

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

## Experiment No. 6

**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
```

```

class Employee:
    pass
f = open('emp.dat', 'wb')
n = int(input('How many employees?'))
for i in range(n):
    id = int(input('Enter id:'))
    name = input('Enter name:')
    sal = float(input('Enter salary:'))

e = Employee ()
e.id=id
e.name=name
e.salary=sal
pickle.dump(e, f)
f.close()

```

## Output:-

The screenshot shows a Python IDE with a file named 'Emp.py'. The code in the file is as follows:

```

1 import pickle
2 class Employee:
3     pass
4 f = open('emp.dat', 'wb')
5 n = int(input('How many employees?'))
6 for i in range(n):
7     id = int(input('Enter id:'))
8     name = input('Enter name:')
9     sal = float(input('Enter salary:'))
10
11 e=Employee ()
12 e.id=id
13 e.name=name
14 e.salary=sal
15
16 pickle.dump(e, f)

```

The terminal output shows the execution of the program:

```

Enter id:08
Enter name:Sunidhi
Enter salary:500000
PS C:\Users\Student\Desktop>

```

**Conclusion:** Serialization in Python using Pickle has been demonstrated.