

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

File 1: **perform.py**

Source code:

```
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  
12  
13  
14 |
```

File 2: **singer.py**

Source Code:

```
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 |
```

File 3: dance.py

Source Code:

```
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
```

File 4: test_class.py

Source Code:

```
1 from performer import Performer
2 from singer import Singer
3 from dancer import Dancer
4
5
6 p = Performer("John", 25)
7 print(p.get_name(), p.get_age())
8
9 d = Dancer("Emily", 28, "Ballet")
10 print(d.get_name(), d.get_age(), d.get_dance_style())
11
12 d.dance()
13
14 print(issubclass(Dancer, Performer))
15
16 s = Singer("Linda", 35, "Soprano")
17 print(s.get_name(), s.get_age(), s.get_vocal_range())
18
19 s.sing()
20
21 |
```

Sample output:

```
John 25
Emily 28 Ballet
Emily is performing Ballet dance.
True
Linda 35 Soprano
Linda is singing with a Soprano range.
```

```
** Process exited - Return Code: 0 **
[]
```