Assignment-6: JSON and OOP Assignment

Submitted By : Mayur Gadhave

Assignment 1 :

1. Create a JSON file (employee.json) containing employee information of minimum 5 employees. Each employee information consists of Name, DOB, Height, City, State. Write a python program that reads this information from the JSON file and saves the information into a list of objects of Employee class. Finally print the list of the Employee objects.

In [1]:

```
import json

class Employee:
    def __init__(self, name, dob, height, city, state):
        self.name = name
        self.dob = dob
        self.height = height
        self.city = city
        self.state = state

# Read employee data from JSON file
with open('employee.json') as json_file:
    employee_data = json.load(json_file)

# Create a list of Employee objects
employee_objects = []
for emp in employee_data:
    employee_objects.append(Employee(
        emp['Name'], emp['DOB'], emp['Height'], emp['City'], emp['State']))

# Print the list of Employee objects
for emp_obj in employee_objects:
    print(f"Name: {emp_obj.name}, DOB: {emp_obj.dob}, Height: {emp_obj.height}, City: {em
```

```
Name: Amit Kumar, DOB: 1990-05-15, Height: 175, City: Delhi, State: Delhi
Name: Priya Sharma, DOB: 1988-10-22, Height: 163, City: Mumbai, State: Mah
arashtra
Name: Rahul Patel, DOB: 1995-02-10, Height: 180, City: Ahmedabad, State: G
ujarat
Name: Anjali Gupta, DOB: 1992-09-05, Height: 160, City: Kolkata, State: We
st Bengal
Name: Vikram Singh, DOB: 1985-12-18, Height: 185, City: Bangalore, State:
Karnataka
```

2. Create a dictionary of any 7 Indian states and their capitals. Write this into a JSON file.

In [2]:

```
import json

# Dictionary of Indian states and capitals
indian_states = {
    "Andhra Pradesh": "Amaravati",
    "Maharashtra": "Mumbai",
    "Karnataka": "Bengaluru",
    "Tamil Nadu": "Chennai",
    "Telangana": "Hyderabad",
    "Uttar Pradesh": "Lucknow",
    "Gujarat": "Gandhinagar"
}

# Write the dictionary to a JSON file
with open('indian_states.json', 'w') as json_file:
    json.dump(indian_states, json_file, indent=4)

print("Data has been written to 'indian_states.json'")
```

```
Data has been written to 'indian_states.json'
```

Assignment 2

1. Create a class named 'Dog'. It should have a constructor which accepts its name, age and coat color. You must perform the following operations

In [4]:

```
class Dog:
    def __init__(self, name, age, coat_color):
        self.name = name
        self.age = age
        self.coat_color = coat_color

    def description(self):
        print(f"{self.name} is {self.age} years old.")

    def get_info(self):
        print(f"{self.name}'s coat color is {self.coat_color}.")

class JackRussellTerrier(Dog):
    def bark(self):
        print(f"{self.name} (Jack Russell Terrier) is barking!")

    def fetch(self):
        print(f"{self.name} (Jack Russell Terrier) is fetching the ball.")

class Bulldog(Dog):
    def growl(self):
        print(f"{self.name} (Bulldog) is growling.")

    def sleep(self):
        print(f"{self.name} (Bulldog) is taking a nap.")

# Creating Dog objects
dog1 = JackRussellTerrier("Michal", 3, "White and Brown")
dog2 = Bulldog("Rocky", 5, "Fawn")

# Using methods
dog1.description()
dog1.get_info()
dog1.bark()
dog1.fetch()

dog2.description()
dog2.get_info()
dog2.growl()
dog2.sleep()
```

```
Michal is 3 years old.
Michal's coat color is White and Brown.
Michal (Jack Russell Terrier) is barking!
Michal (Jack Russell Terrier) is fetching the ball.
Rocky is 5 years old.
Rocky's coat color is Fawn.
Rocky (Bulldog) is growling.
Rocky (Bulldog) is taking a nap.
```

In [ ]:

```

```