Assignment01

August 18, 2023

Q1. Create one variable containing following type of data: (i) string (ii) list (iii) float (iv) tuple

[1]:
```
name = "Divy"
```

[2]:
```
numbers = [1,2,3,4,5]
```

[3]:
```
percentage = 90.87
```

[4]:
```
fruits = ("Apple", "Mango", "Kiwi")
```

[7]:
```
type(name)
```

[7]:
```
tuple
```

[8]:
```
type(numbers)
```

[8]:
```
list
```

[9]:
```
type(percentage)
```

[9]:
```
float
```

[10]:
```
type(fruits)
```

[10]:
```
tuple
```

Q2. Given are some following variables containing data: (i) var1 = ‘ ‘ (ii) var2 = ‘[DS , ML , Python]’ (iii) var3 = [‘DS’ , ’ML’ , ‘Python’] (iv) var4 = 1.

[12]:
```
var1 = "string" #DATATYPE: STRING
```

[ ]:
```
var3 = ["DS","ML","Python"] #DATATYPE: LIST
```

[14]:
```
var4 = 1 #DATATYPE: INTEGER
```

Q3. Explain the use of the following operators using an example: (i) / (ii) (iii) // (iv) **

[17]:
```
# / - Divide

output = 10 / 2
output
```

[17]: 5.0

[21]:
```
# % - remainder
x = 10 % 3
x
```

[21]: 1

[22]:
```
# Floor Division
result = 10 // 3
result
```

[22]: 3

[24]:
```
# Exponentiation
res = 2 ** 3
res
```

[24]: 8

Q4. Create a list of length 10 of your choice containing multiple types of data. Using for loop print the element and its data type.

[29]:
```
elements = [1,2,3,'name','name2',(2+3j), 44, 44.22,{'key': 'value'}, 55]
```

[30]:
```
elements
```

[30]: [1, 2, 3, 'name', 'name2', (2+3j), 44, 44.22, {'key': 'value'}]

[3]:
```
x = 10

if x > 5:

    print("x is greater than 5")

elif x == 5:

    print("x is equal to 5")

else:

    print("x is less than 5")
```

```
x is greater than 5
```

Using a while loop, verify if the number A is purely divisible by number B and if so then how many times it can be divisible.

[4]:
```
a = int(input("Enter A: "))
b = int(input("Enter B: "))
count = 0
while a % b == 0:
    count += 1
    a //= b
print(count)
```

```
Enter A:  240
Enter B:  12

1
```

Q6. Create a list containing 25 int type data. Using for loop and if-else condition print if the element is divisible by 3 or not.

[5]:
```
numbers = [15, 9, 7, 27, 4, 33, 12, 18, 22, 8, 21, 30, 10, 5, 16, 36, 45, 14,␣
 ↪3, 25, 6, 20, 42, 11, 39]

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

```
15 is divisible by 3.
9 is divisible by 3.
7 is not divisible by 3.
27 is divisible by 3.
4 is not divisible by 3.
33 is divisible by 3.
12 is divisible by 3.
18 is divisible by 3.
22 is not divisible by 3.
8 is not divisible by 3.
21 is divisible by 3.
30 is divisible by 3.
10 is not divisible by 3.
5 is not divisible by 3.
16 is not divisible by 3.
36 is divisible by 3.
45 is divisible by 3.
14 is not divisible by 3.
3 is divisible by 3.
25 is not divisible by 3.
```

```
6 is divisible by 3.
20 is not divisible by 3.
42 is divisible by 3.
11 is not divisible by 3.
39 is divisible by 3.
```

[ ]: