

## FINALS LAB TASK 2

### I. PROBLEM

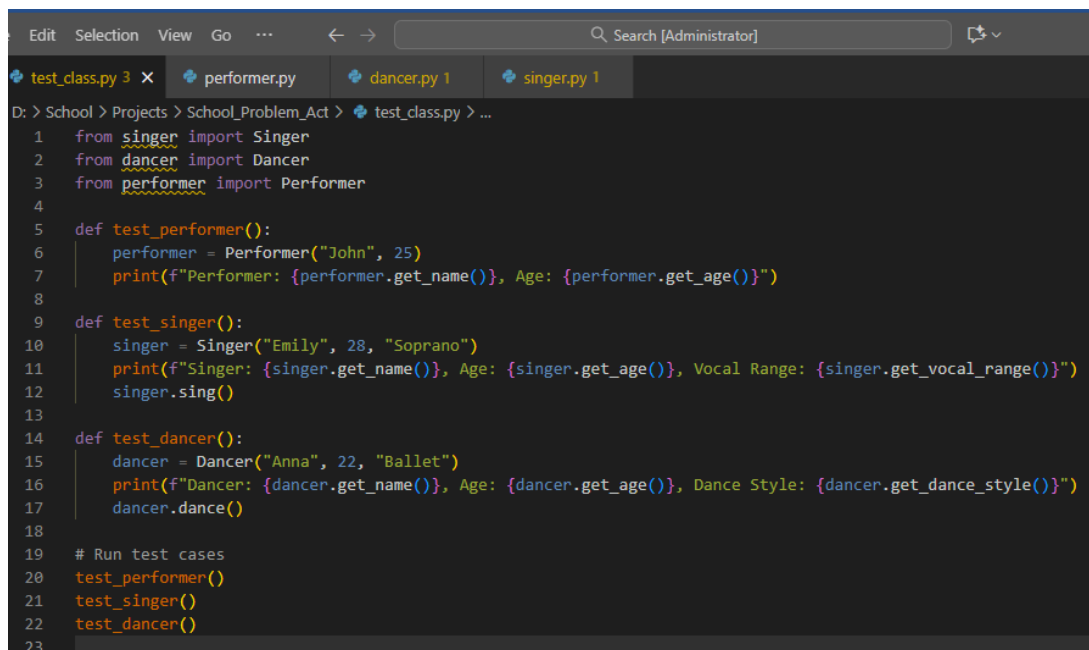
#### Problem School Performance

**Note: You are to create 4 separate python files for this task:**

- performer.py(base class)
- singer.py(sub class)
- dancer.py(sub class)
- test\_class.py – following the required test cases

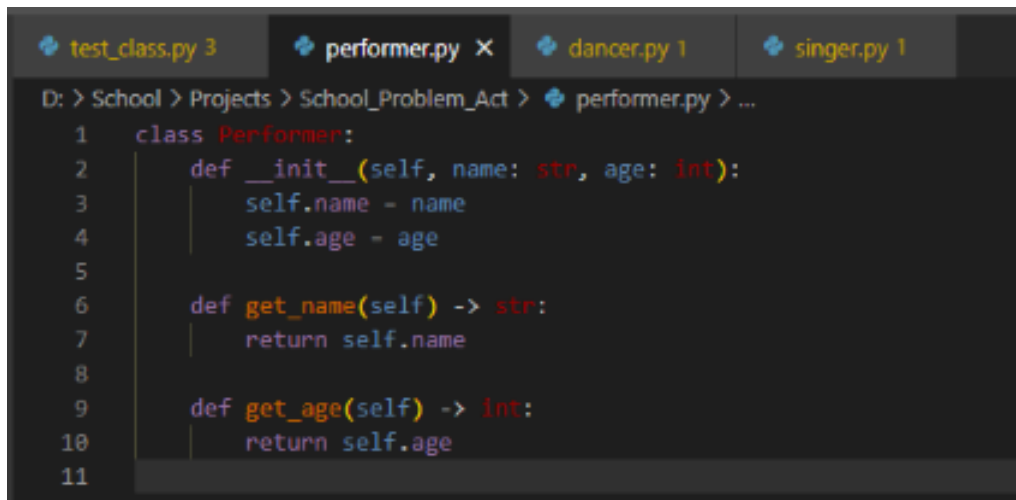
### II. CODE

#### i.



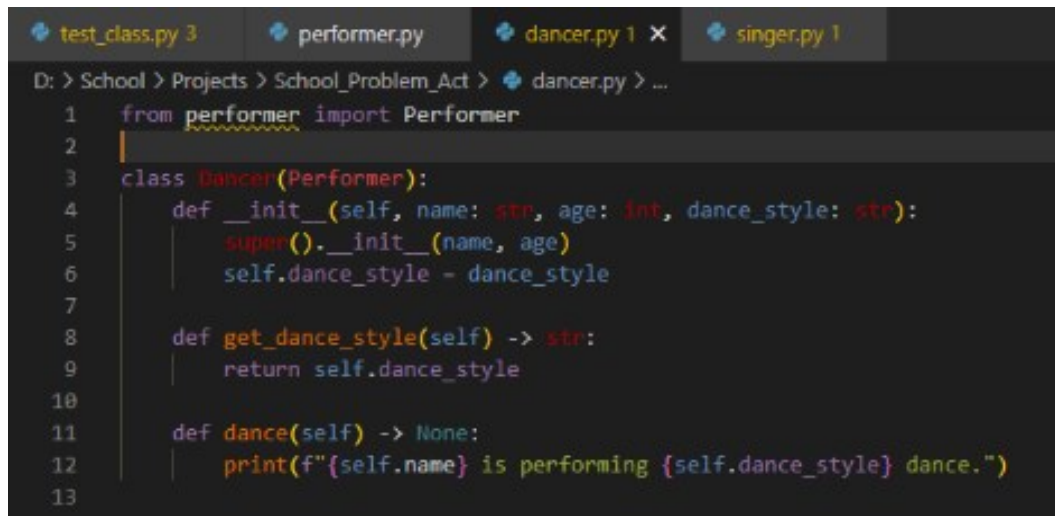
```
1 from singer import Singer
2 from dancer import Dancer
3 from performer import Performer
4
5 def test_performer():
6     performer = Performer("John", 25)
7     print(f"Performer: {performer.get_name()}, Age: {performer.get_age()}")
8
9 def test_singer():
10    singer = Singer("Emily", 28, "Soprano")
11    print(f"Singer: {singer.get_name()}, Age: {singer.get_age()}, Vocal Range: {singer.get_vocal_range()}")
12    singer.sing()
13
14 def test_dancer():
15    dancer = Dancer("Anna", 22, "Ballet")
16    print(f"Dancer: {dancer.get_name()}, Age: {dancer.get_age()}, Dance Style: {dancer.get_dance_style()}")
17    dancer.dance()
18
19 # Run test cases
20 test_performer()
21 test_singer()
22 test_dancer()
23
```

ii.



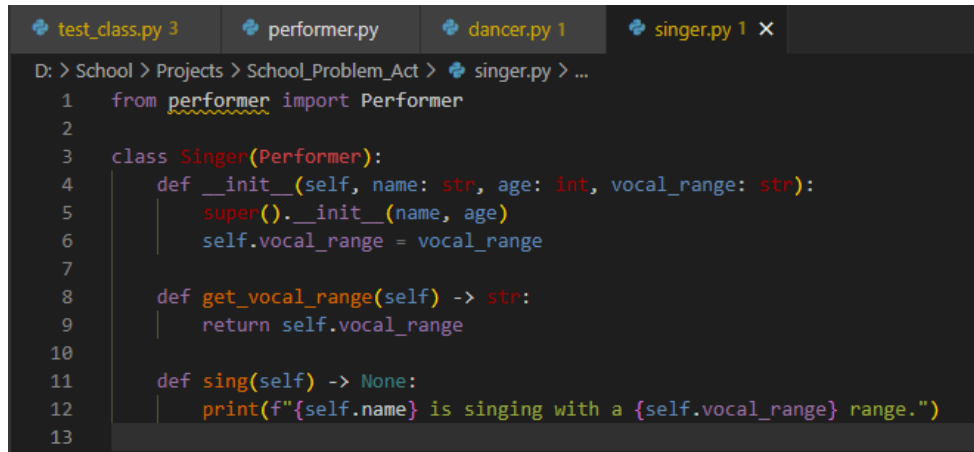
```
test_class.py 3  performer.py X  dancer.py 1  singer.py 1
D: > School > Projects > School_Problem_Act > performer.py > ...
1  class Performer:
2      def __init__(self, name: str, age: int):
3          self.name = name
4          self.age = age
5
6      def get_name(self) -> str:
7          return self.name
8
9      def get_age(self) -> int:
10         return self.age
11
```

iii.



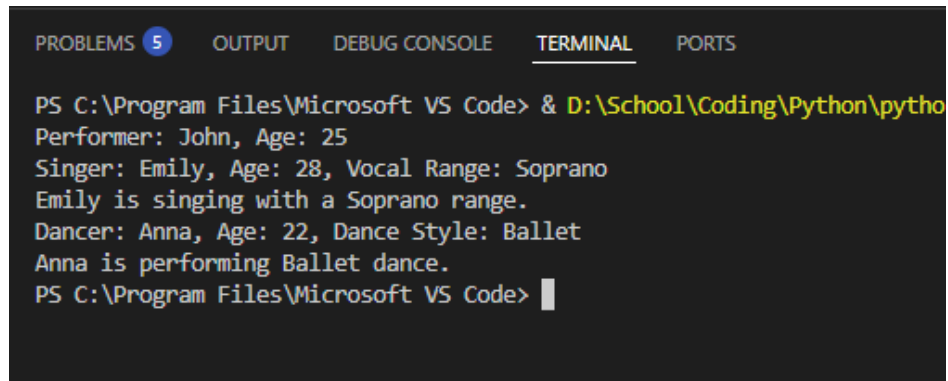
```
test_class.py 3  performer.py  dancer.py 1 X  singer.py 1
D: > School > Projects > School_Problem_Act > dancer.py > ...
1  from performer import Performer
2
3  class Dancer(Performer):
4      def __init__(self, name: str, age: int, dance_style: str):
5          super().__init__(name, age)
6          self.dance_style = dance_style
7
8      def get_dance_style(self) -> str:
9          return self.dance_style
10
11     def dance(self) -> None:
12         print(f"{self.name} is performing {self.dance_style} dance.")
13
```

iv.



```
test_class.py 3 performer.py dancer.py 1 singer.py 1 x
D: > School > Projects > School_Problem_Act > singer.py > ...
1  from performer import Performer
2
3  class Singer(Performer):
4      def __init__(self, name: str, age: int, vocal_range: str):
5          super().__init__(name, age)
6          self.vocal_range = vocal_range
7
8      def get_vocal_range(self) -> str:
9          return self.vocal_range
10
11     def sing(self) -> None:
12         print(f"{self.name} is singing with a {self.vocal_range} range.")
13
```

### III. SAMPLE OUTPUT



```
PROBLEMS 5 OUTPUT DEBUG CONSOLE TERMINAL PORTS
PS C:\Program Files\Microsoft VS Code> & D:\School\Coding\Python\pytho
Performer: John, Age: 25
Singer: Emily, Age: 28, Vocal Range: Soprano
Emily is singing with a Soprano range.
Dancer: Anna, Age: 22, Dance Style: Ballet
Anna is performing Ballet dance.
PS C:\Program Files\Microsoft VS Code> |
```