# d0vurog3j

February 5, 2025

Question: Write a comment in Python.

[1]:
```
#this is a comment in python
```

Question: Write a multiline comment/paragraph in Python

[2]:
```
"""
this is a multiline comment in python
"""
```

[2]:
```
'\nthis is a multiline comment in python\n'
```

Question: Write a program to print an integer, float, string, complex number, Boolean, and bytes in Python and display their data type.

[3]:
```
i  = 5
print(i)
i = 234.12123
print(i)
str = "This is a string"
print(str)
x = 5
y = 3
print(complex(x, y))
a = True
print(a)
```

```
5
234.12123
This is a string
(5+3j)
True
```

Question: Write a program to create a list. Collect heterogenous data in it.

[4]:
```
heterogenous = [4,2,1,"this", True, [3,5,3,1]]
print(heterogenous)
```

```
[4, 2, 1, 'this', True, [3, 5, 3, 1]]
```

Question: Write a program to print a list.

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

```
[4, 2, 1, 'this', True, [3, 5, 3, 1]]
```

Question: Write a program to print a new list. Append an item in this list

[6]:
```
heterogenous.append(34)
print(heterogenous)
```

```
[4, 2, 1, 'this', True, [3, 5, 3, 1], 34]
```

Question: Write a program to make a copy of the previous lis

[7]:
```
het = heterogenous.copy()
print(het)
```

```
[4, 2, 1, 'this', True, [3, 5, 3, 1], 34]
```

Question: Write a program to concatenate 2 lists and print the output

[8]:
```
list2 = het + heterogenous
print(list2)
```

```
[4, 2, 1, 'this', True, [3, 5, 3, 1], 34, 4, 2, 1, 'this', True, [3, 5, 3, 1],
34]
```

Question: Write a program to count the number of elements present in a list.

[9]:
```
print(list2)
print("The length of the list is: ",len(list2))
```

```
[4, 2, 1, 'this', True, [3, 5, 3, 1], 34, 4, 2, 1, 'this', True, [3, 5, 3, 1],
34]
The length of the list is:  14
```

Question: Write a program to print the length of a list.

[10]:
```
print(list2)
print("The length of the list is: ",len(list2))
```

```
[4, 2, 1, 'this', True, [3, 5, 3, 1], 34, 4, 2, 1, 'this', True, [3, 5, 3, 1],
34]
The length of the list is:  14
```

Question: Write a program to append more than 1 item in a list.

[11]:
```
list2.extend([5,4])
print(list2)
```

```
[4, 2, 1, 'this', True, [3, 5, 3, 1], 34, 4, 2, 1, 'this', True, [3, 5, 3, 1],
34, 5, 4]
```

Question: Write a program to extend a list.

[12]:
```
list2.extend([5,4])
print(list2)
```

```
[4, 2, 1, 'this', True, [3, 5, 3, 1], 34, 4, 2, 1, 'this', True, [3, 5, 3, 1],
34, 5, 4, 5, 4]
```

Question: Write a program to insert a value at a position in a list.

[13]:
```
list2.insert(4,3)
print(list2)
```

```
[4, 2, 1, 'this', 3, True, [3, 5, 3, 1], 34, 4, 2, 1, 'this', True, [3, 5, 3,
1], 34, 5, 4, 5, 4]
```

Question: Write a program to delete a value at a given position in a list

[14]:
```
print(list2)
del list2[3]
print(list2)
```

```
[4, 2, 1, 'this', 3, True, [3, 5, 3, 1], 34, 4, 2, 1, 'this', True, [3, 5, 3,
1], 34, 5, 4, 5, 4]
[4, 2, 1, 3, True, [3, 5, 3, 1], 34, 4, 2, 1, 'this', True, [3, 5, 3, 1], 34, 5,
4, 5, 4]
```

Question: Write a program to remove a value from the list.

[15]:
```
print(list2)
list2.pop()
print(list2)
```

```
[4, 2, 1, 3, True, [3, 5, 3, 1], 34, 4, 2, 1, 'this', True, [3, 5, 3, 1], 34, 5,
4, 5, 4]
[4, 2, 1, 3, True, [3, 5, 3, 1], 34, 4, 2, 1, 'this', True, [3, 5, 3, 1], 34, 5,
4, 5]
```

Question: Write a program to slice the data in a list.

[16]:
```
print(list2[4:])
```

```
[True, [3, 5, 3, 1], 34, 4, 2, 1, 'this', True, [3, 5, 3, 1], 34, 5, 4, 5]
```

Question: Write a program to slice data in a list using positions.

Question: Write a program to print the last 8 elements.

[17]:
```
print(list2[:8])
```

```
[4, 2, 1, 3, True, [3, 5, 3, 1], 34, 4]
```

Question: Write a program to print the last value of a lis

[18]:
```
print(list2[-1])
```

```
5
```

Question: Write a program to print the central value of a list.

[19]:
```
def find_middle_elements(arr):
    result = []
    n = len(arr)
    if n % 2 == 0:
        result.append(arr[n // 2 - 1])
        result.append(arr[n // 2])
    else:
        result.append(arr[n // 2])

    return result

middle = find_middle_elements(list2)
print(middle)
```

```
[2]
```

Question: Write a program to create a tuple. Collect heterogenous data in it.

[20]:
```
tup = ([1,2,3,4], "This is a string", 3,2,1)
print(tup)
```

```
([1, 2, 3, 4], 'This is a string', 3, 2, 1)
```

Question: Write a program to print the position of an item in the tuple.

[21]:
```
pos = tup.index("This is a string")
print(pos)
```

```
1
```

Question: Print a new tuple. Write a program to concatenate two tuples.

[22]:
```
tup2 = (4,2,1,2,3)
ls = list(tup2)
# list2 = list(tup) + list(tup2)
tup = tuple(list2)
print(tup)
```

```
(4, 2, 1, 3, True, [3, 5, 3, 1], 34, 4, 2, 1, 'this', True, [3, 5, 3, 1], 34, 5,
4, 5)
```

Question: Write a program to print the value at position 2 in the concatenated tuple.

[23]:
```
print(tup.index(2))
```

```
1
```

Question: Write a program to change the element of a tuple.

[24]:
```
ls= list(tup)
ls[2] = 234
tup = tuple(ls)
print(tup)
```

```
(4, 2, 234, 3, True, [3, 5, 3, 1], 34, 4, 2, 1, 'this', True, [3, 5, 3, 1], 34,
5, 4, 5)
```

Question: Write a program to create and print a dictionary.

[25]:
```
dic = {"Name" : "Smayan", "id": 23}
```

[26]:
```
print(dic)
```

```
{'Name': 'Smayan', 'id': 23}
```

Question: Write a program to print values of a dictionary using keys.

[27]:
```
print(dic["Name"])
```

```
Smayan
```

Question: Write a program to create a multidimensional dictionary.

[28]:
```
dic2 = {"Id" : {"Name" : "smayan" }, "age" : 24}
print(dic2)
```

```
{'Id': {'Name': 'smayan'}, 'age': 24}
```

Question: Write a program to print values from the multidimensional dictionary using keys.

[29]:
```
print(dic2)
print(dic2["Id"]["Name"])
```

```
{'Id': {'Name': 'smayan'}, 'age': 24}
smayan
```

Question: Brother is 12 years old. Sister is 15 years old. Write a program that prints who is older using if-else statement.

[30]:
```
b = 12
s = 15
if(b>s): print("Brother is older than sister")
else : print("Sister is older than brother")
```

```
Sister is older than brother
```

Question: Take the input of ages from the user. Write a program that prints who is older using if-else statement

[31]:
```
b = input("Enter brothers age")
s = input("Enter sisters age")
if(b>s): print("Brother is older than sister")
else : print("Sister is older than brother")
```

```
Brother is older than sister
```

Question: Write a program that prints the elements of a list using for loop.

[32]:
```
for i in range(len(list2)):
    print(list2[i])
```

```
4
2
1
3
True
[3, 5, 3, 1]
34
4
2
1
this
True
[3, 5, 3, 1]
34
5
4
5
```

Question: Write a program that enumerates and prints the elements of a list using for loop.

[33]:
```
for i,val in enumerate(list2):
    print(val)
```

```
4
2
1
3
True
[3, 5, 3, 1]
34
4
2
1
this
True
```

```
[3, 5, 3, 1]
34
5
4
5
```

Question: Write a program to create a function.

[34]:
```
def func():
    print("This does absolutely nothing")

func()
```

```
This does absolutely nothing
```

Question: Create a function that adds two numbers.

[35]:
```
def add(x,y):
    return x+y
a = add(4,3)
print(a)
```

```
7
```

Question: Create a function that adds two numbers. Take input from the user.

[36]:
```
a = int(input("Enter a number"))
b = int(input("Enter a number"))
c = add(a,b)
print(c)
```

```
23
```

Question: Create a function that adds two strings. Take input from the user.

[37]:
```
def adstr(s1,s2):
    return s1+s2

s3 = adstr("This is str1 ", " This is str2")
print(s3)
```

```
This is str1  This is str2
```

Question: Write a program to create and print a set

[38]:
```
s = {3,2,1,4,2}
print(s, type(s))
```

```
{1, 2, 3, 4} <class 'set'>
```

Question: Write a program to print a set with duplicate values.

[39]:
```
"""
It is not possible to do this function in python
"""
```

[39]:
```
'\nIt is not possible to do this function in python\n'
```

Question: Write a program to print the length of a set

[40]:
```
print(len(s))
```

4

Question: Write a program to create a set and print its data typ

[41]:
```
s = {3,2,1,4,2}
print(s, type(s))
```

```
{1, 2, 3, 4} <class 'set'>
```

Question: Write a program to check if a set takes duplicate values with different capitalization/formatting.

[42]:
```
se = {"Yes", "yes", "it", "is pssible "}
print(se)
```

```
{'is pssible ', 'Yes', 'yes', 'it'}
```