Experiment No.6
Serialization in python using Pickel
Date of Performance:
Date of Submission:

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Aim: Serialization in python using Pickel

Objective: To introduce basic concept of Pickel module

Theory:

- What is Serialization?
- Serialization is the process of converting a Python object into a byte stream that can be stored in a file or transmitted over a network.
- What is Pickle?
- Pickle is a Python module used for serializing and deserializing Python objects.
- Why Pickle?
- Pickle provides a convenient way to save Python objects to disk and load them back into memory later.
- How to use Pickle?
- The pickle module provides two main functions: dump() for serialization and load() for deserialization.

1) **pickle.dump(obj, file)**:
   - The **pickle.dump()** function is used to serialize a Python object **obj** and write it to a file specified by the file object **file**.
   - This function takes two parameters:
     - **obj**: The Python object to be serialized.
     - **file**: A file object opened in binary write mode ('wb') where the serialized data will be written.

2) **pickle.load(file)**:
   - The **pickle.load()** function is used to deserialize data from a file specified by the file object **file** and reconstruct the original Python object.
   - This function takes one parameter:
     - **file**: A file object opened in binary read mode ('rb') from which the serialized data will be read and deserialized.

CODE:

```
import pickle

emp = {'emp_name':'VR','emp_id':'66','emp_add':'Mumbai'}
with open('emp.pickle','wb') as f1:
    pickle.dump(emp,f1)
    print('Pickling Completed....')

with open('emp.pickle','rb')as f2:
    print('Unpickling the data : ')
    emp = pickle.load(f2)
    print(emp)
```

OUTPUT:

```
============== RESTART: C:/Vedanti_Degree/SEM_4/SBL_PYTHON/pr6.py ==============
Pickling Completed....
Unpickling the data :
{'emp_name': 'VR', 'emp_id': '66', 'emp_add': 'Mumbai'}
```

CONCLUSION:

In conclusion, exploring serialization in Python using the Pickle module has provided a comprehensive understanding of how to convert complex data structures into a format that can be easily stored, transmitted, or reconstructed. Throughout our exploration, we have witnessed the versatility and simplicity of Pickle in serializing and deserializing Python objects, enabling seamless data persistence across different platforms and environments.