DAY-18

Pickling

In General terms :-

The process of preserving or extending the lifespan of food by either anaerobic fermentation in brine or immersion in vinegar.

In Python :-

→ The process whereby a python object hierarchy is converted into a byte stream to maintain program state across sessions, or transport over the network.

Unpickling :-

→ the inverse operation, whereby a byte stream is converted back into an object hierarchy.

* Pickling (and unpickling) is alternatively known as serialization, marshalling, or flattening.
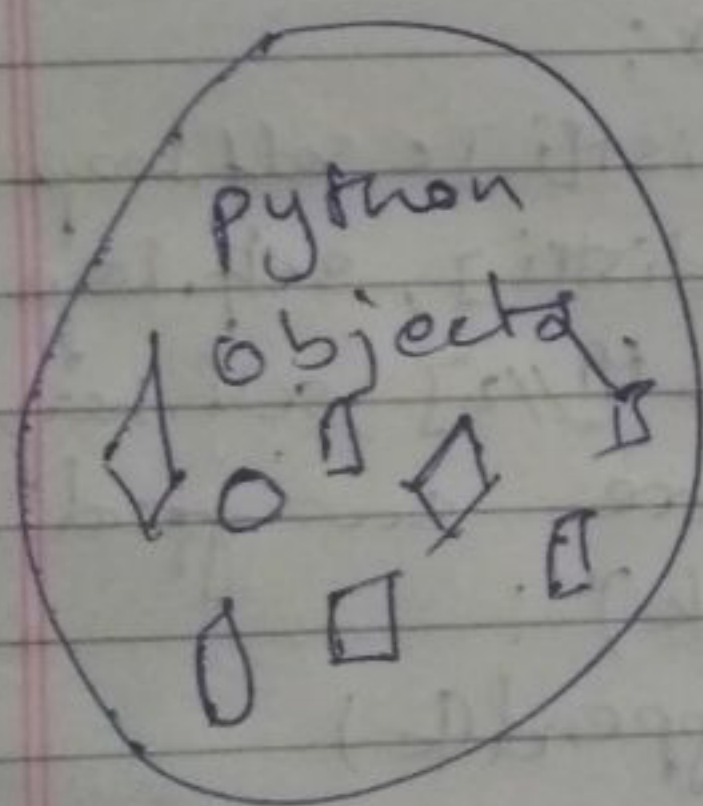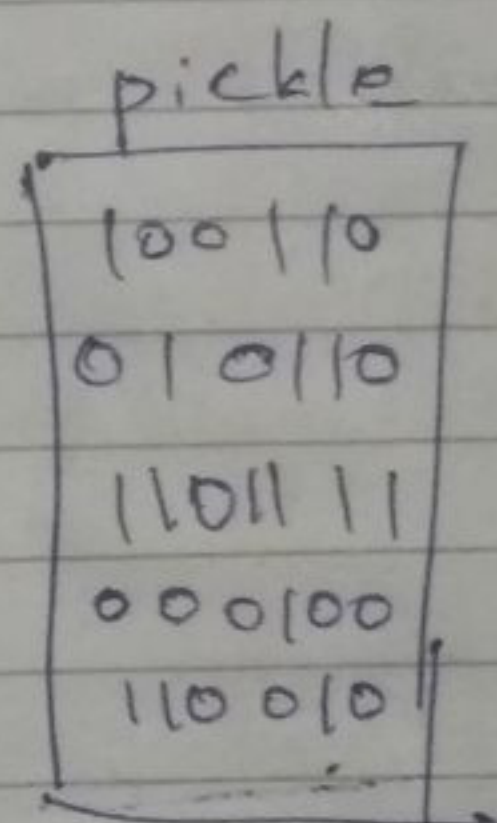
~~Module~~ : Module :

→ pickle module implements a fundamental, but powerful algorithm for serialization and deserialization a python object structure.

> [* Pickling is only for Objects.]

Python pickle Module

Python objects → pickle.dump() → pickle
pick.load() ← unpickle

pickle
100110
010110
110111
000100
110010

```python
class HerCharacter():
    def __init__(self,character):
        self.character=character


    def getHerCharacter(self):
        print ('Her character is ',self.character)
```

```python
class AdditionalReason():
    def __init__(self,Reason):
        self.Reason=Reason
    def getAdditionalReason(self):
        print("'N Of course ",self.Reason)
```

```python
class WhyShe():
    def __init__(self,Reason):
        self.Reason=Reason
    def getWhyShe(self):
        print('She is a ',self.Reason)
```

```python
import pickle, HerCharacter, WhyShe, AdditionalReason

f=open('picklePack.dat', 'rb')

objectList=[]

try:
    while True:
        object1=pickle.load(f)
        objectList.append(object1)
except EOFError:
    print('<------- Unpickling complted --------->')

objectList.append(100) #Just to check different cases
print('Objetcs Count: ', objectList.__len__())

for obj in objectList:
    if isinstance(obj,HerCharacter.HerCharacter):
        obj.getHerCharacter()
    elif isinstance(obj,WhyShe.WhyShe):
        obj.getWhyShe()
    elif isinstance(obj,AdditionalReason.AdditionalReason):
        obj.getAdditionalReason()
    else:
        print('\nUnknown type ',type(obj))
```

```python
Pickling.py > ...
  1    import pickle, HerCharacter, WhyShe, AdditionalReason
  2
  3    characterPickle = HerCharacter.HerCharacter('very good')
  4    whyPickle = WhyShe.WhyShe('Topper and also a Programmer')
  5    ReasonPickle = AdditionalReason.AdditionalReason('short and cute ')
  6
  7    with open('picklePack.dat', 'wb') as f:
  8        pickle.dump(characterPickle , f)
  9        pickle.dump(whyPickle , f)
 10        pickle.dump(ReasonPickle , f)
 11
 12        print('<------- Pickling complted --------->')
 13
```