

Finals Task 2. Inheritance

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

✓ Performer.py:

```
class Performer:
    def __init__(self, name: str, age: int):
        self.name = name
        self.age = age

    def get_name(self) -> str:
        return self.name

    def get_age(self) -> int:
        return self.age
```

✓ Singer.py

```
from performer import Performer

class Singer(Performer):
    def __init__(self, name: str, age: int, vocal_range: str):
        super().__init__(name, age)
        self.vocal_range = vocal_range

    def get_vocal_range(self) -> str:
        return self.vocal_range

    def sing(self) -> None:
        print(f"{self.name} is singing with a {self.vocal_range} range.")
```

✓ **Dancer.py**

```
from performer import Performer

class Dancer(Performer):
    def __init__(self, name: str, age: int, dance_style: str):
        super().__init__(name, age)
        self.dance_style = dance_style

    def get_dance_style(self) -> str:
        return self.dance_style

    def dance(self) -> None:
        print(f"{self.name} is performing {self.dance_style} dance.")
```

✓ **Test_class.py**

```
from performer import Performer
from dancer import Dancer
from singer import Singer

print("\nTEST CASE 1")
p = Performer("John", 25)
print([p.get_name(), p.get_age()])

print("\nTEST CASE 2")
d = Dancer("Emily", 28, "Ballet")
print([d.get_name(), d.get_age(), d.get_dance_style()])

print("\nTEST CASE 3")
d.dance()

print("\nTEST CASE 4")
print(issubclass(Dancer, Performer))

print("\nTEST CASE 5")
s = Singer("Linda", 35, "Soprano")
print([s.get_name(), s.get_age(), s.get_vocal_range()])

print("\nTEST CASE 6")
s.sing()
```

Sample output for the Test Class:

```
TEST CASE 1
['John', 25]

TEST CASE 2
['Emily', 28, 'Ballet']

TEST CASE 3
Emily is performing Ballet dance.

TEST CASE 4
True

TEST CASE 5
['Linda', 35, 'Soprano']

TEST CASE 6
Linda is singing with a Soprano range.

...Program finished with exit code 0
Press ENTER to exit console. 
```