Five simple programs using Class and Object

Program 1

In [6]:
```
# Define a Person class with a name and age attribute
class Person:
    def __init__(self, name, age):
        self.name = name
        self.age = age

    def introduce(self):
        print(f"My name is {self.name} and I'm {self.age} years old.")

# Create an object instance of the Person class to represent a specific person
person1 = Person("Ahmad", 25)

# Use the introduce method to introduce the person
person1.introduce()
```

```
My name is Alice and I'm 25 years old.
```

Program 2

In [5]:
```
# Define a Car class with a make, model, and year attribute
class Car:
    def __init__(self, make, model, year):
        self.make = make
        self.model = model
        self.year = year

    def info(self):
        print(f"{self.make} {self.model} ({self.year})")

# Create two object instances of the Car class to represent two different cars
car1 = Car("Toyota", "Corolla", 2018)
car2 = Car("Honda", "Civic", 2020)

# Use the info method to print out information about each car
car1.info()
car2.info()
```

```
Toyota Corolla (2018)
Honda Civic (2020)
```

Program 3

In [3]:
```python
# Define a Circle class with a radius attribute
class Circle:
    def __init__(self, radius):
        self.radius = radius

    def area(self):
        return 3.14 * self.radius ** 2

# Create an object instance of the Circle class to represent a circle
circle1 = Circle(5)

# Use the area method to calculate and print out the area of the circle
print(f"The area of the circle with radius {circle1.radius} is {circle1.area()}.")
```

```
The area of the circle with radius 5 is 78.5.
```

Program 4

In [10]:
```python
# Define a class named "Person"
class Person:

    # Define the initialization method for the class
    def __init__(self, name, age):
        self.name = name
        self.age = age

    # Define a method that prints the person's name and age
    def print_info(self):
        print(f"Name: {self.name}")
        print(f"Age: {self.age}")

# Create an object of the "Person" class
person1 = Person("Saeed", 19)

# Call the "print_info" method of the object
person1.print_info()
```

```
Name: Saeed
Age: 19
```

Program 5

In [11]:
```
class Rectangle:
    def __init__(self, length, width):
        self.length = length
        self.width = width

    def area(self):
        return self.length * self.width

    def perimeter(self):
        return 2 * (self.length + self.width)

# create two Rectangle objects
rectangle1 = Rectangle(5, 10)
rectangle2 = Rectangle(3, 7)

# print the area and perimeter of the first rectangle
print("Rectangle 1:")
print("Area =", rectangle1.area())
print("Perimeter =", rectangle1.perimeter())

# print the area and perimeter of the second rectangle
print("Rectangle 2:")
print("Area =", rectangle2.area())
print("Perimeter =", rectangle2.perimeter())
```

```
Rectangle 1:
Area = 50
Perimeter = 30
Rectangle 2:
Area = 21
Perimeter = 20
```