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

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Aim: Serialization in python using Pickle

Objective: To introduce basic concept of Pickle 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

```python
class Employee :
    def __init__(self, name, employee_id, salary):
        self.name = name
        self.employee_id = employee_id
        self.salary = salary
        def display_info(self):
            print(f"Name: {self.name}, Employee ID: {self.employee_id}, Salary: {self.salary}")


Employee_object = Employee("Kshitij", employee_id=123, salary=700000)
with open("employee_object.pickle", "wb") as file:
    pickle.dump(Employee_object, file)
print("Employee object has been serialized.")
```

Output:-
Employee object has been serialized.

Conclusion: Serialization in Python using Pickle has been demonstrated.