Name: Gabon, Lexter C. C204

7OOP 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*

#Base Class: Performer

```
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
```

#Subclass - Singer

```
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.")
```

#Subclass - Dancer

```
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

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

 # Test case 1

```
p = Performer("Clark", 21)
print(f"Performer: {p.get_name()}  \nAge: {p.get_age()}")
```

 # Test case 2

```
print(f" ")
d = Dancer("James" , 19, "Hip Hop")
print(f"Dancer: {d.get_name()}  \nAge: {d.get_age()}  \nDance Style:
{d.get_dance_style()}.")
```

 # Test case 3

d.dance()Output: James is Performing Hip Hop Dance.

 # Test case 4

print(issubclass(Dancer, Performer)) Output: True

#Test Case 5

```
print(f" ")
s = Singer("Dexter", 25, "Soprano")
print(f"Singer: {s.get_name()}  \nAge: {s.get_age()}  \nVocal Range:
{s.get_vocal_range()}.")
```

 # Test Case 6

s.sing() Output: Dexter is singing with a Soprano range.

Sample Output:

```
Performer: Clark
Age: 21

Dancer: James
Age: 19
Dance Style: Hip Hop.
James is performing Hip Hop dance.
True

Singer: Dexter
Age: 25
Vocal Range: Soprano.
Dexter is singing with a Soprano range.

[Program finished]
```