

Bondoc, Moses

Polymorphism

Program:

```
> __pycache__  
+ dino_park.py  
+ dinosaur.py  
+ main.py  
+ t_rex.py  
+ triceratops.py
```

Main.py:

```
from t_rex import T_Rex  
from triceratops import Triceratops  
from dino_park import DinoPark  
  
if __name__ == "__main__":  
    trex = T_Rex()  
    trike = Triceratops()  
  
    park = DinoPark()  
  
    print(trex.make_sound())  
    print(trike.make_sound())  
    print(park.make_dino_sounds([trex, trike]))
```

dino\_park.py:

```
from typing import List  
from dinosaur import Dinosaur  
  
class DinoPark:  
    def make_dino_sounds(self, dinos: List[Dinosaur]) -> List[str]:  
        return [dino.make_sound() for dino in dinos]
```

triceratops.py:

```
from dinosaur import Dinosaur
```

```
class Triceratops(Dinosaur):
    def make_sound(self) -> str:
        return "GRUUUUNNNT!"
```

t\_rex.py:

```
from dinosaur import Dinosaur

class T_Rex(Dinosaur):
    def make_sound(self) -> str:
        return "ROOOAAARRR!!!"
```

dinosaur.py:

```
from abc import ABC, abstractmethod

class Dinosaur(ABC):
    @abstractmethod
    def make_sound(self) -> str:
        pass
```

Output:

```
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS D:\mosespoly> & 'C:\Users\COMLAB\AppData\Local\Programs\Python\Python311\python
ncher' '59128' '--' 'd:\mosespoly\main.py'
ROOOAAARRR!!!
GRUUUUNNNT!
['ROOOAAARRR!!!', 'GRUUUUNNNT!']
PS D:\mosespoly> d:; cd 'd:\mosespoly'; & 'C:\Users\COMLAB\AppData\Local\Programs\
apter/.../debugpy\launcher' '59139' '--' 'd:\mosespoly\dino_park.py'
PS D:\mosespoly>
```