Practical No.8

Aim:Write a python program to demonstrate the use of classes and objects

Theory: A class in Python is a user-defined data type that acts as a blueprint or template for creating objects. It defines a set of attributes (variables) and methods (functions) that determine the behavior and properties of the objects created from it.

An object is an instance of a class. Each object has its own identity, state, and behavior. The state of an object is represented by its attributes, and the behavior is represented by its methods.

The constructor method (__init__) is a special function in a class that is automatically executed when an object is created. It is used to initialize the attributes of the class with specific values.

Instance variables are variables defined inside the class but associated with individual objects. Each object maintains its own copy of these variables. Methods are functions defined inside a class that perform specific actions or operations using the object’s data.

Objects are created using the class name followed by parentheses. Once created, the attributes and methods of a class can be accessed using the dot (.) operator.

Program:
```
# Define a class
class Student:
    # Constructor to initialize object
    def __init__(self, name, age,rollNo):
        self.name = name
        self.age = age
        self.rollNo = rollNo
    # Method to display student details
    def display_info(self):
        print("Name:",self.name)
        print("Age:",self.age)
        print("Roll No:",self.rollNo)

# Create objects (instances of the class)
student1 = Student("Alice", 20,101)
student2 = Student("Bob", 22,102)

# Access methods using objects
```

```
student1.display_info()
print("------------------")
student2.display_info()
```

Output:

```
Name: Alice
Age: 20
Roll No: 101
------------------
Name: Bob
Age: 22
Roll No: 102
```

Result: Thus, we have successfully created a classes and objects in python.