,4,588,2+3j,"the game developer"," the art",True]
```

[100]:
```
l[7]=False
```

[103]:
```
l
```

[103]:
```
[2, 3, 4, 588, (2+3j), 'the game developer', ' the art', False]
```

[104]:
```
print(l)
```

```
[2, 3, 4, 588, (2+3j), 'the game developer', ' the art', False]
```

[ ]:
```
immutable data type : in immutable data type the given list of input cannot be␣
 ↪modified
ex:
```

[116]:
```
s="chirag"
```

[117]:
```
s[0]
```

[117]:
```
'c'
```

[118]:
```
s[1]='a'
```

```
---------------------------------------------------------------------------
TypeError                                 Traceback (most recent call last)
Cell In[118], line 1
----> 1 s[1]='a'

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

[ ]:
```
in this case we are unable  to change s(1) so the string is immutable
```