Untitled

May 14, 2023

[7]:
```
#solutions1:
#creating variable containing following data:
#(i)string:
A="Aishwarya"
#list:
B=[1,2,"Aishwarya",3.5,True]
#float:
C=3.55
#tuple:
D=('10', 101, True)
```

[8]:
```
#solution:2
var1=''
var2='[DS,ML,Python]'
var3=['DS','ML','Python']
var4=1
#datatypes of  above variable
print("data type of var1:")
print(type(var1))
print("data type of var2:")
print(type(var2))
print("data type of var3:")
print(type(var3))
print("data type of var4:")
print(type(var4))
```

```
data type of var1:
<class 'str'>
data type of var2:
<class 'str'>
data type of var3:
<class 'list'>
data type of var4:
<class 'int'>
```

[1]:
```
#solution:3
a=10
b=5
# /:Division (float): divides the first operand by the second and gives quotient
c=a/b
print(c)
# //:Division (floor): divides the first operand by the second and gives floor␣
 ↪of quotient
c=a//b
print(c)
# %:Modulus: returns the remainder when the first operand is divided by the␣
 ↪second
c= a%b
print(c)
# **:Power (Exponent): Returns first raised to power second
c=a**b
print(c)
```

```
2.0
2
0
100000
```

[3]:
```
# solution4:
my_list=[1,3,4,"Aishwarya",True,False,3+6j,35.55,4,6]
for i in my_list:
    print(i)
    print(type(i))
```

```
1
<class 'int'>
3
<class 'int'>
4
<class 'int'>
Aishwarya
<class 'str'>
True
<class 'bool'>
False
<class 'bool'>
(3+6j)
<class 'complex'>
35.55
<class 'float'>
4
<class 'int'>
```

```
6
<class 'int'>
```

[1]:
```
#solutions5:
A=int(input("enter the num"))
B=int(input("enter the num"))
i=1
while(A/B!=i):
  i=i+1
  if(A%B!=0):
   break
if(A/B==i):
    print("A is divisible by B with following times",i)
else:
    print("A is not divisible by B")
```

```
enter the num 14
enter the num 7

A is divisible by B with following times 2
```

[2]:
```
    #solution6:
list=[1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25]
for i in list:
     if i % 3 == 0:
        print(" This num  is divisible by 3:",i)
     else:
        print( "This num  is not divisible by 3:",i)
```

```
This num  is not divisible by 3: 1
This num  is not divisible by 3: 2
 This num  is divisible by 3: 3
This num  is not divisible by 3: 4
This num  is not divisible by 3: 5
 This num  is divisible by 3: 6
This num  is not divisible by 3: 7
This num  is not divisible by 3: 8
 This num  is divisible by 3: 9
This num  is not divisible by 3: 10
This num  is not divisible by 3: 11
 This num  is divisible by 3: 12
This num  is not divisible by 3: 13
This num  is not divisible by 3: 14
 This num  is divisible by 3: 15
This num  is not divisible by 3: 16
This num  is not divisible by 3: 17
 This num  is divisible by 3: 18
This num  is not divisible by 3: 19
```

```
This num  is not divisible by 3: 20
 This num  is divisible by 3: 21
This num  is not divisible by 3: 22
This num  is not divisible by 3: 23
 This num  is divisible by 3: 24
This num  is not divisible by 3: 25
```

[9]:
```python
#solutions7:
"""mutable data types are those whose values can be changed or
new values can be assigned to them at a particular index"""
 #example:list,set,dictionary
 #list:
list=[1,3,True]
print("we assigned new value 2 at index 0 in place of 1 in list:")
list[0]=2
print(l)

""" Immutable data types are those whose values cann't be changed,
it doesn't support item assignment"""
#example:string,tuples etc
#tuples:
print("we cann't assign any new value in tuple as it is immutable")
T=(1,"tree",False)
```

```
we assigned new value 2 at index 0 in place of 1 in list:
[2, 3, True]
we cann't assign any new value in tuple as it is immutable
```