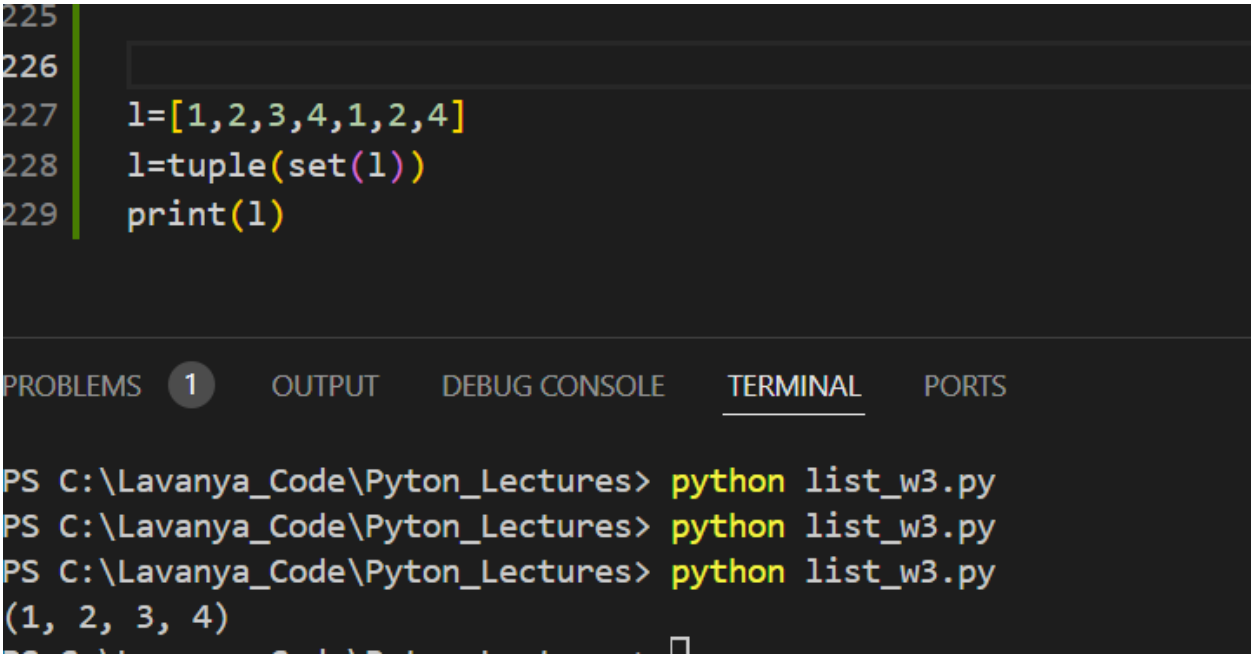
Q1) What is the difference between tuple and list, list and set, set and tuple?

Set	List
Set is unordered	List is ordered
We can't access list elements with index .set is unindexed	We can access list elements with index
Empty set declared by e.g a=set()	Empty set declared by e.g a=list()
Set don't allow duplicate values	List will allow duplicate value
We can perform set operations using union ,intersection etc	We can't perform set operations in list We have to write our own function
Set is unchangeble you can only add element at end or remove the element slicing is not possible	In list slicing is possible you can add elements at any position
Set is declared by {}	List is declared by []

Set	Tuple
Set is unordered	Tuple is ordered
Empty set declared by e.g a=set()	Empty tuple declared by e.g a=tuple()
We can't access list elements with index .set is unindexed	We can access tuple elements with index
Set don't allow duplicate values	tuple will allow duplicate value
We can perform set operations using union ,intersection etc	We can't perform set operations in list
Set is unchangeble you can only add element at end or remove the element slicing is not possible	In tuple slicing is possible.but you can't change the tuple once you created it Tuple is immutable
Set is declared by {}	tuple is declared by ()

List	Tuple
List can be defined by []	Tuple is defined by ()
List is slower due to dynamic size and mutablity	Tuple is faster due to immutability
It is suitable for collection of items may change	It is suitable for collection of items that may not change
List having more inbuilt functions	Tuple having less inbult functions
List consumme more memory due to mutablity	Tuple is consume less memory due to immutablity

Q2) i/p: l=[1,2,3,4,1,2,4] o/p : l=(1,2,3,4) Write a code .



Q3) Why can't we perform slicing in set and explain the error if apply any slicing?

Because set is unordered and that's why we can't access it with index hence slicing is not possible in set

Q4) What can't we apply append on a tuple? Explain the error if apply append on tuple

Tuple is immutable data type if you going to perform append operation on tuple it will give you **Attrubutre Error:tuple has no attribute 'append**

```
227  l=[1,2,3,4,1,2,4]
228  l=tuple(set(l))
229  l.append(8)
230  print(l)
```

```
PROBLEMS 1  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

PS C:\Lavanya_Code\Pyton_Lectures> python list_w3.py
Traceback (most recent call last):
  File "C:\Lavanya_Code\Pyton_Lectures\list_w3.py", line 229, in <module>
    l.append(8)
    ^^^^^^^^
AttributeError: 'tuple' object has no attribute 'append'
PS C:\Lavanya_Code\Pyton_Lectures>
```

Q5) i/p: t=(1,2,3,'a','v','jeff') o/p: t=(1,2,'We','I','you') Write the code?

```
226  t=(1,2,3,'a','v','jeff')
227  # =(1,2,'We','I','you')
228  t=list(t)
229  t[3:6]="We","I","you"
230  t=tuple(t)
231  print(t)
```

```
PROBLEMS 1  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

PS C:\Lavanya_Code\Pyton_Lectures> python list_w3.py
(1, 2, 3, 'We', 'I', 'you')
```