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

Experiment No. 1

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:-

```python
class Emp:
    def __init__(self,id,name,sal):
        self.id = id
        self.name = name
        self.sal = sal
    def display(self):
        print("{:5d}{:20s{:10.2f}}".format(self.id,self.name,self.sal))
```

```python
import pickle
import emp

f= open("emp.dat","wb")
n = int(input("how many emloyees:-"))

for i in range(n):
    id = int(input("Enter id:-"))
    name = (input("enter name:-"))
    sal = int(input("Enter sal:-"))
    e = emp.Emp(id,name,sal)
    pickle.dump(e,f)

f.close()

with open("emp.dat", "rb") as f:
    emp_objects = []
    while True:
        emp_obj = pickle.load(f)
        emp_objects.append(emp_obj)
        break


for emp_obj in emp_objects:
    print("ID:", emp_obj.id)
    print("Name:", emp_obj.name)
    print("Salary:", emp_obj.sal)
    print()
```

Output:-

```
PS C:\Users\DEEPA KALE\OneDrive\Desktop\python> py .\six.py
how many emloyees:-1
Enter id:-13
enter name:-Vedant
Enter sal:-1000000
ID: 13
Name: Vedant
Salary: 1000000
```

Conclusion: Serialization in Python using Pickle has been demonstrated.