ASSIGNMENT NO.3

Task:1. Create a class named Person with the following properties/methods:
Properties: first_name, last_name, age
Methods: display_info() - prints the values of all three properties **Solution:**

Task.py > ...

```python
class Person:
    def __init__(self, first_name, last_name, age):
        self.first_name = first_name
        self.last_name = last_name
        self.age = age

    def display_info(self):
        print(f"First Name: {self.first_name}")
        print(f"Last Name: {self.last_name}")
        print(f"Age: {self.age}")

person1 = Person("Ahmad", "Ali", 30)
person1.display_info()
```

Output:

```
PS D:\Assignment 3 py> python -u "d:\Assignment 3 py\Task.py"
First Name: Ahmad
Last Name: Ali
Age: 30
PS D:\Assignment 3 py>
```

Task:2. Create a class named Student that inherits from the Person class. The Student class should have the following properties/methods:

Properties: student_id, gpa

Methods: display_info() - prints the values of all five properties **Solution:**

```python
class Person:
    def __init__(self, first_name, last_name, age):
        self.first_name = first_name
        self.last_name = last_name
        self.age = age

    def display_info(self):
        print(f"First Name: {self.first_name}")
        print(f"Last Name: {self.last_name}")
        print(f"Age: {self.age}")

class Student(Person):
    def __init__(self, first_name, last_name, age, student_id, gpa):
        super().__init__(first_name, last_name, age)
        self.student_id = student_id
        self.gpa = gpa

    def display_info(self):
        super().display_info()
        print(f"Student ID: {self.student_id}")
        print(f"GPA: {self.gpa}")

student1 = Student("Taha", "Ahmad", 20, "12345", 3.8)
student1.display_info()
```

Output:

```
PS D:\Assignment 3 py> python -u "d:\Assignment 3 py\Task.py"
ha
Last Name: Ahmad
Last Name: Ahmad
Age: 20
Student ID: 12345
GPA: 3.8
PS D:\Assignment 3 py>
```

Task:3. Create a class named Teacher that inherits from the Person class. The Teacher class should have the following properties/methods:

Properties: teacher_id, salary

Methods: display_info() - prints the values of all five properties **Solution:**

Task.py > ...

```python
class Person:
    def __init__(self, first_name, last_name, age):
        self.first_name = first_name
        self.last_name = last_name
        self.age = age

    def display_info(self):
        print(f"First Name: {self.first_name}")
        print(f"Last Name: {self.last_name}")
        print(f"Age: {self.age}")

class Teacher(Person):
    def __init__(self, first_name, last_name, age, teacher_id, salary):
        super().__init__(first_name, last_name, age)
        self.teacher_id = teacher_id
        self.salary = salary

    def display_info(self):
        super().display_info()
        print(f"Teacher ID: {self.teacher_id}")
        print(f"Salary: {self.salary}")

teacher1 = Teacher("Muhammad", "Arshad", 40, "98765", 50000)
teacher1.display_info()
```

Output:

```
PS D:\Assignment 3 py> python -u "d:\Assignment 3 py\Task.py"
First Name: Muhammad
Last Name: Arshad
Age: 40
Teacher ID: 98765
Salary: 50000
PS D:\Assignment 3 py>
```

Task:4. Create an instance of the Student class and call its display_info() method.
Create an instance of the Teacher class and call its display_info() method**.**

Solution:

Task.py > ...

```python
class Person:
    def __init__(self, first_name, last_name, age):
        self.first_name = first_name
        self.last_name = last_name
        self.age = age

    def display_info(self):
        print(f"First Name: {self.first_name}")
        print(f"Last Name: {self.last_name}")
        print(f"Age: {self.age}")

class Student(Person):
    def __init__(self, first_name, last_name, age, student_id, gpa):
        super().__init__(first_name, last_name, age)
        self.student_id = student_id
        self.gpa = gpa

    def display_info(self):
        super().display_info()
        print(f"Student ID: {self.student_id}")
        print(f"GPA: {self.gpa}")

class Teacher(Person):
    def __init__(self, first_name, last_name, age, teacher_id, salary):
        super().__init__(first_name, last_name, age)
        self.teacher_id = teacher_id
        self.salary = salary

    def display_info(self):
        super().display_info()
        print(f"Teacher ID: {self.teacher_id}")
        print(f"Salary: {self.salary}")
student1 = Student("Ahmad", "Ali", 20, "12345", 3.8)
student1.display_info()
print()
teacher1 = Teacher("Muhammad", "Arshad", 40, "98765", 50000)
teacher1.display_info()
```

Output:

```
PS D:\Assignment 3 py> python -u "d:\Assignment 3 py\Task.py"
First Name: Ahmad
Last Name: Ali
Age: 20
Student ID: 12345
GPA: 3.8

First Name: Muhammad
Last Name: Arshad
Age: 40
Teacher ID: 98765
Salary: 50000
PS D:\Assignment 3 py>
```